



THE CITY OF WINNIPEG

TENDER

TENDER NO. 57-2023

GWWD RAILWAY SIDING CONSTRUCTION (MILE 10.40 TO MILE 10.56)

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 GWWD RAILWAY SIDING CONSTRUCTION (MILE 10.40 TO MILE 10.56)

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, May 26, 2023.

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 on the following dates:

- (i) 11:00 A.M. CDT on May 12, 2023 and
- (ii) 11:00 A.M. CDT on May 18, 2023

to provide Bidders access to the Site. Access will only be permitted from Murdock Road, and on the north side of the GWWD railway. Interested Bidders are to meet on the west side of Murdock Road at the GWWD railway, prior to walking west to the Site.

B3.2 The Bidder is advised that with the exception of B3.1, access to the site is not permitted.

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

B4. ENQUIRIES

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

B4.2 If the Bidder finds errors, discrepancies or omissions in the Tender, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.

B4.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Tender will be provided by the Contract Administrator to all Bidders by issuing an addendum.

B4.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Tender will be provided by the Contract Administrator only to the Bidder who made the enquiry.

B4.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3.1 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.
- B6.4 The Bidder is responsible for ensuring that they have received all addenda and is advised to check the MERX website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B6.5 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid/Proposal. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.
- B6.6 Notwithstanding B3.1, enquiries related to an Addendum may be directed to the Contract Administrator indicated in D4.

B7. SUBSTITUTES

- B7.1 The Work is based on the Plant, Materials and methods specified in the Tender.
- B7.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B7.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B7.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
 - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
 - (c) identify any anticipated cost or time savings that may be associated with the substitute;
 - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same

function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;

- (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.

B7.5 The Contract Administrator, after assessing the request for approval of a substitute, may in their sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.

B7.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.

B7.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons they wish to inform.

B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.

B7.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base their Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with 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 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely.

B8.3 The Bid shall be submitted electronically through MERX at www.merx.com.

B8.3.1 Bids will **only** be accepted electronically through MERX.

B8.4 Bidders are advised that inclusion of terms and conditions inconsistent with the Tender document, including the General Conditions, will be evaluated in accordance with 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 their own name, their name shall be inserted;

- (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
- (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
- (d) if the Bidder is carrying on business under a name other than their own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.

B9.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.

B9.3 In Paragraph 3 of Form A: Bid/Proposal, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

B9.4 Paragraph 13 of Form A: Bid/Proposal shall be signed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in their own name, it shall be signed by the Bidder;
- (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
- (c) if the Bidder is a corporation, it shall be signed by their duly authorized officer or officers;
- (d) if the Bidder is carrying on business under a name other than their own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.

B9.4.1 The name and official capacity of all individuals signing Form A: Bid/Proposal should be entered below such signatures.

B9.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B10. PRICES

B10.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B10.1.1 Prices stated on Form B: Prices shall not include any costs which may be incurred by the Contractor with respect to any applicable funding agreement obligations as outlined in D28. Any such costs shall be determined in accordance with D28.

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

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 their participation in the Tender process or the Work; or
- (f) has knowledge of confidential information (other than confidential information disclosed by the City in the normal course of the Tender process) of strategic and/or material relevance to the Tender process or to the Work that is not available to other bidders and that could or would be seen to give that Bidder an unfair competitive advantage.

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

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

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

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

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

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

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

B13. QUALIFICATION

B13.1 The Bidder shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba; and
- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.

B13.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, 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; 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); and
- (d) have completed the Accessible Customer Service online training required by the Accessibility for Manitobans Act (AMA) (see B13.5 and D7).

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

- (a) Written confirmation of a safety and health certification meeting SAFE Work Manitoba's SAFE Work Certified Standard (e.g., COR™ and SECOR™) 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

- (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>).

- B13.5 Further to B13.3(d), the Bidder acknowledges they and all Subcontractors have obtained training required by the Accessibility for Manitobans Act (AMA) available at <http://www.accessibilitymb.ca/training.html> for anyone that may have any interaction with the public on behalf of the City of Winnipeg.
- B13.6 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.
- B13.7 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B14. BID SECURITY

- B14.1 The Bidder shall include in their 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.
- 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.
- 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 their 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 their Bid or in other information required to be submitted, that they are 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.

B18.4.2 Further to B18.1(a), in the event that a unit price is not provided on Form B: Prices, the City may determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

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 Award of this Contract is contingent upon the finalization of an ongoing land acquisition process between The City and a private landowner in the project area. The Work is anticipated to proceed on the basis of a fully executed "Enter to Construct" agreement between The City and the landowner before land titles have been changed.

B19.3 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.

B19.3.1 Without limiting the generality of B19.3, the City will have no obligation to award a Contract where:

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

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 D28 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 their 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
- 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. FORM OF CONTRACT DOCUMENTS

D2.1 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.

D3. SCOPE OF WORK

D3.1 The Work to be done under the Contract shall consist of construction of a new rail siding complete with switches and turnouts between Symington Road and Murdock Road (Mile 10.40 to Mile 10.56) in the Rural Municipality of Springfield.

D3.2 The major components of the Work are as follows:

- (a) Construction of a temporary access road from Murdock Road to the Work Site.
- (b) Embankment construction and ditch/drainage tie-ins.
- (c) Rail siding and turnout construction.
- (d) Removal of the temporary access road and restoration of the site to its original condition.

D3.3 The following shall apply to the Work:

- (a) Universal Design Policy

<http://clkapps.winnipeg.ca/DMIS/DocExt/ViewDoc.asp?DocumentTypeId=2&DocId=3604>

D4. SITE INVESTIGATION DUE DILIGENCE AND RISK

D4.1 Notwithstanding C3.1, the Contractor acknowledges that the site investigation reports and other site information included in this Tender have been provided to it and may be relied upon by the Contractor to the extent that the Contractor uses Good Industry Practice in interpreting such report(s) and site information and carries out the Work in accordance with Good Industry Practice based upon such report(s) and the information contained in them and such other site information. In the event that a site condition related to:

- (a) the location of any utility which can be determined from the records or other information available at the offices of any public authority or person, including a municipal corporation and any board or commission thereof, having jurisdiction or control over the utility;
- (b) the Site conditions, including but not limited to subsurface hazardous materials or other concealed physical conditions;
- (c) the location, nature, quality or quantity of the materials to be removed or to be employed in the performance of the Work;
- (d) the nature, quality or quantity of the Plant needed to perform the Work;
- (e) all matters concerning access to the Site, power supplies, location of existing services, utilities or materials necessary for the completion of the Work; and
- (f) all other matters which could in any way affect the performance of the Work;

that could not have been “properly inferable”, “readily apparent” and readily discoverable” using Good Industry Practice by the Contractor, results in additional Work which is a direct result of

this newly discovered site condition, such additional Work will be considered by the City under Changes in Work.

D5. CONTRACT ADMINISTRATOR

D5.1 The Contract Administrator is Stantec Consulting Ltd., represented by:

Eric Tranquada, B.Env.D., P.Eng.
Bridge Engineer & Project Manager

Telephone No. 204 228 2574
Email Address eric.tranquada@stantec.com

D5.2 At the pre-construction meeting, Eric Tranquada will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D6. CONTRACTOR'S SUPERVISOR

D6.1 At the pre-construction meeting, the Contractor shall identify their designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

D7. ACCESSIBLE CUSTOMER SERVICE REQUIREMENTS

D7.1 The Accessibility for Manitobans Act (AMA) imposes obligations on The City of Winnipeg to provide accessible customer service to all persons in accordance with the Customer Service Standard Regulation ("CSSR") to ensure inclusive access and participation for all people who live, work or visit Winnipeg regardless of their abilities.

D7.1.1 The Contractor agrees to comply with the accessible customer service obligations under the CSSR and further agrees that when providing the Goods or Services or otherwise acting on the City of Winnipeg's behalf, shall comply with all obligations under the AMA applicable to public sector bodies.

D7.1.2 The accessible customer service obligations include, but are not limited to:

- (a) providing barrier-free access to goods and services;
- (b) providing reasonable accommodations;
- (c) reasonably accommodating assistive devices, support persons, and support animals;
- (d) providing accessibility features e.g. ramps, wide aisles, accessible washrooms, power doors and elevators;
- (e) inform the public when accessibility features are not available;
- (f) providing a mechanism or process for receiving and responding to public feedback on the accessibility of all goods and services; and
- (g) providing adequate training of staff and documentation of same.

D8. UNFAIR LABOUR PRACTICES

D8.1 Further to C3.2, the Contractor declares that in bidding for the Work and in entering into this Contract, the Contractor and any proposed Subcontractor(s) conduct their respective business in accordance with established international codes embodied in United Nations Universal Declaration of Human Rights (UDHR) <https://www.un.org/en/about-us/universal-declaration-of-human-rights> International Labour Organization (ILO) [https://www.ilo.org/global/lang--en/index.htm](https://www.ilo.org/global/lang-en/index.htm) conventions as ratified by Canada.

D8.2 The City of Winnipeg is committed and requires its Contractors and their Subcontractors, to be committed to upholding and promoting international human and labour rights, including fundamental principles and rights at work covered by ILO eight (8) fundamental conventions

and the United Nations Universal Declaration of Human Rights which includes child and forced labour.

- D8.3 Upon request from the Contract Administrator, the Contractor shall provide disclosure of the sources (by company and country) of the raw materials used in the Work and a description of the manufacturing environment or processes (labour unions, minimum wages, safety, etc.).
- D8.4 Failure to provide the evidence required under D8.3, may be determined to be an event of default in accordance with C18.
- D8.5 In the event that the City, in its sole discretion, determines the Contractor to have violated the requirements of this section, it will be considered a fundamental breach of the Contract and the Contractor shall pay to the City a sum specified by the Contract Administrator in writing ("Unfair Labour Practice Penalty"). Such a violation shall also be considered an Event of Default, and shall entitle the City to pursue all other remedies it is entitled to in connection with same pursuant to the Contract.
- D8.5.1 The Unfair Labour Practice Penalty shall be such a sum as determined appropriate by the City, having due regard to the gravity of the Contractor's violation of the above requirements, any cost of obtaining replacement goods/ services or rectification of the breach, and the impact upon the City's reputation in the eyes of the public as a result of same.
- D8.5.2 The Contractor shall pay the Unfair Labour Practice Penalty to the City within thirty (30) Calendar Days of receiving a demand for same in accordance with clause D8.5. The City may also hold back the amount of the Unfair Labour Practice Penalty from payment for any amount it owes the Contractor.
- D8.5.3 The obligations and rights conveyed by this clause survive the expiry or termination of this Contract, and may be exercised by the City following the performance of the Work, should the City determine, that a violation by the Contractor of the above clauses has occurred following same. In no instance shall the Unfair Labour Practice Penalty exceed the total of twice the Contract value.

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 their sole discretion and acting reasonably, require an updated COR Certificate or Annual Letter of good Standing. A Contractor, who fails to provide a satisfactory COR Certificate or Annual Letter of good Standing, will not be permitted to continue to perform any Work.

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 (\$5,000,000.00) inclusive, with The City of Winnipeg and if required by contract, Manitoba Hydro, added as additional insureds, with a cross-liability clause. Such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability, sudden and accidental pollution liability, 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 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 \$5,000,000 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) Contractors pollution liability (CPL) in the amount of at least one million dollars (\$1,000,000) per occurrence and two million dollars (\$2,000,000) in the 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's operations and completed operations. Such policy to name the City as an additional insured and remain in place for six (6) months following Total Performance.

D12.2 Deductibles shall be borne by the Contractor.

D12.3 All policies shall be taken out with insurers licensed 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.

D13.1.1 Where the contract security is a performance bond, it may be submitted in hard copy or digital format. If submitted in digital format the contract security must meet the following criteria:

- (a) the version submitted by the Contractor must have valid digital signatures and seals;

- (b) the version submitted by the Contractor must be verifiable by the City with respect to the totality and wholeness of the bond form, including: the content; all digital signatures and digital seals; with the surety company, or an approved verification service provider of the surety company.
- (c) the version submitted must be viewable, printable and storable in standard electronic file formats compatible with the City, and in a single file. Allowable formats include pdf.
- (d) the verification may be conducted by the City immediately or at any time during the life of the bond and at the discretion of the City with no requirement for passwords or fees.
- (e) the results of the verification must provide a clear, immediate and printable indication of pass or fail regarding D13.1(b).

D13.1.2 Digital bonds failing the verification process will not be considered to be valid and may be determined to be an event of default in accordance with C18.1. If a digital bond fails the verification process, the Contractor may provide a replacement bond (in hard copy or digital format) within seven (7) Calendar Days of the City's request or within such greater period of time as the City in their discretion, exercised reasonably, allows.

D13.1.3 Digital bonds passing the verification process will be treated as original and authentic.

D13.2 The Contractor shall provide the Contract Administrator identified in D4 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. SUBCONTRACTOR LIST

D14.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the General Conditions for the return of the executed Contract Documents, if applicable.

SCHEDULE OF WORK

D15. COMMENCEMENT

D15.1 The Contractor shall not commence any Work until they are in receipt of an award letter from the Award Authority authorizing the commencement of the Work.

D15.2 The City is arranging for limited access to the construction site from Murdock Road via temporary construction easements as shown on the design drawings. Additionally, arrangements have been made to construct the Work on land that is in the process of being acquired through an Enter to Construct Agreement. Accordingly, access to the site prior to the execution of the aforementioned agreements is not permitted unless authorized by the City.

D15.3 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 Subcontractor list specified in D14;
 - (vii) the direct deposit application form specified in D25;
- (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.

D15.3.1 The City intends to award this Contract by July 7, 2023.

D15.3.2 If the actual date of award is later than the intended date, the dates specified for Commencement, Critical Stages, Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

D16. WORK BY OTHERS

D16.1 Further to C6.25, the Contractor's attention is directed to the fact that other Contractors, the personnel of Utilities and the staff of the City may be working within the project limit, approach roadway, adjacent roadways or right-of-way. The activities of these agencies may coincide with the Contractors execution of Work and it will be the Contractor's responsibility to cooperate to the fullest extent with other personnel working in the area, and such cooperation is an obligation of the Contractor under the terms of Contract.

D16.2 Work by others on or near the Site will include but not necessarily be limited to:

- (a) Transportation of rail cars, equipment, high rail vehicles and materials along the mainline track.

D16.2.1 Further to D16.1, the Contractor shall cooperate and coordinate all activities with all parties performing required Work by Others identified in D16.1 and accommodate the necessary area on Site required for the Work by Others to complete the Work.

D17. CRITICAL STAGES

D17.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:

- (a) Maximum allowable GWWD mainline outage period of seven (7) calendar days which requires a minimum of three (3) weeks notice to be accommodated.
 - (i) If during an approved mainline outage whereby the City requires use of the mainline for emergency or urgent measures, the Contractor shall restore the mainline within twenty four (24) hours of being notified. Any additional costs or impacts to schedule as a result of the restoration shall be addressed at the time direction is given.

D18. SUBSTANTIAL PERFORMANCE

D18.1 The Contractor shall achieve Substantial Performance by September 29, 2023.

D18.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.

D18.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

D19. TOTAL PERFORMANCE

- D19.1 The Contractor shall achieve Total Performance by October 31, 2023.
- D19.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.
- D19.3 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.

D20. LIQUIDATED DAMAGES

- D20.1 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 – Maximum allowable GWWD mainline outage period of seven (7) calendar days – Five thousand dollars (\$5,000);
 - (b) Substantial Performance – One thousand five hundred dollars (\$1,500);
 - (c) Total Performance – One thousand five hundred dollars (\$1,500).
- D20.2 The amounts specified for liquidated damages in D20.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve, Critical Stages, Substantial Performance or Total Performance by the days fixed herein for same.
- D20.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D21. COVID-19 SCHEDULE DELAYS

- D21.1 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.
- D21.2 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.
- D21.3 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.
- D21.4 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 D21.3. Failure to provide this notice will result in no additional time delays being considered by the City.
- D21.5 The Work schedule, including the durations identified in D17 to D19 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.

- D21.6 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.
- D21.7 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.

CONTROL OF WORK

D22. JOB MEETINGS

- D22.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.
- D22.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever they deem it necessary.

D23. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D23.1 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).

D24. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

- D24.1 Further to B13.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at their sole discretion and acting reasonably, require updated proof of compliance, as set out in B13.4.

MEASUREMENT AND PAYMENT

D25. PAYMENT

- D25.1 Further to C12, the City shall make payments to the Contractor by direct deposit to the Contractor's banking institution, and by no other means. Payments will not be made until the Contractor has made satisfactory direct deposit arrangements with the City. Direct deposit application forms are at https://winnipeg.ca/finance/files/Direct_Deposit_Form.pdf.

WARRANTY

D26. WARRANTY

- D26.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire two (2) years thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.
- D26.2 Notwithstanding C13.2 or D26.1, 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) A final inspection of the constructed rail works has been completed by the Contract Administrator in accordance with the Track Inspection Guidelines and Transport Canada Rules Respecting Track Safety (TC E-54) prior to the date of Total Performance.

D26.2.1 In such case, the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin.

DISPUTE RESOLUTION

D27. DISPUTE RESOLUTION

D27.1 If the Contractor disagrees with any opinion, determination, or decision of the Contract Administrator, the Contractor shall act in accordance with the Contract Administrator's opinion, determination, or decision unless and until same is modified by the process followed by the parties pursuant to D27.

D27.2 The entire text of C21.4 is deleted, and amended to read: "Intentionally Deleted"

D27.3 The entire text of C21.5 is deleted, and amended to read:

- (a) If Legal Services has determined that the Disputed Matter may proceed in the Appeal Process, the Contractor must, within ten (10) Business Days of the date of the Legal Services Response Letter, submit their written Appeal Form, in the manner and format set out on the City's Materials Management Website, to the Chief Administrative Officer, and to the Contract Administrator. The Contractor may not raise any other disputes other than the Disputed Matter in their Appeal Form.

D27.4 Further to C21, prior to the Contract Administrator's issuance of a Final Determination, the following informal dispute resolution process shall be followed where the Contractor disagrees with any opinion, determination, or decision of the Contract Administrator ("Dispute"):

- (a) In the event of a Dispute, attempts shall be made by the Contract Administrator and the Contractor's equivalent representative to resolve Disputes within the normal course of project dealings between the Contract Administrator and the Contractor's equivalent representative.
- (b) Disputes which in the reasonable opinion of the Contract Administrator or the Contractor's equivalent representative cannot be resolved within the normal course of project dealings as described above shall be referred to a without prejudice escalating negotiation process consisting of, at a minimum, the position levels as shown below and the equivalent Contractor representative levels:
 - (i) The Contract Administrator;
 - (ii) Supervisory level between the Contract Administrator and applicable Department Head;
 - (iii) Department Head.

D27.4.1 Names and positions of Contractor representatives equivalent to the above City position levels shall be determined by the Contractor and communicated to the City at the pre-commencement or kick off meeting.

D27.4.2 As these negotiations are not an adjudicative hearing, neither party may have legal counsel present during the negotiations.

D27.4.3 Both the City and the Contractor agree to make all reasonable efforts to conduct the above escalating negotiation process within twenty (20) Business Days, unless both parties agree, in writing, to extend that period of time.

D27.4.4 If the Dispute is not resolved to the City and Contractor's mutual satisfaction after discussions have occurred at the final escalated level as described above, or the time

period set out in D27.4.3, as extended if applicable, has elapsed, the Contract Administrator will issue a Final Determination as defined in C1.1(v), at which point the parties will be governed by the Dispute Resolution process set out in C21.

THIRD PARTY AGREEMENTS

D28. FUNDING AND/OR CONTRIBUTION AGREEMENT OBLIGATIONS

- D28.1 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.
- D28.2 Further to D28.1, in the event that the obligations in D28 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.
- D28.3 For the purposes of D28:
- (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.
- D28.4 Modified Insurance Requirements
- D28.4.1 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 their Ministers, officers, employees, and agents shall be added as additional insureds.
- D28.4.2 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.
- D28.4.3 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.
- D28.4.4 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.
- D28.4.5 All policies must be taken out with insurers licensed to carry on business in the Province of Manitoba.
- D28.5 Indemnification By Contractor
- D28.5.1 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.

- D28.5.2 The Contractor agrees that in no event will Canada or Manitoba, their respective officers, servants, employees or agents be held liable for any damages in contract, tort (including negligence) or otherwise, for:
- (a) any injury to any person, including, but not limited to, death, economic loss or infringement of rights;
 - (b) any damage to or loss or destruction of property of any person; or
 - (c) any obligation of any person, including, but not limited to, any obligation arising from a loan, capital lease or other long term obligation;

in relation to this Contract or the Work.

D28.6 Records Retention and Audits

- D28.6.1 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.

- D28.6.2 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 D28.6.1 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.

D28.7 Other Obligations

- D28.7.1 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.
- D28.7.2 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.
- D28.7.3 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.
- D28.7.4 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.
- D28.7.5 The Contractor represents and warrants that no current or former public servant or public office holder, to whom the Value and Ethics Code for the Public Sector, the Policy on Conflict of Interest and Post Employment, or the Conflict of Interest Act applies, shall

derive direct benefit from this Contract, including any employment, payments, or gifts, unless the provision or receipt of such benefits is in compliance with such codes and the legislation.

D28.7.6

The Contractor represents and warrants that no member of the House of Commons or of the Senate of Canada or of the Legislative Assembly of Manitoba is a shareholder, director or officer of the Contractor or of a Subcontractor, and that no such member is entitled to any benefits arising from this Contract or from a contract with the Contractor or a Subcontractor concerning the Work.

FORM H1: PERFORMANCE BOND
(See D13)

KNOW EVERYONE 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. 57-2023

GWWD RAILWAY SIDING CONSTRUCTION (MILE 10.40 TO MILE 10.56)

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 EVERYONE 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. 57-2023

GWWD RAILWAY SIDING CONSTRUCTION (MILE 10.40 TO MILE 10.56)

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 their entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.2.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, 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 A link to the manufacturer's specifications or a copy of the manufacturer's specifications must be provided in the Tender document
- E1.4 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.
- E1.5 The following are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
1-0751R-D0004-001	TRACK DESIGN PACKAGE - PROPOSED SIDING RELOCATION - MILE 10.40 TO MILE 10.56 - GREAT WINNIPEG WATER DISTRICT RAILWAY - RURAL MUNICIPALITY OF SPRINGFIELD - MANITOBA - COVER SHEET
1-0751R-D0005-001	TRACK DESIGN PACKAGE - PROPOSED SIDING RELOCATION - MILE 10.40 TO MILE 10.56 - GREAT WINNIPEG WATER DISTRICT RAILWAY - RURAL MUNICIPALITY OF SPRINGFIELD - MANITOBA - LEGEND, NOTES, ABBREVIATIONS
1-0751R-D0006-001	TRACK DESIGN PACKAGE - PROPOSED SIDING RELOCATION - MILE 10.40 TO MILE 10.56 - GREAT WINNIPEG WATER DISTRICT RAILWAY - RURAL MUNICIPALITY OF SPRINGFIELD - MANITOBA - GENERAL LAYOUT
1-0751R-D0007-001	TRACK DESIGN PACKAGE - PROPOSED SIDING RELOCATION - MILE 10.40 TO MILE 10.56 - GREAT WINNIPEG WATER DISTRICT RAILWAY - RURAL MUNICIPALITY OF SPRINGFIELD - MANITOBA - PROPOSED SIDING TRACK
1-0751R-D0008-001	TRACK DESIGN PACKAGE - PROPOSED SIDING RELOCATION - MILE 10.40 TO MILE 10.56 - GREAT WINNIPEG WATER DISTRICT RAILWAY - RURAL MUNICIPALITY OF SPRINGFIELD - MANITOBA - TYPICAL SECTIONS AND DETAILS
1-0751R-D0009-001	TRACK DESIGN PACKAGE - PROPOSED SIDING RELOCATION - MILE 10.40 TO MILE 10.56 - GREAT WINNIPEG WATER DISTRICT RAILWAY - RURAL MUNICIPALITY OF SPRINGFIELD - MANITOBA - CROSS SECTIONS - STA 0+000 TO STA 0+140
1-0751R-D0010-001	TRACK DESIGN PACKAGE - PROPOSED SIDING RELOCATION - MILE 10.40 TO MILE 10.56 - GREAT WINNIPEG WATER DISTRICT RAILWAY - RURAL MUNICIPALITY OF SPRINGFIELD - MANITOBA - CROSS SECTIONS - STA 0+150 TO STA 0+261.331

E2. SOILS INVESTIGATION REPORT

- E2.1 Further to C3.1, the soils investigation report is available from Stantec Consulting if requested.

GENERAL REQUIREMENTS

E3. MOBILIZATION AND DEMOBILIZATION PAYMENT

- E3.1 Description

(a) This Specification shall govern mobilization and demobilization from site.

E3.2 Measurement and Payment

E3.2.1 Mobilization and Demobilization

- (a) Mobilization and demobilization will be measured on a lump sum basis and paid for at the Contract Lump Sum Price for "Mobilization and Demobilization". Payment for Mobilization and demobilization shall include all costs associated with mobilization and demobilization, temporary access road construction, removal and restoration, site set up, cleanup and overall site restoration. Payment will be made on the following schedule:
- (i) The first 25% payment of the Mobilization and Demobilization lump sum price will be paid once crews and equipment arrive on site and commence with preparation works and traffic control.
 - (ii) The second 25% payment (50% total) of the Mobilization and Demobilization lump sum price will be paid once equipment and crews arrive on site and commence placement of ties and rails.
 - (iii) The remaining 50% of the Mobilization and Demobilization lump sum price will be paid subsequent to completion of the siding and turnout construction, removal of the temporary access road, and site cleanup and restoration.

E4. CASH ALLOWANCE FOR ADDITIONAL WORK

E4.1 Additional Work may be necessitated due to unforeseen circumstances that may arise during the course of the project due to:

(a) Additions to the scope of Work by the Contract Administrator, beyond that defined herein.

E4.2 A cash allowance has been included on Form B: Prices.

E4.3 The City reserves the right to delete any or all of the Cash Allowance from the Contract if the Work intended to be covered by the Cash Allowance is not required, or if the Works intended are found to be more extensive than the provisional Cash Allowance.

E4.4 Cost of additional work shall be evaluated by the methods outlined in C7.4, and a Change Order prepared by the Contract Administrator. Cost of the Change Order will be paid on the Progress Estimate and deducted from the Cash Allowance. If the valuation of the authorized work exceeds the Value of the Cash Allowance, the Contract Value will be adjusted by the shortfall.

E4.5 Additional services and/or Work will not be initiated for:

- (a) Reasons of lack of performance or errors in execution.
- (b) Scheduling changes initiated by the City, where at least 24 hours' notice is given prior to the Contractors schedule time to be on Site.

E4.6 Should it be determined that additional material or services are required, the Contract Administrator shall approve the Work, prior to commencement of the additional Work.

E4.7 Material Mark-Up Factors in accordance with C7:

- (a) The base cost is to be the wholesale cost of the material, regardless of the Contractor or Subcontractor supplying the material.
- (b) In general, the party (Contractor or Subcontractor) supplying the material is the party that purchases the material from a supplier who does not perform any work on Site, unless otherwise determined by the Contract Administrator.
- (c) Where the Contractor is supplying the material, the mark-up on the material is limited to fifteen percent (15%).

- (d) Where the Contractor's immediate Subcontractor is supplying the material the total mark-up on the material including all Subcontractors and the Contractor is limited to twenty-five percent (25%)
 - (i) The Subcontractor's mark-up on the material is limited to fifteen percent (15%);
 - (ii) The Contractor's mark-up on the material is limited to ten percent (10%).
- (e) A Third-Level Subcontractor is a Subcontractor of a Subcontractor of the Contractor.
 - (i) No Third-Level Subcontractors on this project are approved for additional mark-up.
 - (ii) In the event that a Third-Level Subcontractor is utilized, that is not approved for additional mark-up, the Contractor is responsible for coordinating the split of the maximum approved mark-up between the Contractor and Subcontractors.

E5. TRAFFIC CONTROL

- E5.1 In accordance with latest version of Manitoba Transportation and Infrastructure's (MTI) Work Zone Traffic Control Manual, the Contractor shall place, maintain, and remove all construction and regulatory signs and traffic control devices required for the duration of the project.
- E5.2 Approved Designated Construction Zones with a temporary posted speed limit reduction. The Contractor will be responsible for placing all of the advance signs and 'Construction Ends' (TC-4) signs. The Contractor will also be responsible for all other temporary traffic control including but not limited to barricades, barrels, tall cones and "Caution Trucks and Equipment Turning" signage.
- E5.3 The Contractor shall notify the RM of Springfield of its traffic control plan and provide documentation illustrating the layout and extents of reduced speed zones, signage location, lane reductions etc.
- E5.4 Upon request from the Contract Administrator, the Contractor shall provide records demonstrating that the Site has been maintained.
- E5.5 Any changes to the approved traffic management plan must be submitted to the Contract Administrator a minimum of (five) 5 Working Days prior to the required change for approval.
- E5.6 If the Contract Administrator determines that the Contractor is not performing Traffic Control in accordance with this specification, a third-party traffic control service provider may be engaged. In this event the Contractor shall bear the costs associated charged to the project by the third-party service provider in connection with the required Works undertaken by the Contractor.
- E5.7 Traffic Control will be considered incidental to E3.2.1, "Mobilization and Demobilization." No measurement and payment will be made within this section.

E6. WORKING IN PROXIMITY TO MANITOBA HYDRO OVERHEAD LINES

- E6.1 Description
 - E6.1.1 The Contractor shall notify Manitoba Hydro of the nature of their work and the type of equipment being used as the temporary access road crosses an existing Manitoba Hydro right-of-way with overhead powerlines and adjacent transmission towers.
 - E6.1.2 Any work within 3 m of a Manitoba Hydro overhead line requires Manitoba Hydro Safety watch, unless altered by Manitoba Hydro in writing.
 - E6.1.3 The Contractor shall stay 6 metres away from transmission structures.
 - E6.1.4 The Contractor shall not use vehicles taller than 4.15 m above ground level.
 - E6.1.5 Vehicles and equipment shall not be parked, stored or refueled on Manitoba Hydro's Land.
- E6.2 Measurement and Payment

E6.2.1 Manitoba Hydro Safety watch will be considered incidental to the Work. No measurement and payment will be made within this section.

E7. WORKING NEAR RAIL

E7.1 The Contractor is advised that the GWWD Railway will remain in operation throughout the construction period and that regular communication and coordination with GWWD dispatch and operations be maintained for the duration of the project.

E7.2 Operation of the GWWD Railway is of critical importance to the quantity and quality of the City's water supply. Supply of water treatment chemicals for the treatment and disinfection of the water supply is of paramount importance. Water treatment chemicals are hauled to the Drinking Water Treatment Plant at Deacon as well as the Aqueduct Intake at Shoal Lake in rail car quantities via the GWWD Railway. Due to the limited storage capacity at these facilities, it is imperative that the work be sufficiently complete at the date of Substantial Performance to allow the railway to resume full operations at that time.

E7.3 Any work remaining after the date of Substantial Performance must be carried out without interfering with GWWD Railway operations. No work or the siting of vehicles or equipment closer than 4 m to the nearest rail on the GWWD main line is allowed without prior consent of the GWWD Railway.

E7.4 General Requirements

E7.4.1 The Contractor shall be responsible to meet all railway company, Greater Winnipeg Water District (GWWD), constraints, requirements, and safety measures.

E7.4.2 Prior to commencement of roadworks within the Rail right-of-way the Contractor is responsible to coordinate a kick-off meeting with GWWD to determine the limits of Work Foul of Track.

E7.4.3 The Contractor shall coordinate with the City of Winnipeg for any closure of the GWWD Rail line. Notice of any proposed closure is requested a minimum of three (3) weeks in advance of the scheduled activity with a maximum mainline outage of seven (7) days. Mainline outages shall be considered critical stages to the work as referenced in Section D17.

E7.5 Description of Work

E7.5.1 The Contractor will construct the railway siding with required embankments, turnouts, switching devices and all items as indicated on the design drawings and as required in these specifications.

E7.6 Safety Requirements

E7.6.1 Contractor safety requirements shall conform to the latest version of CP Minimum Safety Requirements for Contractors. The Contractor is advised that the requirements are applicable to all of the Contractor's personnel and equipment crossing GWWD tracks and property.

E7.7 Railway Flagging Costs

E7.7.1 The Contractor shall coordinate work so as to limit operations requiring railway flagging, to minimize these costs to the project to the satisfaction of the Contract Administrator. Railway flagging costs identified by the Contract Administrator to be a result of poor coordination shall be borne by the Contractor.

E7.8 Measurement and Payment

E7.8.1 Working Near Rail will be considered incidental to the Work. No measurement and payment will be made within this section.

E8. OPERATING CONSTRAINTS FOR WORK WITHIN TEMPORARY EASEMENTS AND IN CLOSE PROXIMITY TO CRITICAL WATER INFRASTRUCTURE

- E8.1 This section describes specific requirements for Work in close proximity to critical water infrastructure. Close proximity shall be deemed to be any construction activity within a 5 m horizontal offset from a feeder main/water main, aqueduct, within 5 m of valve chambers and other appurtenances, and any other infrastructure identified below.
- E8.2 The following shall be considered critical pipelines and water infrastructure for this project:
- (a) Shoal Lake Aqueduct, 1650 mm Concrete Aqueduct - Installed on the south side of the GWWD rail line siding and running parallel to the main line tracks.
 - (b) Shoal Lake Aqueduct Underdrain, 200 mm vitrified clay tile or PVC in some sections – Installed on the north side of the aqueduct running parallel to reduce groundwater elevations adjacent to the aqueduct.
- E8.3 The above noted critical pipelines are critical components of the City's regional water supply system and work in close proximity to the critical pipelines shall be undertaken with an abundance of caution. The above noted critical pipelines and in particular the Shoal Lake Aqueduct cannot typically be taken out of service for extended periods to facilitate construction. Inadvertent damage caused to these pipes would likely have catastrophic consequences.
- E8.4 The Contractor shall not perform any Work, operate vehicles or store materials, equipment or perform any activities south of the GWWD railway mainline to avoid working near critical water infrastructure.
- E8.5 The Contract Administrator reserves the right to issue a Stop Work Order if the Contractor uses equipment not previously approved, or if equipment is used in an area not previously approved by the Contract Administrator.
- E8.6 Submittals:
- E8.6.1 Submit a construction method statement to the Contract Administrator a minimum of five (5) Business Days prior to commencing Work. The construction method statement shall contain the following minimum information:
- (a) Proposed construction plan including excavation locations, haul routes, excavation equipment locations, loading positions, staging areas, and material stockpile locations;
 - (b) Equipment travel path plan indicating travel paths for all vehicles that are required to travel from Murdock Road to the Work area. This travel path shall highlight the temporary easement along the GWWD railway and also indicate the proximity of the path to any existing utilities including (but not limited to) Manitoba Hydro transmission towers.
 - (c) Drawing of the temporary site access road including cross-sections and material composition; and
 - (d) Excavation plans, including shoring designs (if required).
- E8.6.2 Incomplete or partial submissions will not be reviewed and will be returned to the Contractor for re-submission.
- E8.6.3 Allow five (5) Business Days for review of all Submittals by the Contract Administrator.
- E8.7 Pre-Work Planning and General Execution
- E8.7.1 No work shall commence until the travel paths, construction method statement and temporary access road drawing and configuration have been submitted and accepted.

E9. TRACK CONSTRUCTION

- E9.1 Description

- E9.1.1 This specification describes requirements for track construction for the project shown on the Contract Drawings.
- E9.2 The Contractor shall be responsible for all costs of supply, transportation, handling, and installation of all materials specified in the Contract Drawings and in these specifications. This includes labour, equipment, supervision, and overheads associated with this work.
- E9.3 The Contractor shall supply all other necessary materials, whether or not specifically mentioned herein, to complete the works covered by these specifications and/or the Contract Drawings. The cost of these materials shall be incidental to the Work.
- E9.4 The Trackwork under this Contract shall be constructed using new material supplied by the Contractor.
- E9.5 The Contractor shall submit shop drawings, manufacturer's certificates, quality control/quality assurance procedures and test results as requested by the Contract Administrator for all materials prior to installation.
- E9.6 Reference Standards
- (a) CN, Engineering Specifications for Industrial Tracks, latest edition.
 - (b) CN, Track Standards Plans (TS), latest edition.
 - (c) CN, Recommended Methods (RM), latest edition.
 - (d) CN, Engineering Track Standards (TS), 2019.
 - (e) CN, Standard Practice Circulars (SPC) – Track, latest edition.
 - (f) American Railway Engineering and Maintenance-of-way Association (AREMA) Manual for Railway Engineering (latest edition).
- E9.7 Scope of Work
- The major components of Trackwork include but are not limited to the following:
- (a) Determine locations of underground and overhead utility lines and ensure that precautions are taken to prevent damage to these lines during the work.
 - (b) Supply of materials and installation of new 115 lb. RE jointed track with a standard gauge of 1435 mm.
 - (c) Supply and install compromise bars of the correct weight and hand and shall be used when transitioning from one rail weight to another.
 - (d) Supply of materials and installation of two (2) new CN #8 – 115 lb. turnouts. Install appropriate tie plates, spikes and anchors in order to accommodate the installed turnout.
 - (e) Supply, load, haul, unload, handle and spread all track ballast.
 - (f) Supply and resurface the existing track, as required.
 - (g) Ballast, line, surface, and dress new and realigned tracks.
 - (h) Provide all surveys required for the layout, construction of the work and As-Built documentation.
- E9.8 Quality Assurance Plan
- (a) The Contractor shall be responsible to conduct their own quality assurance plan to ensure all material, workmanship, etc. meet the requirements of the Specifications.
 - (b) The Contractor shall provide a Quality Assurance Plan outlining methods and frequency of tests, to the Contract Administrator for approval prior to start of the works, based on the following minimum requirements:
 - (i) Management responsibilities specific to the contract including the responsibility and authority for quality
 - (ii) Organization proposed for the Contract

- (iii) Site management and supervision
- (iv) Qualifications and competencies including currency of qualification of all staff, including sub-contractors, proposed to be used on the Contract
- (v) Contractor's method of control of sub-contract Work and quality
- (vi) All work processes and equipment for all construction Works
- (vii) Work method statements for all activities which shall include all requirements nominated in this specification. The Contractor shall include details on the following:
 - (i) Equipment and methods proposed to be used
 - (ii) Handling of rails and track panels
 - (iii) Handling, loading and unloading of track and turnout panels
 - (iv) Laying of sub-ballast and ballast
 - (v) Installation of rails, fastenings, drilling and cutting rail
 - (vi) Installation of turnouts, assembly and placement, documentation of inspection
 - (vii) Track surfacing, lining, lifting, documentation of lifts performed, and ballast regulating
 - (viii) Method of dealing with frozen winter ballast if winter track works are expected
 - (ix) Inspection, testing plans and documentation of track construction
- (c) During the Work the Contractor shall arrange for all relevant testing required by the Project Quality Assurance Plan and this Specification to be carried out by suitably qualified personnel approved by the Contract Administrator.
- (d) The Contractor shall establish and maintain a system of records that provides objective evidence that the requirements of the Contract have been satisfied.
- (e) The Contractor shall make all records pertaining to the Contract available to the Contract Administrator at all reasonable times and, where requested by the Contract Administrator, provide the Contract Administrator with a hard copy of the records.
- (f) At the completion of a package of works the Contractor shall provide a scanned copy of all the records in PDF or other agreed format, and As-Built survey results in AutoCAD format.
- (g) The Contractor shall make or arrange to be available documentation, records and personnel, including those of Subcontractors that are reasonably required for any audits or surveillance to be undertaken by the Contract Administrator to ensure specified requirements are being met.
- (h) All non-conformances shall be promptly reported to the Contract Administrator via non-conformance reports.
- (i) The Contractor shall provide to the Contract Administrator soft and hard copies of the following documents:
 - (i) Track Inspection Reports
 - (ii) Rail Reports
 - (iii) Track In-Service Certificates for track and special track work placed in service and
 - (iv) Rail mill certificates
- (j) The Contractor shall ensure that all track construction meets the requirements of the detailed drawings and all specifications required in the Contract.

E9.9 Handling of Materials

- (a) Contractor supplied materials shall be handled in a manner to prevent damage to any of the materials.
- (b) Equipment used must be of proper type and capacity for the intended purpose and must conform to all Provincial Government's Occupational Health & Safety standards.
- (c) Track and turnout panels must be handled using spreader bars or similar device to adequately distribute the load. Submit proposed handling method for track and turnout panels to the Contract Administrator for review and approval prior to use on site.

- (d) The weight of track and turnout panels must be known and compared with load chart of the crane to be used prior to attempting a lift.

E9.10 Materials

E9.10.1 General

- (a) No materials will be supplied by the City.
- (b) All materials shall be supplied by the Contractor. Unless otherwise specified, all track materials supplied by the Contractor shall conform to or exceed the referenced standards as section E 8.1.2 of this specification. Alternate proposals for material that will provide an equivalent or higher standards, may be considered and accepted or rejected by the Contract Administrator.
- (c) Materials supplied by the Contractor shall be inspected by the Contractor and Contract Administrator and will be advised if material in question is suitable for use. If material is rejected by the Contract Administrator, the Contractor shall immediately remove the material from site and shall be replaced at no additional cost to the City.

E9.10.2 Rail

- (a) Unless otherwise noted all tracks under the Scope of Work of this project shall be ballasted, new 115 lb RE jointed track on wooden ties using tie plates and spikes, or screws as required by CN Standards.
- (b) Rails to be minimum 39 feet in length, unless specified otherwise. The Contractor may propose alternate lengths for closure rails, which are subject to review and approval by the Contract Administrator prior to installation.
- (c) Portions of the existing mainline 85 lb rail beyond the turnout limits shall be replaced with 100 lb rail and 115 lb rail to provide proper transitioning.
- (d) All tracks shall have a standard gauge of 4'-8 1/2" or 1435mm, unless specified otherwise.
- (e) All rails shall be straight and free of kinks and in compliance with current AREMA Specifications, Chapter 4.
- (f) In general, track construction shall conform to the provisions set forth in Chapter 5, Part 4 of AREMA Manual for Railway Engineering.

E9.10.3 Step down Rail

- (a) The Contractor shall remove and replace a portion the existing mainline track to provide proper transitioning to install the CN #8-115 lb turnout in accordance with the Contract Drawings and this specification.
- (b) The Contractor shall supply and replace ties, rail and resurface the existing track as specified in the contract drawings.
- (c) The Contractor shall remove the portion of the existing mainline 85 lb rail beyond the turnout limits and replace with 100 lb rail and 115 lb rail to provide proper transitioning and resurface as stipulated in the construction drawings.
- (d) The Contractor shall remove the existing tie plates for 85 lb rail and replace with new 14" tie plates with 5.5" base width where 100 lb rails are installed.
- (e) The Contractor shall also replace existing spikes and anchors to accommodate the step down rail and turnouts as required.
- (f) The rails shall be 16 feet in length minimum.
- (g) The Contractor shall remove and dispose material off-site.

E9.10.4 Ties

- (a) Cross ties shall be new hardwood ties in accordance with Volume 1, Chapter 30, Part 3 of AREMA Manual for Railway Engineering and CN's Specifications for Industrial Tracks Section 5.8 for size, quality, treatment, and defects.

- (b) Cross ties for tangent track and curves less than 6 degrees shall be 2591 mm (8 ft. – 6 in.) in length and have minimum cross section dimensions of 152 mm x 203 mm (6 in. x 8 in.).
- (c) Cross ties for tangent track and curves less than 6 degrees shall be minimum No. 2 grade hardwood ties.
- (d) Cross ties for curves 6 degrees and greater shall be 2591 mm (8 ft. – 6 in.) in length and have minimum cross section dimensions of 178 mm x 229 mm (7 in. x 9 in.).
- (e) Cross ties for curves 6 degrees and greater shall be minimum No. 1 grade hardwood ties.
- (f) Switch ties to be new hardwood ties, minimum 7"x9" in size, with length as required per an appropriate CN Track Standard Plan.

E9.10.5 Ballast

- (a) Ballast shall be Crushed Rock Ballast Class 2 and in compliance with specifications of CN Engineering Specifications for Industrial Tracks, Appendix A, A16-1, CN Granular Specifications.
- (b) The ballast type shall be limited to either granites, traprocks, or quartzites.
- (c) Carbonated materials such as limestones, dolomites, and dolomitic limestones shall not be accepted as ballast materials.
- (d) The Contractor shall supply and unload new ballast required for the installation of tracks in conformance with CN standards and as specified below. The ballast shall be purchased and supplied at the contractor's cost.
- (e) Ballast shall conform to the following gradation and the specifications of Appendix A, A16-1, CN Granular Specifications.

Sieve Size	% Passing
45.3 mm (1-3/4")	100
32.0 mm (1-1/4")	70-95
25.4 mm (1")	50-80
19.0 mm (3/4")	10-40
12.7 mm (1/2")	0-15
4.76 mm (No. 4)	0-1
75 micron (No. 200)	0-1

- (f) Percentage of crushed particles in size range shall not be less than 70% by weight of all particles in that size range. Particles having one or more fractured faces will be used in calculating this percentage.
- (g) Sampled material finer than No.4 (4.76 mm) sieve will not be considered in determining the percentage of fractured faces.
- (h) Grading of crushed gravel ballast shall be determined by ASTM C316 (latest edition).
- (i) Amount of material finer than No.200 (75 micron) shall be determined by ASTM C117 (latest edition).
- (j) The percent of wear due to abrasion shall be less than 30% for the ballast per ASTM C 131 "A" grading.

E9.10.6 Sub-ballast

- (a) Material consisting of hard, strong and durable angular particles clean and free from clay, shale, cementation, organic material, frozen material, dust, other deleterious materials and elongated pieces.
- (b) Sub-ballast depth shall be 14" or 356 mm.

- (c) Minimum sub-ballast width is 12' or 3.657 m from the track centreline.
- (d) Sub-ballast crossfall slope, top and bottom shall be 2.5% from the track centreline.
- (e) Sub-ballast shall be compacted to 98% SPMDD.
- (f) Sub-ballast gradation shall be based on "Granular A Base Course" Material from the City of Winnipeg construction specifications CW3110, November 2022.
- (g) Sub-ballast gradation shall be sufficient to prevent penetration of the sub-ballast into the subgrade and shall conform to CN requirements.

E9.10.7 Subgrade

- (a) Subgrade shall be engineered clay fill and shall be designed & constructed as per the requirements of section 3.1 of CN Engineering Specifications for Industrial Tracks, latest edition.
- (b) Subgrade shall be compacted to 95% SPMDD.

E9.10.8 Turnouts

- (a) New CN #8, 115 lb turnouts on wood ties as per CN Track Standards Plan TS – 008.
- (b) Turnout Frog shall be rail bound manganese (RBM.)
- (c) Turnout ties shall be new hardwood No. 1-7"x9" (178mm x229mm) with lengths as required as per CN TS-008.

E9.10.9 Other Track Material (OTM)

- (a) All rail hardware, including spikes, washers, bolts, anchors, tie plates and joint bars to be supplied and installed by the Contractor, and must be new and match the specific size and type of rail being supplied.
- (b) 115 lb joint bars shall be new, 6-hole bars punched for alternating oval-head bolts as per CN Standard Plan TS-1203.
- (c) Compromised bars shall be used on mainline track for transitioning from 85 lb rail to 100 lb rail and from 100 lb rail to 115 lb rail.
- (d) Track bolts with nuts must be new, oval-neck heat-treated carbon steel bolts with square nuts as per CN Standard Plan TS-1319. Bolts and nuts shall conform to current AREMA Specifications and shall be to the appropriate size for the bolt holes in the rail section with length sufficient for a full nut and spring washer and 1/4" thread exposed.
- (e) New spring washers of the appropriate size to fit the track bolt used and shall conform to current AREMA Specifications. Each track bolt shall receive one spring washer.
- (f) Track spikes must be new 5/8" square with reinforced throat design as per CN Standard Plan TS-1325 'Spikes'. All track spikes shall conform to current AREMA Specifications for High-Carbon Steel Track Spikes, Chapter 5, Part 2. Length of track spike under its head shall be 6 inches.
- (g) Rail Anchors – Anchors shall be Improved Fair for of the proper size to fit 115 lb rail sections.
- (h) Tie Plates – 14" tie plates with 5 1/2" base width. All tie plates are to be double shoulder with 1:40 cant, free of injurious defects and foreign material, and shall conform to current AREMA Specifications for Steel Tie Plates 5-1-2 and CN Standard Plan TS-501.

E9.11 Equipment and Workforce

E9.11.1 Minimum Equipment Requirements – Contract Duration.

- (a) Mechanical High Production tampers capable of lifting, lining and tamping track and turnouts, capable of Class 1 railway tamping and production rates.
- (b) Mechanized High Production on-track ballast regulators.

E9.11.2 Minimum Manpower Requirements

- (a) All operators of on-track equipment shall hold a valid Canadian Rail Operating Rules (CROR) certificate.
- (b) The Contractor shall have a mechanic on duty during track closures to ensure that delays are not encountered as a result of mechanical failures.
- (c) The Contractor shall be responsible for determining the exact location of all utilities and signal cables and must have a qualified signal person assigned to support all track work where signal support is required.
- (d) Contractor shall have a qualified surveyor for marking out track centres, turnout and switch layouts and locations as required.

E9.12 Execution

E9.12.1 Construction of New Standard Track

- (a) The Contractor shall construct bolted rail track.
- (b) Rail shall comply to requirements listed in sections E9.10.2 and E9.10.38 of the specification and be handled and treated as per CN T.S. 4.7.2.
- (c) Ties shall be spaced 558 mm (22") centre to centre. Proper tie spacing and tie counts shall be validated and verified prior to the ballasting of the track.
- (d) The ballast shall extend a minimum of 305 mm (12") from the edge of tie.
- (e) Ballast depth shall be a minimum of 305 mm (12") below bottom of bearing surface of tie.
- (f) The Contractor shall ballast, surface, line, and regulate new track in accordance with Contract Documents.
- (g) Expansion Gaps shall be provided based on the following table:

EXPANSION SPACE REQUIRED FOR RAIL TEMPERATURE – MILLIMETRES								
Length of Rail		Rail Laying Temperature (°C)		Expansion Space - mm				
metres	feet	max	min	0	2	4	6	8
9	30	54°C	-32°C	>32°C	32 to 13°C	12 to -6°C	-7 to -26°C	<-26°C
10	33	54°C	-32°C	>32°C	32 to 15°C	14 to -2°C	-3 to -20°C	<-20°C
11	36	54°C	-32°C	>32°C	32 to 17°C	16 to 1°C	0 to -15°C	<-15°C
12	39	54°C	-32°C	>32°C	32 to 18°C	17 to 3°C	2 to -12°C	<-12°C
13 - 15	40 - 50	52°C	-7°C	>32°C	32 to 20°C	19 to 7°C	6 to -6°C	<-6°C
16 - 18	51 - 60	51°C	-7°C	>32°C	32 to 22°C	21 to 12°C	11 to 1°C	<1°C
19 - 21	61 - 70	49°C	-7°C	>32°C	32 to 24°C	23 to 16°C	15 to 7°C	<7°C
22 - 24	71 - 80	35°C	-1°C	>32°C	32 to 25°C	24 to 17°C	16 to 9°C	<9°C
25 - 27	81 - 90	32°C	2°C	32°C	31 to 25°C	24 to 18°C	17 to 11°C	<11°C
28 - 30	91 - 100	32°C	4°C	32°C	31 to 26°C	25 to 19°C	18 to 13°C	<13°C
31 - 36	101 - 120	32°C	10°C	32°C	31 to 26°C	25 to 20°C	19 to 16°C	<16°C
37 - 43	121 - 140	32°C	13°C	32°C	31 to 26°C	25 to 21°C	20 to 18°C	<18°C
44 - 49	141 - 160	32°C	16°C	32°C	31 to 26°C	25 to 21°C	20 to 18°C	<18°C
50 - 59	161 - 195	32°C	18°C	32°C	31 to 26°C	25 to 23°C	22 to 20°C	<20°C

- (h) Rail shall be connected using 6-hole bars, punched for alternating oval-head 1 inch diameter bolts as per CN Standard Plan TS-1203.
- (i) Supply and install Compromised Bars to provide proper transitioning in rail weight.
- (j) Bolts in the rail joint shall be tightened to the following torque:

Size of Bolts	Torque (ft-lb)
1"	490
7/8"	375

- (k) Rail joints on opposite rails shall be staggered by at least 3.66 m (12') to avoid square joints.
- (l) Cutting and drilling of rail shall be considered integral to the work and shall be performed in accordance with CN Engineering Track Standards Section 5.1 'Rail' and CN Recommended Method RM 3700-0 'Drilling Holes in Rail'.
- (m) Place joint bars and tighten bolts before spiking the rail.
- (n) Tighten bolts in the rail joints in the following sequence:
 - (i) The two bolts in the center of the bar
 - (ii) The second bolt from the end of each rail
 - (iii) The third bolt from the end of each rail

E9.12.2 Spikes

- (a) Spikes shall be new 152 mm (6 in.) x 16 mm (5/8 in.) square.
- (b) Spikes shall conform to the material specifications set forth in Volume 1, Chapter 5, Part 2 of AREMA Manual for Railway Engineering.
- (c) Spikes shall be installed as per method and spiking pattern within CN TS 5.10 – Track and Screw Spikes, Spiking Pattern to be as per CN Engineering Specifications for Industrial Tracks, Appendix A, A21, Spiking Pattern 'A'.
- (d) All turnouts must be fully spiked as per CN Engineering Specifications for Industrial Tracks, Appendix A, A21, Spiking Pattern 'D'.

E9.12.3 Anchors

- (a) Anchors shall be new or manufacturer certified refurbished rail anchors of appropriate size.
- (b) Anchors shall conform to the material specifications set forth in Volume 1, Chapter 5, Part 7 of AREMA Manual for Railway Engineering (latest edition).
- (c) Rail anchors shall be installed as per method and pattern within CN TS 5.6 - Rail Anchors.
- (d) Rail anchors shall comply to requirements listed in paragraph E9.10.9 'Rail Anchors' of the specification and be installed in accordance with CN Engineering Track Standards Section T.S. 5.6.
- (e) Rail anchor application to match the pattern as shown in CN Engineering Specifications for Industrial Tracks, Appendix A, A11, Anchor Pattern of Track – box anchor every other tie (except joints).
- (f) Do not apply rail anchors where they will interfere with bond wires, insulated joints or other signal or track appliances.

E9.12.4 Tie Plates

- (a) Tie plates shall comply to requirements listed in section E9.10.9 'Tie Plates' of the specifications and be installed as per CN T.S. 5.7.

E9.12.5 Gauge

- (a) Standard gauge for all track shall be 1,435 mm (56 1/2"). Gauge of after laying must be uniform and within 3.17 mm (1/8") of design

E9.12.6 Installation of Turnouts

- (a) Turnout installation shall include the supply of all labour, tools, and equipment for the loading, hauling and unloading of panelized turnouts and installation of turnouts at location indicated on Contract Drawings (includes rods, helper rods, stands, and all other appurtenances).
- (b) Installation of turnout shall be in accordance with CN Engineering Track Standards Section T.S. 4.7.3 – Turnout Installation.
- (c) Turnouts shall comply to requirements listed in paragraph E9.10.8 'Turnouts' of this specification.

- (d) New CN #8, 115 lb turnouts shall be installed on wood ties as per CN Track Standards Plan TS – 008.
- (e) Turnout Frog shall be rail bound manganese (RBM).
- (f) Turnout ties shall be new hardwood No. 1-7"x9" (178 mm x 229 mm) with lengths as required as per CN TS-008.
- (g) All hand operated switches must be equipped with rigid style switch stands complete with the appropriate reflectorized target 15" x 18" complete with double bladed target tip assembly as per CN plan TS-701. Target tip assemblies will be properly adjusted to display green when the switch is lined for the normal route and red when lined for the diverging route.
- (h) Contractor should replace/ remove portion of existing track in order to install the turnouts as shown in the contract drawings and dispose materials.
- (i) The Contractor shall surface and line turnout in accordance with Contract drawings.

E9.12.7 Ballasting

- (a) The Contractor shall unload, spread, lift, tamp, line, and regulate the ballast.
- (b) Ballast shall be meet or exceed the requirements of Section E9.10.5 'Ballast' of this specification and shall not include limestone.
- (c) Ballasting shall be performed in accordance with CN Engineering Track Standards Section T.S. 5.5 – Ballast (Crushed Gravel) and section T.S. 4.7.4 Track Surfacing and lining.
- (d) Ballast shall be placed as indicated on contract drawings and/or as directed by the Contract Administrator.
- (e) A tamper and ballast regulator shall be used for all ballasting and surfacing operations. The ballast regulator is to be used to shape the cross-section and distribute the track ballast in accordance with the Contract Drawings.
- (f) Before commencing ballasting or surfacing, the Contractor shall line the track to within 1" (25 mm) of final horizontal alignment, and ties shall be spaced in accordance with Contract specifications.
- (g) The Contractor may pre-ballast and compact ballast prior to constructing track.

E9.12.8 Sub-Ballasting

- (a) Install Sub-ballast placed on the prepared subgrade to form a stable foundation for the Track Ballast, after subgrade surface is inspected and approved by the Contract Administrator.
- (b) Ensure no frozen material is placed.
- (c) Place material only on clean unfrozen surface, free from snow, ice or standing water.
- (d) Place track sub-ballast using methods which do not lead to segregation or degradation.
- (e) Install sub-ballast to cross section and profile and compact. Where layer is 150 mm or less compact in one layer. Where thickness is greater than 150 mm, place material in equal layers of not more than 150 mm thick, compacting each layer to 95% of maximum dry density, prior to placing the next layer.

E9.12.9 Surfacing and Lining

- (a) The Contractor shall ballast, surface, line, and regulate new track in accordance with Contract Documents and in accordance with CN Engineering Track Standards Section T.S. 4.7.4 Track Surfacing and lining.
- (b) Track lining shall be done while lifting and tamping and shall be completed prior to the final surfacing lift.

E9.12.10 Final Surfacing

- (a) The Contractor shall supply all labour, tools, and equipment to bring the track to final grade lines after ballasting in accordance with the Contract Drawings.

- (b) The finished ballast section shall be shaped as shown on the drawings. Final surfacing shall be in accordance with CN Engineering Track Standards Section T.S. 4.7.4 – Track Surfacing and Lining.
- (c) The Contractor shall shape the ballast section in conformance with the Contract Documents, and shall include any ballasting required to fill tie cribs and shoulders
- (d) Track shall be surfaced to within the following tolerances:
 - (i) Line: Alignment: The maximum out-of-alignment measured from mid-ordinate of a 62' chord may not be more than 1/8".
 - (ii) Surface: The deviation from uniform profile on either rail at the mid-ordinate of a 20 m (62') chord, centered on visible peaks or sags, may not be more than 5 mm (3/16").
 - (iii) Cross-Level: At any point in the track measured cross-level shall not differ (positive or negative) from the design Cross-Level by more than 5 mm (3/16").
- (e) The Contractor shall make an additional final, lift, line, tamp and stabilization of all tracks 6 months after track is placed in service to address any settlement of the track which has been installed under this Contract.

E10. SHOP DRAWINGS

E10.1 Description

- (a) This Specification provides instructions for the preparation and submission of Shop Drawings. The term 'Shop Drawings' means drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data including Site erection drawings which are to be provided by the Contractor to illustrate details of the portion of the Work.
- (b) Further to C6.9, the Contractor shall arrange for the preparation of Shop Drawings required by the Contract, or as reasonably required by the Contract Administrator.
- (c) The Contractor shall submit to the Contract Administrator for review, all specified Shop Drawings. All submissions must be in metric units. Where data is in imperial units, the correct metric equivalent shall also be shown on all submissions for the Contract Administrators review.

E10.2 Shop Drawings

- (a) Original drawings shall be prepared by the Contractor, to illustrate the appropriate portion of Work including fabrication, layout, setting, or erection details as specified in the appropriate sections.
- (b) Shop Drawings shall bear the seal of a Professional Engineer licenced to practice in the Province of Manitoba.
- (c) Shop Drawings shall be prepared by the Contractor.

E10.3 Contractor's Responsibilities.

- (a) Review Shop Drawings, product data, and samples prior to submission and stamp and sign drawings indicating conformance to the Contract requirements.
- (b) Verify:
 - (i) Field Measurements;
 - (ii) Field Construction Criteria; and
 - (iii) Catalogue numbers and similar data.
- (c) Coordinate each submission with requirement of Work and Contract Documents. Individual Shop Drawings will not be reviewed until all related drawings are available.
- (d) Promptly submit Shop Drawings in an orderly sequence to prevent delay in the Work or the Work of other Contractors.
- (e) Notify the Contract Administrator, in writing at the time of submission, of deviations from requirements of Contract Documents.

- (f) Responsibility of deviations in submission from requirements of Contract Documents is not relieved by Contract Administrator's review of submission unless Contract Administrator gives written acceptance of specified deviations.
- (g) Responsibility for errors and omissions in submissions is not relieved by Contract Administrator's review of submittals.
- (h) Make any corrections required by the Contract Administrator and resubmit the required number of corrected copies of Shop Drawings. Direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections requested by the Contract Administrator on previous submission.
- (i) After Contract Administrator's review and return copies, distribute to Subcontractors and others as appropriate.
- (j) Maintain one (1) complete set of reviewed Shop Drawings, filed by Specification Section Number, at the Site of the Work for use and reference of the Contract Administrator and Subcontractors.

E10.4 Submission Requirements

- (a) Allow for a ten (10) Business Day period for review by the Contract Administrator of each individual and re-submission, unless noted in the Contract Documents.
- (b) Accompany submissions with transmittal letter containing:
 - (i) Date;
 - (ii) Project title and Tender Number;
 - (iii) Contractor's name and address;
 - (iv) Number of each Shop Drawing, product data and sample submitted;
 - (v) Specification Section, Title, Number, and Clause;
 - (vi) Drawing Number and Detail/Section Number; and
 - (vii) Other pertinent data.
- (c) Submission shall include:
 - (i) Date revision dates; and
 - (ii) Project title and tender number.
- (d) Name of:
 - (i) Contractor;
 - (ii) Subcontractor;
 - (iii) Supplier;
 - (iv) Manufacturer;
 - (v) Detailer (if applicable);
 - (vi) Identification of product or material;
 - (vii) Relation to adjacent structure or materials;
 - (viii) Field dimensions, clearly identified as such;
 - (ix) Specification section name, number, and clause number or drawing number and detail/section number.
 - (x) Applicable standard, such as CSA or CGSB numbers; and
 - (xi) Contractor's stamp, initialed or signed, certifying review of submission, verification of field measurements and compliance with Contract Documents.

E10.5 Other Considerations

- (a) Fabrication, erection, installation, or commissioning may require modifications to equipment or systems to conform to the design intent. Revise pertinent Shop Drawings and resubmit.
- (b) Material and equipment delivered to the Site of the Works will not be paid for at least until pertinent Shop Drawings have been submitted and reviewed.

- (c) Incomplete Shop Drawing information will be considered as stipulated deductions for the proposes of progress payment certificates.
- (d) No delay or cost claims will be allowed that arise because of delays in submissions, resubmissions, and the review of the Shop Drawings.

E11. ENVIRONMENTAL PROTECTION PLAN

- E11.1 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.
- E11.2 The Contractor is advised that at least the following Acts, Regulations, and By-laws apply to the Work. Some are available for viewing at the office of the Contract Administrator.
- E11.3 Federal Legislation
 - (a) Canadian Environmental Assessment Act (CEAA) c.37
 - (b) Transportation of Dangerous Goods Act and Regulations c.34
 - (c) And any other applicable Acts, Regulations, and By-laws
- E11.4 Provincial Legislation
 - (a) The Dangerous Goods Handling and Transportation Act D12
 - (b) The Endangered Species Act E111
 - (c) The Environment Act c.E125
 - (d) The Fire Prevention Act F80
 - (e) The Manitoba Heritage Resources Act H39-1
 - (f) The Manitoba Noxious Weeds Act N110
 - (g) The Manitoba Nuisance Act N120
 - (h) The Public Health Act c.P210
 - (i) The Workplace Safety and Health Act W210
 - (j) And current applicable associated regulations (Note: Provincial regulations updated as of September 1999)
 - (k) And any other applicable Acts, Regulations, and By-laws
- E11.5 Municipal Legislation
 - (a) The RM of Springfield By-law No. 19-11 and all amendments
 - (b) And any other applicable Acts, Regulations, and By-laws
- E11.6 Materials Handling and Storage
 - (a) Storage of construction materials shall be confined to the defined storage areas as shown on the Drawings.
- E11.7 Fuel Handling and Storage
 - (a) The Contractor shall obtain all necessary permits from Manitoba Environment for the handling and storage of fuel products and shall provide copies to the Contract Administrator.
 - (b) 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.
 - (c) 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.

- (d) The Contractor shall ensure that any temporary fuel storage areas established for construction of the project are contained by an impermeable dyke. Dykes shall be designed, constructed, and maintained to retain not less than 100% of the capacity of the total number of containers or 110% of the largest container, whichever is greatest. The dykes shall be constructed of clay or similar impervious material. If this type of material is not available, the dyke shall be constructed of locally available material and lined with high-density polyethylene (HDPE). Furthermore, the fuel storage area(s) shall be secured by a barrier such as a high fence and gate to prevent vandalism.
- (e) The Contractor shall ensure that all fuel storage containers are inspected daily for leaks and spillage.
- (f) Products transferred from the fuel storage area(s) to specific work Sites shall not exceed the daily usage requirement.
- (g) 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.
- (h) 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.
- (i) 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.

E11.8 Waste Handling and Disposal

- (a) The construction area shall be kept clean and orderly at all times during and at completion of construction.
- (b) 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.
- (c) The Contractor shall, during and at the completion of construction, clean-up the construction area and 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 require special disposal methods (refer to Section 30.5.D) in Manitoba Regulation #150/91.
- (d) Indiscriminate dumping, littering, or abandonment shall not take place.
- (e) No on-site burning of waste is permitted.
- (f) Waste storage areas shall not be located so as to block natural drainage.
- (g) Runoff from a waste storage area shall not be allowed to cause siltation of a watercourse.
- (h) 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.
- (i) Equipment shall not be cleaned near watercourses; contaminated water from onshore cleaning operations shall not be permitted to enter watercourses.
- (j) Discharge from any dewatered areas shall be released into a well-vegetated area, filter bag, settling basin, or storm sewer system to remove suspended material and other deleterious substances from the discharge before it finds its way into any watercourse.

E11.9 Dangerous Goods/Hazardous Waste Handling and Disposal

- (a) Dangerous goods/hazardous waste are identified by, and shall be handled according to The Dangerous Goods Handling and Transportation Act and Regulations.
- (b) The Contractor shall be familiar with The Dangerous Goods Handling and Transportation Act and Regulations.

- (c) 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.
- (d) Different waste streams shall not be mixed.
- (e) Disposal of dangerous goods/hazardous wastes shall be at approved hazardous waste facilities.
- (f) Liquid hydrocarbons shall not be stored or disposed of in earthen pits on Site.
- (g) 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.
- (h) Used oil filters shall be drained, placed in suitable storage containers, and buried or incinerated at approved hazardous waste treatment and disposal facilities.
- (i) Dangerous goods/hazardous waste storage areas shall be located at least 100 m away from the high water line and be dyked.
- (j) Dangerous goods/hazardous waste storage areas shall not be located so as to block natural drainage.
- (k) Runoff from a dangerous goods/hazardous waste storage area shall not be allowed to cause siltation of a watercourse.
- (l) 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.

E11.10 Emergency Response

- (a) The Contractor shall ensure that due care and caution is taken to prevent spills.
- (b) 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 the table: Spills That Must be Reported to Manitoba Conservation as Environmental Accidents) to Manitoba Environment, immediately after occurrence of the environmental accident, by calling the 24-hour emergency phone number (204) 945-4888.
- (c) 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.
- (d) 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 Environment 24-hour Spill Response Line (204) 945-4888, Police, Fire Department, Ambulance, company back-up).
 - (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.
 - Dyke spill material with dry, inert absorbent material or dry clay soil or sand.
 - Prevent spill material from entering waterways and utilities by dyking.
 - Prevent spill material from entering manholes and other openings by covering with rubber spill mats or dyking.
- (e) Resume any effective action to contain, clean up, or stop the flow of the spilled product.
- (f) The emergency response coordinator shall ensure that all environmental accidents involving contaminants shall be documented and reported to Manitoba Environment according to The Dangerous Goods Handling and Transportation Act, Environmental Accident Report Regulation 439/87.
- (g) 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.
- (h) 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.
- (i) City emergency response, 9-1-1, shall be used if other means are not available.

Spills That Must be Reported to 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	1 kg or 1 L
	PG III	50 kg or 50 L
5.2	Organic Peroxide	1 kg or 1 L
6.1	PG I	1 kg or 1 L
	PG II & III	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 (except PCB mixtures)	50 kg
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)		

E11.11 Noise

- (a) Noise-generating activities shall be limited to the hours indicated in the RM of Springfield Noise By-Law (19-11), unless otherwise accepted in advance by the Contract Administrator.
- (b) The Contractor shall be responsible for scheduling Work to avoid potential noise problems and/or employ noise reduction measures to reduce noise to acceptable limits. The Contractor shall also demonstrate to the Contract Administrator that Works to be performed during the night-time period, on Sundays, and Holidays shall not exceed the approved limit.

E11.12 Dust

- (a) Dust control practices implemented by the Contractor during construction shall include regular street cleaning and dampening of construction access roads and Work areas with water or approved chemicals at an adequate frequency to prevent the creation of dust.
- (b) Only water or chemicals approved by the Contract Administrator shall be used for dust control. The use of waste petroleum or petroleum by-products is not permitted.
- (c) The Contractor shall ensure that trucks which are used to haul excavated material and backfill material to and from the work Site utilize tarpaulin covers during transport to prevent material from falling onto the street and creating dust.
- (d) Stockpiled soils shall be covered with tarpaulin covers to prevent the creation of dust.

E11.13 Erosion Control

- (a) The Contractor shall develop a sediment control plan prior to beginning construction to the satisfaction of the Contract Administrator.
- (b) Sediment control fencing, or other such erosion control structures, shall be employed wherever construction activity increases the potential for runoff to carry sediment into a drainage channel or other watercourse. The Contractor shall inspect all such structures daily during heavy construction activity in the areas of the structures and after a heavy rainfall to ensure their continued integrity.
- (c) All areas disturbed during construction shall be landscaped and revegetated with native and/or introduced plant species in order to restore and enhance the Site and to protect against soil erosion unless otherwise indicated.
- (d) The disturbed surface shall be revegetated so as to create a dense root system in order to defend against soil erosion on the right-of-way, stream banks, and any other disturbed areas susceptible to erosion.
- (e) The loss of topsoil and the creation of excessive dust by wind during construction shall be prevented by the addition of temporary cover crop, water, or tackifier, if conditions so warrant.
- (f) Effective sediment and erosion control measures (e.g., straw mulch, erosion control blankets, interceptor ditches) are used both during construction and until vegetation is re-established to prevent sediment-laden runoff from entering the Red River.
- (g) The Contractor shall routinely inspect all erosion and sediment control structures and immediately carry out any necessary maintenance. Several inspections shall be performed during rainy days.

E11.14 Runoff Control

- (a) Construction activities on erodible slopes shall be avoided during spring runoff and heavy rainfall events.

E11.15 Vegetation

- (a) Vegetation shall not be disturbed without written permission from the Contract Administrator.
- (b) 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 Contract Administrator.
- (c) Herbicides and pesticides shall not be used adjacent to any surface watercourses.
- (d) Trees or shrubs shall not be felled into watercourses.
- (e) 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.

- (f) 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 practice by bonded tree care professionals.
- (g) Damaged trees which are not viable shall be replaced at the expense of the Contractor.

E11.16 Landscaping

- (a) Construction waste (excluding common construction gravel, sand, etc.) shall be removed to a minimum depth of 600 mm below final grade in all areas that are to be backfilled with suitable material and revegetated in accordance with the City of Winnipeg Standard Construction Specifications.
- (b) The Contractor shall adhere to the landscaping plan for maintenance of initial stages and development stages of the plant community.