



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 395-2011

**2011 BRIDGE MAINTENANCE – SLOPE STABILIZATION – ROUTE 90
UNDERPASS AT LOGAN AVENUE**

TABLE OF CONTENTS

PART A - BID SUBMISSION

Form A: Bid	1
Form B: Prices	3

PART B - BIDDING PROCEDURES

B1. Contract Title	1
B2. Submission Deadline	1
B3. Site Investigation	1
B4. Enquiries	1
B5. Addenda	1
B6. Substitutes	2
B7. Bid Components	3
B8. Bid	3
B9. Prices	4
B10. Qualification	4
B11. Opening of Bids and Release of Information	5
B12. Irrevocable Bid	5
B13. Withdrawal of Bids	5
B14. Evaluation of Bids	6
B15. Award of Contract	6

PART C - GENERAL CONDITIONS

C0. General Conditions	1
------------------------	---

PART D - SUPPLEMENTAL CONDITIONS

General

D1. General Conditions	1
D2. Scope of Work	1
D3. Contract Administrator	1
D4. Contractor's Supervisor	1
D5. Notices	1

Submissions

D6. Authority to Carry on Business	2
D7. Safe Work Plan	2
D8. Insurance	2
D9. Performance Security	3

Schedule of Work

D10. Commencement	3
D11. Substantial Performance	3
D12. Total Performance	4
D13. Liquidated Damages	4
D14. Scheduled Maintenance	4

Control of Work

D15. Prime Contractor – The Workplace Safety and Health Act (Manitoba)	4
D16. Authorized Work on Private Property	5
D17. Layout of the Work	5
D18. Cooperation with Others	5
D19. Environmental Planning	5

Measurement and Payment

D20. Payment	5
--------------	---

Warranty

D21. Warranty	5
---------------	---

Form H1: Performance Bond	6
---------------------------	---

Form H2: Irrevocable Standby Letter of Credit	8
---	---

PART E - SPECIFICATIONS

General

E1. Applicable Specifications and Drawings	1
E2. Traffic Control	1
E3. Water Obtained From the City	2
E4. Surface Restorations	2
E5. Water Obtained From the City	2
E6. Existing Underground Services, Utilities, and Structures	3
E7. Slope Stabilization	3

PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 2011 BRIDGE MAINTENANCE – SLOPE STABILIZATION – ROUTE 90 UNDERPASS AT LOGAN AVENUE

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, June 2, 2011.

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

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

B3. SITE INVESTIGATION

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

B4. ENQUIRIES

B4.1 All enquiries shall be directed to the Contract Administrator identified in D3.1.

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

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

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

B4.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.

B5. ADDENDA

B5.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.

B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.

B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt>

B5.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

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

B6. SUBSTITUTES

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

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

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

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

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

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

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

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

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

B6.8 If the Contract Administrator approves a substitute as an "approved alternative", any Bidder bidding that approved alternative may base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B14.

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

B6.10 Notwithstanding B6.2 to B6.9, and in accordance with B7.7, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B14.1(a).

B7. BID COMPONENTS

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

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

B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.

B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.

B7.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.

B7.5 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:

The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg, MB R3B 1J1

B7.5.1 Samples or other components of the Bid Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid Submission.

B7.6 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.

B7.7 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B14.1(a).

B7.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to (204) 949-1178.

B7.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.

B7.8.2 Bids submitted by internet electronic mail (e-mail) will not be accepted.

B8. BID

B8.1 The Bidder shall complete Form A: Bid, making all required entries.

B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:

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

B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.

- B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B8.4 Paragraph 10 of Form A: Bid shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his own name, it shall be signed by the Bidder;
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers;
 - (d) if the Bidder is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B8.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.
- B8.4.2 All signatures shall be original.
- B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B9. PRICES

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

B10. QUALIFICATION

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

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

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

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

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

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

B11. OPENING OF BIDS AND RELEASE OF INFORMATION

B11.1 Bids will not be opened publicly.

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

B11.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract Amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt>

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

B12. IRREVOCABLE BID

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

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

B13. WITHDRAWAL OF BIDS

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

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

B14. EVALUATION OF BIDS

- B14.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Bid Opportunity or acceptable deviation there from (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to 0 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B6.
- B14.2 Further to B14.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.
- B14.3 Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid or in other information required to be submitted, that he is responsible and qualified.
- B14.4 Further to B14.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.
- B14.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.
- B14.4.2 Further to B14.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

B15. AWARD OF CONTRACT

- B15.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

- B15.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.
- B15.2.1 Without limiting the generality of B15.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
 - (b) the prices are materially in excess of the prices received for similar work in the past;
 - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
 - (d) only one Bid is received; or
 - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B15.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B14.
- B15.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his Bid upon written request to the Contract Administrator.
- B15.4 Notwithstanding C4, the City will issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B15.5 The Contract, as defined in C1.1, in its entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that it is not necessarily attached to or accompany said Purchase Order.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

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

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of embankment stabilization.

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

- (a) Excavation
- (b) Supply and placement of backfill material
- (c) Supply and installation of drainage piping
- (d) Landscape restoration

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is Dillon Consulting Limited, represented by:

Mr. Mark Doucet, P.Eng.
200-895 Waverley Street
Winnipeg, Manitoba R3T 5P4

Telephone No. (204) 453-2301
Facsimile No. (204) 452-4412

D3.2 At the pre-construction meeting, Mr. Doucet will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D4. CONTRACTOR'S SUPERVISOR

D4.1 At the pre-construction meeting, the Contractor shall identify his designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

D5. NOTICES

D5.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.

D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D3.1.

D5.3 Notwithstanding C21., all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following facsimile number:

The City of Winnipeg
Chief Financial Officer
Facsimile No.: (204) 949-1174

- D5.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following address or facsimile number:

The City of Winnipeg
Legal Services Department
Attn: City Solicitor
185 King Street, 3rd Floor
Winnipeg MB R3B 1J1
Facsimile No.: (204) 947-9155

SUBMISSIONS

D6. AUTHORITY TO CARRY ON BUSINESS

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

D7. SAFE WORK PLAN

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

D8. INSURANCE

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

D9. PERFORMANCE SECURITY

- D9.1 If the Contract Price exceeds twenty-five thousand dollars (\$25,000.00), the Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:
- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
 - (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or
 - (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.
- D9.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.
- D9.2 The Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of Purchase Order and prior to the commencement of any Work on the Site.

SCHEDULE OF WORK

D10. COMMENCEMENT

- D10.1 The Contractor shall not commence any Work until he is in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.
- D10.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D6;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the Safe Work Plan specified in D7;
 - (iv) evidence of the insurance specified in D8;
 - (v) the performance security specified in D9;
 - (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.
- D10.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the Purchase Order.
- D10.4 The City intends to award this Contract by July 2, 2011
- D10.4.1 If the actual date of award is later than the intended date, the dates specified for Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

D11. SUBSTANTIAL PERFORMANCE

- D11.1 The Contractor shall achieve Substantial Performance by August 30, 2011.
- D11.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted

during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.

- D11.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

D12. TOTAL PERFORMANCE

- D12.1 The Contractor shall achieve Total Performance by September 15, 2011.
- D12.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.
- D12.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

D13. LIQUIDATED DAMAGES

- D13.1 If the Contractor fails to achieve Total Performance in accordance with the Contract by the day fixed herein for Total Performance, the Contractor shall pay the City six hundred dollars (\$600) per Calendar Day for each and every Calendar Day following the day fixed herein for Total Performance during which such failure continues.
- D13.2 The amount specified for liquidated damages in D13.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Total Performance by the day fixed herein for same.
- D13.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D14. SCHEDULED MAINTENANCE

- D14.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:
- (a) Sod as specified in CW 3510;
- D14.2 Determination of Substantial Performance and Total Performance shall be exclusive of scheduled maintenance identified herein. All scheduled maintenance shall be completed prior to the expiration of the warranty period. Where the scheduled maintenance cannot be completed during the warranty period, the warranty period shall be extended for such period of time as it takes the Contractor to complete the scheduled maintenance.

CONTROL OF WORK

D15. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D15.1 Further to C6.24, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

D16. AUTHORIZED WORK ON PRIVATE PROPERTY

D16.1 The Contractor shall confine his works to the right of way or easements as much as possible. Where Work is required to be done on or accessed through private property, the Contractor shall obtain written permission from the property owner and provide a copy to the Contract Administrator.

D17. LAYOUT OF THE WORK

D17.1 The Contract Administrator will provide the basic centrelines and an elevation of the Works.

D17.2 The Contractor shall be responsible for the true and proper layout of the Work and for the correctness of the location, levels, dimensions, and alignment of all aspects of the Work. He shall provide all required instruments and competent personnel for performing all layouts.

D17.3 The Contract Administrator shall be notified at least one (1) working day prior to any Work being commenced in order to have the option to check and review all elevations and layouts at his discretion.

D17.4 The Contractor shall carefully protect and preserve all benchmarks, stakes, and other items used in giving the basic data supplied by the Contract Administrator. Any such benchmarks or stakes removed or destroyed by the Contractor, without the consent of the Contract Administrator, shall be replaced by the Contract Administrator at the expense of the Contractor.

D18. COOPERATION WITH OTHERS

D18.1 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 on the structure, approach roadways, adjacent roadways or right-of-way. The activities of these agencies may coincide with the Contractor's execution of the Work, and it will be the Contractor's responsibility to cooperate to the fullest extent with the other personnel working in the area, and such cooperation is an obligation of the Contractor under the terms of this Contract.

D19. ENVIRONMENTAL PLANNING

D19.1 The Contractor shall conduct his operations in accordance with all current federal, provincial or other regulations concerning environmental protection and pollution control. It shall be the Contractor's responsibility to familiarize himself with all applicable regulations and to obtain all necessary approvals and permits for his operations.

MEASUREMENT AND PAYMENT

D20. PAYMENT

D20.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D21. WARRANTY

D21.1 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.

FORM H1: PERFORMANCE BOND
(See D9)

KNOW ALL MEN BY THESE PRESENTS THAT

_____ ,
(hereinafter called the "Principal"), and

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

_____ dollars (\$ _____ . _____)

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

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

BID OPPORTUNITY NO. 395-2011

2011 BRIDGE MAINTENANCE – SLOPE STABILIZATION – ROUTE 90 UNDERPASS AT LOGAN AVENUE

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

(Date)

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 395-2011

2011 BRIDGE MAINTENANCE – SLOPE STABILIZATION – ROUTE 90 UNDERPASS AT
LOGAN AVENUE

Pursuant to the request of and for the account of our customer,

(Name of Contractor)

(Address of Contractor)

WE HEREBY ESTABLISH in your favour our irrevocable Standby Letter of Credit for a sum not exceeding
in the aggregate

Canadian dollars.

This Standby Letter of Credit may be drawn on by you at any time and from time to time upon written demand for payment made upon us by you. It is understood that we are obligated under this Standby Letter of Credit for the payment of monies only and we hereby agree that we shall honour your demand for payment without inquiring whether you have a right as between yourself and our customer to make such demand and without recognizing any claim of our customer or objection by the customer to payment by us.

The amount of this Standby Letter of Credit may be reduced from time to time only by amounts drawn upon it by you or by formal notice in writing given to us by you if you desire such reduction or are willing that it be made.

Partial drawings are permitted.

We engage with you that all demands for payment made within the terms and currency of this Standby Letter of Credit will be duly honoured if presented to us at:

(Address)

and we confirm and hereby undertake to ensure that all demands for payment will be duly honoured by us.

All demands for payment shall specifically state that they are drawn under this Standby Letter of Credit.

Subject to the condition hereinafter set forth, this Standby Letter of Credit will expire on

(Date)

It is a condition of this Standby Letter of Credit that it shall be deemed to be automatically extended from year to year without amendment from the present or any future expiry date, unless at least 30 days prior to the present or any future expiry date, we notify you in writing that we elect not to consider this Standby Letter of Credit to be renewable for any additional period.

This Standby Letter of Credit may not be revoked or amended without your prior written approval.

This credit is subject to the Uniform Customs and Practice for Documentary Credit (1993 Revision), International Chamber of Commerce Publication Number 500.

(Name of bank or financial institution)

Per: _____
(Authorized Signing Officer)

Per: _____
(Authorized Signing Officer)

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
U228-11-01	2011 Bridge Maintenance – Route 90 Underpass – Slope Stabilization

E2. TRAFFIC CONTROL

- E2.1 Description
- The Work covered under this item shall cover specific traffic control requirements.
 - The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified.
- E2.2 Notification
- The Contractor shall notify the City of Winnipeg Customer Service at 986-5640, **two days** in advance of any traffic lane closures.
- E2.3 Construction Methods
- E2.3.1 General
- The Contractor will be responsible for pedestrian and traffic control at the Site acceptable to the Contract Administrator.
 - For traffic control in the immediate Work area, the Contractor shall erect and maintain all applicable traffic control devices in accordance with the provision contained in the latest edition of the "Manual of Temporary Traffic Control in Work Areas on City Streets," issued by the City of Winnipeg.
 - The Contractor shall provide and maintain flagmen in accordance with the above mentioned manual.
 - The Contractor shall take all other safety measures necessary to cope with any peculiar or unusual circumstances that have not been set out in the above mentioned manual and shall, at all times, ensure that maximum protection is afforded to the road user and that his operations in no way interfere with the safe operation of traffic.

- (e) Improper signing will be sufficient reason for the Contract Administrator or Inspector to immediately shut down the entire job.
- (f) Barricades supplied and installed by the Contractor and the telephone number(s) at which he can be reached twenty-four (24) hours per day, seven (7) days per week.
- (g) During the hours when the Contractor is not working, equipment and stockpiled materials shall be left in such a location so as not to interfere with or present a hazard to motorists or pedestrians.
- (h) Permanent repairs are completed. The Contractor shall bear all costs associated with temporary repairs and their maintenance.

E2.3.2 Specific

- (a) Route 90
 - (i) One lane at a time may be closed except weekdays from 7:00 to 9:00 and 15:30 to 18:00 hours.
 - (ii) All lanes shall be opened when no construction activities are taking place.
 - (iii) Stockpiled materials shall not be placed on traffic lanes.
 - (iv) Contractor to ensure that the traffic lanes are clean and free of debris when they are opened.
 - (v) During the project a temporary snow fence shall be installed where open excavations are adjacent to pedestrian facilities. The Contractor shall be responsible for maintaining the snow fence in a proper working condition.
 - (vi) The Contractor shall maintain a safe pedestrian path which is wheel chair accessible for the duration of the project. The slope of the pedestrian path shall not exceed 4%.

E2.4 Measurement and Payment

- (a) Traffic control will not be measured. This item of Work will be paid for at the Contract Lump Sum Price, per location for "Traffic Control", performed in accordance with the Specification and accepted by the Contract Administrator.

E3. WATER OBTAINED FROM THE CITY

- E3.1 Further to clause 3.7 of CW 1120, the Contractor shall pay for all costs, including sewer charges, associated with obtaining water from the City in accordance with the Waterworks and Sewer By-laws.

E4. SURFACE RESTORATIONS

- E4.1 Further to clause 3.3 of CW 1130, when Total Performance is not achieved in the year the Contract is commenced, the Contractor shall temporarily repair any Work commenced and not completed to the satisfaction of the Contract Administrator. The Contractor shall maintain the temporary repairs in a safe condition as determined by the Contract Administrator.

E5. WATER OBTAINED FROM THE CITY

- E5.1 Further to clause 3.7 of CW 1120, the Contractor shall pay for all costs, including sewer charges, associated with obtaining water from the City in accordance with the Waterworks and Sewer By-laws.

E6. EXISTING UNDERGROUND SERVICES, UTILITIES, AND STRUCTURES

E6.1 General

- (a) This Specification covers requirements and activities for notifying, locating and working around existing services, utilities and structures within and adjacent to the Site.

E6.2 Construction Methods

- (a) The Contractor will accept the information shown on the Drawings for the existing services, utilities and structures at own risk. The Owner and the Contract Administrator assume no responsibility for accuracy or completeness of the information provided.
- (b) The Contractor will obtain utility clearances for underground Plant in the vicinity of the Work before starting construction.
- (c) The Contractor will arrange and pay for hydro-excavation (soft digging) to locate and verify the location and depth of existing services, utilities and structures.
- (d) The Contractor will expose, support, protect, relocate, or remove and replace as required by and in a manner acceptable to the Owner, existing services, utilities, and structures that are indicated in the Specifications or shown on the Drawings as being adjacent to the Work.
- (e) The Contractor will be required to maintain any services, utilities, and structures from damage as a result of construction activities.
- (f) The Contractor will make arrangements with the utility owner to repair existing services, utilities and structures adjacent to the Work that are damaged due to carelessness during construction.
- (g) The Contractor will notify the Contract Administrator immediately of existing services, utilities, structures and obstructions that are not shown on the Drawings or are in different locations than shown on the Drawings and are in conflict with the Work.
- (h) The Contractor will remove abandoned and relocate or remove and replace existing underground services that occur in excavations for and adjacent to the Work.

E6.3 Measurement and Payment

- (a) No separate measurement or payment will be made for the provision of underground services, utilities, and structures

E7. SLOPE STABILIZATION

E7.1 Description

- E7.1.1 The Work covered under this item shall include all items relating to the embankment slope repairs at the CN Underpass at Route 90 and CNR Oakpoint Subdivision.
- E7.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified.

E7.2 Scope of Work

- E7.2.1 The scope of this Work is not necessarily confined to the following, which is compiled as a general outline:
 - (a) Excavation.
 - (b) Supply and placement of geotextile fabric
 - (c) Supply and placement of all backfill materials.

- (d) Supply and placement of perforated and solid drain pipes complete with the necessary connectors and other appurtenances. Connect these pipes to the existing land drainage sewer.
- (e) Grading, supply and placement of topsoil and sod.

E7.3 Materials

E7.3.1 General

- (a) The Contractor shall be responsible for the supply, safe storage, and handling of all materials set forth in this Specification. All materials supplied under this Specification shall be subject to inspection and testing by the Contract Administrator. There shall be no charge to the City for any materials taken by the Contract Administrator for testing purposes.
- (b) The Contractor shall supply all materials incidental to these Works. All materials must be on hand prior to commencement of the Work.

E7.3.2 Aggregate

(a) Free Draining Granular Backfill

- (i) Free draining granular backfill shall consist of clean, free draining, sound, dense, durable crushed rock. The material shall be free from organics, roots, silt, sand, clay, snow, ice or any other deleterious material that would detract from the drainage characteristics of clean rockfill.
- (ii) Free draining granular backfill shall meet the following requirements:

Parameter	Test Method	Specified Limit
Bulk Specific Gravity	ASTM C127	2.6 minimum
LA Abrasion	ASTM C131	32% maximum
Soundness	ASTM C88	13% maximum
Gradation	ASTM D5519	See below

- (iii) Free draining granular backfill shall meet the following gradation requirements:

Canadian Metric Sieve Size	Percent of Total Dry Weight Passing Each Sieve
40 000	100%
25 000	50% - 80%
20 000	5% - 20%
12 500	0% - 5%
80	0% - 3%

(b) Sand Backfill

- (i) Sand for bedding and backfill shall conform to Standard Construction Specification CW 2030, Section 2.

E7.3.3 Earth Fill Backfill Material

- (a) Earth fill backfill material shall consist of either suitable Site material or clay borrow material. Earth fill backfill shall consist of suitable clay materials, free of organics and silts, as approved by the Contract Administrator.

E7.3.4 Geotextile

- (a) Geotextile fabric shall consist of Propex 861 non-woven geotextile or equivalent as approved by the Contract Administrator.

E7.3.5 Subdrain Pipe

- (a) Subdrain pipe shall be perforated as indicated on the Drawing. The pipe shall conform to Standard Construction Specification CW 3120, Section 2.4.

E7.3.6 CB Lead Pipe

- (a) CB lead pipes shall be 200mm diameter PVC as indicated on the Drawing. The pipe shall conform to Standard Construction Specification CW 2130.

E7.3.7 Sodding

- (a) Sodding materials shall conform to Standard Construction Specification CW 3510.

E7.4 Submittals

- (a) The Contractor shall submit the proposed supplier(s) of free draining granular backfill a minimum of 10 days prior to supply and placement for approval and testing by the Contract Administrator.
- (b) The Contractor shall submit the proposed testing laboratory for specific tests a minimum of 10 days prior to conducting the tests for approval by the Contract Administrator.

E7.5 Testing and Approvals

- (a) No supply and placement of free draining granular material will be permitted prior to the Contract Administrator approving the source(s).
- (b) The procedure for preparation of all samples shall be in accordance with ASTM D75.
- (c) The Contractor shall be responsible for completing a minimum of one gradation test on the free draining granular backfill, in accordance with ASTM D 5519, at his own expense.
- (d) The Contractor shall be responsible for demonstrating the free draining granular backfill meets the requirements of E9.3.2(a) to the satisfaction of the Contract Administrator. Laboratory testing for Bulk Specific Gravity, LA Abrasion and Soundness may be requested by the Contract Administrator, and shall be conducted at the Contractor's own expense.
- (e) Changes in material properties of the free draining granular backfill supplied to Site may require additional testing as requested by the Contract Administrator, and shall be conducted by the Contractor at his own expense.
- (f) All materials set forth in this Specification shall be subject to inspection and testing by a testing laboratory approved by the Contract Administrator

E7.6 Construction Methods

E7.6.1 Excavation

- (a) Excavation shall be done in accordance with Standard Construction Specification CW 3170 and as indicated herein. Excavation will be required for the following:
 - (i) Excavate to the top of the subdrain within the area of the slope instability to the limits shown on the Drawing or as directed by the Contract Administrator, prior to commencement of subdrain excavation or installation.
 - (ii) Trench excavate for the installation of subdrains.

E7.6.2 Installation of Geotextile Fabric

- (a) Install geotextile fabric in accordance with this specification and procedures recommended by the manufacturer.
- (b) Commence installation of geotextile fabric after geotextile material has been approved by the Contract Administrator and after the preparation of the sub-grade has been completed to the satisfaction of the Contract Administrator.
- (c) Unroll geotextile fabric to the limits of the completed subdrain excavation as directed by the Contract Administrator
- (d) Unroll geotextile as smooth as possible on the prepared sub-grade in the direction of the subdrain trench excavation.
- (e) Install geotextile in the longest continuous practical length, free from tension, stress, wrinkles and creases.
- (f) Cut or fold geotextile fabric to conform to curves.
- (g) Joints must be overlapped a minimum of 1000 mm in the direction parallel to the drain pipe, or a minimum of 600 mm in the direction transverse to the drain pipe.
- (h) Install pins or place piles of free draining granular backfill as required to anchor the geotextile in place.
- (i) Remove and replace geotextile that is improperly installed or damaged as directed by the Contract Administrator.

E7.6.3 Installation of Subdrain Pipe

- (a) The installation of subdrain pipe shall be done in accordance with Standard Construction Specification CW 2130.

E7.6.4 Free Draining Granular Backfill

- (a) Backfill subdrain trenches with free draining backfill material as shown on the Drawing in lifts no greater than 300mm thick and compacted to the satisfaction of the Contract Administrator.

E7.6.5 Earth Fill Backfill

- (a) Backfill subdrain trenches and the slope failure area with earth fill backfill to the lines and grades shown on the Drawing.
- (b) Earth fill backfill shall be compacted to a minimum of 95% of Standard Proctor Maximum Dry Density (SPMDD) in lifts no greater than 300 mm thick.

E7.6.6 Grading of Work Area

- (a) Grading of the Work Area as shown on the Drawing shall be considered as "Boulevard Grading" and be done in accordance with Standard Construction Specification CW 3110.

E7.6.7 Site Restoration

- (a) Restore any damage to existing facilities to an equal or better condition than it was prior to construction, as approved by the Contract Administrator. Specifically:
 - (i) Grass vegetation shall be restored by sodding in accordance with CW 3510.
 - (ii) Concrete sidewalks shall be restored in accordance with CW 3235.

E7.6.8 Topsoil and Sodding

- (a) Topsoil and sod shall be placed on all graded boulevard areas and drainage trenches within the Work Area shown on the Drawing. Topsoil and sod shall be placed in accordance with CW 3510.
- (b) Topsoil and sod shall be placed in any areas where existing grass vegetation is damaged by the Contractor outside of the Work Area shown on the Drawing, and shall be considered incidental to the Work.

E7.7 Measurement and Payment

E7.7.1 Excavation and Placement of Earth Fill Backfill

- (a) The excavation and placement of earth fill backfill above the trenches will be measured on a cubic metre basis. This item of work will be paid for at the Contract Unit Price for "Excavation and Placement of Earth Fill Backfill", performed in accordance with this Specification and accepted by the Contract Administrator.

E7.7.2 Perforated Subdrain System

- (a) The construction of the Perforated Subdrain System, including excavation, supply and installation of perforated subdrains, geotextile fabric, free draining granular backfill, and sand backfill, will be measured on a per lineal meter basis. This item of work will be paid for at the Contract Unit Price for "Perforated Subdrain System", performed in accordance with this Specification and accepted by the Contract Administrator.