



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 136-2009

**THE PROVINCE OF MANITOBA/CITY OF WINNIPEG BISHOP GRANDIN E/B-
LAKEWOOD TO LAGIMODIERE: PART A-PAVEMENT REHABILITATION; PART B-
MULTI-USE PATHWAY CONSTRUCTION; PART C-ROUNDAABOUT
CONSTRUCTION (LAKEWOOD AT BEAVERHILL)**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

- B1.1 The Province of Manitoba/City of Winnipeg Bishop Grandin E/B-Lakewood to Lagimodiere: Part A-Pavement Rehabilitation; Part B-Multi-Use Pathway Construction; Part C-Roundabout Construction (Lakewood at Beaverhill)

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, May 13, 2009.
- 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. ENQUIRIES

- B3.1 All enquiries shall be directed to the Contract Administrator identified in D3.1.
- B3.2 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.
- B3.3 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.
- B3.4 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.
- B3.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

B4. ADDENDA

- B4.1 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.
- B4.2 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.
- B4.2.1 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/bidopp.asp>
- B4.2.2 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.
- B4.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B5. SUBSTITUTES

- B5.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B5.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B5.3 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.
- B5.4 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.
- B5.5 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.
- B5.6 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.
- B5.6.1 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.
- B5.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B5.8 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.
- B5.9 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.
- B5.10 Notwithstanding B5.2 to B5.9, in accordance with B6.6, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B14.1(a).

B6. BID COMPONENTS

- B6.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices, hard copy;
 - (c) Bid Security;
 - (i) Form G1: Bid Bond and Agreement to Bond, or
Form G2: Irrevocable Standby Letter of Credit and Undertaking, or
a certified cheque or draft;
- B6.2 Further to B6.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B5.
- B6.3 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.
- B6.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.
- B6.4.1 Samples or other components of the Bid 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.
- B6.4.2 A hard copy of Form B: Prices must be submitted with the Bid. If there is any discrepancy between the Adobe PDF version of Form B: Prices and the Microsoft Excel version of Form B: Prices, the PDF version shall take precedence.
- B6.5 Bidders are advised not to include any information/literature except as requested in accordance with B6.1.
- B6.6 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).
- B6.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B6.8 Bids shall be submitted to:
- The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg MB R3B 1J1

B7. BID

- B7.1 The Bidder shall complete Form A: Bid, making all required entries.
- B7.2 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.

B7.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B7.2.

B7.3 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.

B7.4 Paragraph 12 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 and the corporate seal, if the corporation has one, shall be affixed;
- (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.

B7.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.

B7.5 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.

B8. PRICES

B8.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B8.1.1 For the convenience of Bidders, and pursuant to B6.4.2 and B14.4.3, an electronic spreadsheet Form B: Prices in Microsoft Excel (.xls) format is available along with the Adobe PDF documents for this Bid Opportunity on the Bid Opportunities page at the Materials Management Division website at <http://www.winnipeg.ca/matmgt>

B8.2 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.

B8.3 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.

B8.4 Prices from Non-Resident Bidders are subject to a Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B8.5 Form B: Prices is organized into Parts: Part A of the Work, Part B1 of the Work, Part B2 of the Work and Part C of the Work. Bidders shall provide a total price for each Part and, on the summary sheet, a Total Bid Price consisting of the sum of prices for Part A through C.

B9. QUALIFICATION

B9.1 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.

B9.2 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>

B9.3 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);

B9.4 Further to B9.3(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) 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>)

B9.5 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.

B9.6 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.

B10. BID SECURITY

B10.1 The Bidder shall provide bid security in the form of:

- (a) a 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 the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond); or
- (b) an irrevocable standby letter of credit, in the amount of at least ten percent (10%) of the Total Bid Price, and undertaking 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 included in the Bid Submission (Form G2: Irrevocable Standby Letter of Credit and Undertaking); or

- (c) a certified cheque or draft payable to "The City of Winnipeg", in the amount of at least fifty percent (50%) of the Total Bid Price, drawn on a bank or other financial institution registered to conduct business in Manitoba.

- B10.1.1 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.
- B10.1.2 All signatures on bid securities shall be original.
- B10.1.3 The Bidder shall sign the Bid Bond.
- B10.1.4 The Surety shall sign and affix its corporate seal on the Bid Bond and the Agreement to Bond.
- B10.2 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 executed by the successful Bidder and the performance security furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.
- B10.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B10.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.
- B10.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.
- B10.3 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 Bid Opportunity.

B11. OPENING OF BIDS AND RELEASE OF INFORMATION

- B11.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Division, or in such other office as may be designated by the Manager of Materials.
 - B11.1.1 Bidders or their representatives may attend.
 - B11.1.2 Bids determined by the Manager of Materials, or his designate, to not include the bid security specified in B10 will not be read out.
- 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>
- 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 11 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

until a Contract for the Work has been duly executed and the performance security 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.

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 12 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 12 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, including the right to retain the Bidder's bid security.

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 therefrom (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B9 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B5.
- 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.
- B14.4.3 The electronic Form B: Prices and the formulas imbedded in that spreadsheet are only provided for the convenience of Bidders. The City makes no representations or warranties as to the correctness of the imbedded formulas. It is the Bidder's responsibility to ensure the extensions of the unit prices and the sum of Total Bid Price performed as a function of the formulas within the electronic Form B: Prices are correct.

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 As noted in D2 and identified in Form B: Prices, the Work of Part B2 will be contingent upon property acquisition by the City of Winnipeg. If the property acquisition for Part B2 Work does not occur the City shall have the right to eliminate all or any portion of Part B2 Work in accordance with D2.

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 three Parts:

(a) Part A – Pavement Rehabilitation

(i) Bishop Grandin Boulevard Eastbound lanes from Lakewood Boulevard to Lagimodiere Boulevard.

(b) Part B - Multi-Use Pathway Construction

(i) B1 – Multi Use Pathway Construction: Island Shore Blvd to Blvd De La Seigneurie

(ii) B2 - Multi Use Pathway Construction: Blvd De La Seigneurie to Sage Creek Residential Development

(c) Part C- Roundabout Construction

(i) (Lakewood at Beaverhill)

D2.2 The City currently has not acquired the property required to complete Part B2 of the Work. Part B2 of the Work is contingent upon the acquisition of the property.

D2.2.1 Further to C7.1, if the property is not acquired in time to construct, the City shall have the right to eliminate all or any portion of Part B2, and the Contract Price will be reduced accordingly.

D2.2.2 Further to C7.5, C7.5.1, and C7.6, a reduction in the Contract Price pursuant to D2.2.1 shall not be considered in calculating the aggregate reduction in the Contract Price for purposes of C7.5.

D2.3 The major components of the Work are as follows:

(a) Part A – Pavement Rehabilitation

(i) Planing of existing asphalt overlay, and headers at side streets

(ii) Full depth concrete repairs of existing slabs and joints

(iii) Partial depth concrete repairs of existing joints

(iv) Renewal of existing curb and gutter, bullnoses, sidewalk, and medians

(v) Adjustment of existing drainage inlets, and renewal of concrete erosion pads on shoulder

(vi) Construct bus bays at far side islands at Island Shore Blvd and Blvd De La Seigneurie

(vii) Renewal of gravel shoulder adjacent to low side curb and gutter

(viii) Placement of asphalt overlay (average thickness – 110 mm)

(ix) Topsoil and seeding/sod

(b) Part B – Multi-Use Pathway Construction

(i) Tree removals as required

(ii) Topsoil Stripping

(iii) Ditch and Berm Earth Work

(iv) Step Cutting of Berm and Sub-Grade Compaction

(v) Culvert installation crossing pathway

- (vi) Construction of asphalt surfaced pathway
 - (vii) Construction of asphalt bench nodes
 - (viii) Installation of riprap in ditch at catch basins and culverts
 - (ix) Construction of crushed limestone pathway on the east side of Lagimodiere Blvd connecting to Sage Creek Residential Development (Part B2 only)
 - (x) Ditch re-grading, topsoil, sod and seeding
- (c) Part C- Roundabout Construction (Lakewood at Beaverhill)
- (i) Removal of trees
 - (ii) Construction of temporary pavements and sidewalks
 - (iii) Removal of channelization islands and pavement
 - (iv) Excavation and compaction of sub-grade
 - (v) Installation of catchbasins
 - (vi) Construction of pavement structure
 - (vii) Construction of sidewalk and curb
 - (viii) Paving stone installation
 - (ix) Removal of temporary pavements
 - (x) Boulevard restoration and sodding

D3. CONTRACT ADMINISTRATOR

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

David Wiebe, P.Eng.
Project Manager
Suite 200-895 Waverley Street
Telephone No. (204) 453-2301
Facsimile No. (204) 452-4412

D3.2 At the pre-construction meeting, David Wiebe, P.Eng. 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.

D4.2 At least two (2) business days prior to the commencement of any Work on the Site, the Contractor shall provide the Contract Administrator with a phone number where the supervisor identified in D4.1 or an alternate can be contacted twenty-four (24) hours a day to respond to an emergency.

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 address or facsimile number:

The City of Winnipeg
Chief Financial Officer
Administration Building, 3rd Floor
510 Main Street
Winnipeg MB R3B 1B9
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
Internal Services Department
Legal Services Division
Attn: City Solicitor
185 King Street, 3rd Floor
Winnipeg MB R3B 1J1
Facsimile No.: (204) 947-9155

D6. FURNISHING OF DOCUMENTS

- D6.1 Upon award of the Contract, the Contractor will be provided with five (5) complete sets of the Bid Opportunity. If the Contractor requires additional sets of the Bid Opportunity, they will be supplied to him at cost.

SUBMISSIONS

D7. AUTHORITY TO CARRY ON BUSINESS

- D7.1 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.

D8. SAFE WORK PLAN

- D8.1 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.
- D8.2 The Safe Work Plan shall 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>

D9. INSURANCE

- D9.1 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, 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 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;
- (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.

D9.2 Deductibles shall be borne by the Contractor.

D9.3 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 the C4.1 for the return of the executed Contract.

D9.4 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.

D10. PERFORMANCE SECURITY

D10.1 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.

D10.1.1 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.

D10.2 If the bid security provided in his Bid was not a certified cheque or draft pursuant to B10.1(c), 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 letter of intent and prior to the commencement of any Work on the Site and in no event later than the date specified in the C4.1 for the return of the executed Contract.

D11. SUBCONTRACTOR LIST

D11.1 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 or prior to a pre-construction meeting, or 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 C4.1 for the return of the executed Contract.

D12. EQUIPMENT LIST

D12.1 The Contractor shall provide the Contract Administrator with a complete list of the equipment which the Contractor proposes to utilize (Form K: Equipment List) at or prior to a pre-construction meeting, or 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 C4.1 for the return of the executed Contract.

D12.2 For equipment to be used in proximity of the Lagimodiere Feedermain in Part B2 of the Work, the equipment list shall include the requirements of E26.

D13. DETAILED WORK SCHEDULE

D13.1 The Contractor shall provide the Contract Administrator with a detailed work schedule (Form L: Detailed Work Schedule) 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.

D13.2 Further to D14.5, if all or part of Part B2 is eliminated, the time periods stipulated in D20 for Substantial Performance of the Work and in D21 for Total Performance of the Work will not be reduced.

D13.3 The Contractor is to list the appropriate Critical Stages noted in D19 in their detailed work schedule.

SCHEDULE OF WORK

D14. COMMENCEMENT

D14.1 The Contractor shall not commence any Work until he is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.

D14.2 The Contractor shall not commence any Work on the Site until:

- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D7;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the twenty-four (24) hour emergency response phone number specified in D4.2.
 - (iv) the Safe Work Plan specified in D8;
 - (v) evidence of the insurance specified in D9;
 - (vi) the performance security specified in D10;
 - (vii) the subcontractor list specified in D11;
 - (viii) the equipment list specified in D12;
 - (ix) the detailed work schedule specified in D13; and
- (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.

D14.3 The Contractor shall not commence the Work on Part A and Part B1 before May 25, 2009, and shall commence the Work no later than June 1, 2009, as directed by the Contract Administrator and weather permitting.

D14.4 The Contractor shall not commence the Work on Part C before June 22, 2009.

D14.5 The Contractor shall not commence Part B2 of the Work as described in D2 and identified in Form B: Prices, unless he has received notification from the Contract Administrator that the City has acquired the property required to complete the Work.

D14.6 The City intends to award this Contract by May 22, 2009.

D15. WORKING DAYS

D15.1 Further to C1.1(gg);

D15.1.1 The Contract Administrator will determine daily if a Working Day has elapsed and will record his assessment. On a weekly basis the Contract Administrator will provide the Contractor with a record of the Working Days assessed for the preceding week. The Contractor shall sign each report signifying that he agrees with the Contract Administrator's determination of the Working Days assessed for the report period.

D15.1.2 Work done to restore the Site to a condition suitable for Work, shall not be considered "work" as defined in the definition of a Working Day.

D15.1.3 When the Work includes two or more major types of Work that can be performed under different atmospheric conditions, the Contract Administrator shall consider all major types of Work in determining whether the Contractor was able to work in assessing Working Days.

D16. RESTRICTED WORK HOURS

D16.1 Further to clause 3.10 of CW 1130, the Contractor shall require written permission forty-eight (48) hours in advance from the Contract Administrator for any work to be performed between 2000 hours and 0700 hours, or on Saturdays, Sundays, Statutory Holidays and or Civic Holidays.

D17. WORK BY OTHERS

D17.1 Work by others on or near the Site will include but not necessarily be limited to:

(a) Part A – Pavement Rehabilitation

(i) City of Winnipeg Traffic Signals Branch – Upgrading controllers, underground ducts, traffic detector loops, galvanized poles, traffic heads, and accessible pedestrian signals at Lakewood Blvd, Island Shore Blvd, De La Seigneurie Blvd, and Lagimodiere Blvd. It is expected that this work can be done at the same time as this project while sharing the project area.

(b) Part B - Multi-Use Pathway Construction

(i) Manitoba Hydro – Rock wrapping of existing natural gas lines near Station 1+660 and 2+005 if required. Contractor to contact Manitoba Hydro during excavation in this area. Manitoba Hydro will then determine if rock wrapping is necessary.

(c) Part C- Roundabout Construction

(i) Manitoba Hydro (Gas) – Rock wrapping of existing natural gas lines in Stage 1 and 2 of the Work. Contractor to contact Manitoba Hydro during excavation in this area. Manitoba Hydro will then determine if rock wrapping is necessary.

(ii) Manitoba Hydro (Street Lighting) – Street lights must be relocated. This Work should be complete prior to June 22 (commencement of the project).

(iii) MTS – Adjustment to manhole in existing southeast corner island. This adjustment should be complete prior to June 22 (commencement of the project).

D18. SEQUENCE OF WORK

D18.1 Further to C6.1, the sequence of work shall be as follows:

D18.1.1 The Work shall be divided into three Parts. Each Part shall be subdivided into stages. Stages are further subdivided into major items of Work.

D18.1.2 **Part A – Pavement Rehabilitation**

(a) **Stage I** – South Curb Lane and Acceleration/Deceleration Lanes

(i) Planing of existing asphalt overlay, and headers at side streets;

- (ii) Concrete pavement slab and joint work
 - (iii) Adjustment of existing drainage inlets, and renewal of concrete erosion pads;
 - (iv) Renewal of existing curb and gutter, bullnoses, and sidewalk;
 - (v) Construction of bus bays at Island Shore Blvd and De La Seigneurie Blvd;
 - (vi) Placement of topsoil and sod in cross street islands and medians;
 - (vii) Cleaning of all drainage inlets;
 - (viii) Asphalt patching as necessary of joints and cracks; and
 - (ix) Granular shoulder regrading.
- (b) **Stage II – North Median Lane**
- (i) Planing of existing asphalt overlay, and medians;
 - (ii) Concrete pavement slab and joint work
 - (iii) Adjustment of existing drainage inlets;
 - (iv) Renewal of existing curb and gutter, bullnoses, and sidewalk;
 - (v) Placement of topsoil and seed in median;
 - (vi) Cleaning of all drainage inlets; and
 - (vii) Asphalt patching as necessary of joints and cracks.
- (c) **Stage III – Final Asphalt Works**
- (i) Placement of scratch course of asphalt in north median lane
 - (ii) Placement of scratch course of asphalt in south curb lane and acceleration and deceleration lanes
 - (iii) Placement of final lift of asphalt in south curb lane and acceleration and deceleration lanes utilizing automatic grade control
 - (iv) Placement of final lift of asphalt in north median lane utilizing automatic grade control
 - (v) Placement of asphalt tie-ins in all median openings and cross streets utilizing automatic grade control where appropriate
- (d) All Works shall be performed using a lane-at-a-time method (see E6 for minimum requirements of traffic lanes to be left open at various times).
- (e) Placing the topsoil and finished grading of all boulevard and median areas shall be completed prior to commencing construction of the asphaltic concrete overlay, including the scratch course.
- (f) At the end of any day, there shall be no asphalt drop-off accessible to traffic along any longitudinal joint.
- (g) Immediately following the completion of the asphaltic concrete Works of Stage III, the Contractor shall clean up the Site and remove all plant, surplus material, waste and debris, other than that left by the City or other Contractors.
- (h) It should be noted that more than one concrete crew may be required at any one time to complete the Work within the allotted number of Working Days

D18.1.3

Part B – Multi-Use Pathway Construction

- (a) **Stage I – Part B1 from Island Shore Blvd to Blvd De La Seigneurie**
- (i) Tree removals as required
 - (ii) Topsoil Stripping
 - (iii) Ditch and Berm Earth Work
 - (iv) Step Cutting of Berm and Sub-Grade Compaction
 - (v) Culvert installation crossing pathway
 - (vi) Construction of asphalt surfaced pathway
 - (vii) Construction of asphalt bench nodes
 - (viii) Installation of riprap in ditch at catch basins and culverts

- (ix) Ditch re-grading, topsoil, sodding and seeding.
- (b) **Stage II** – Part B2 from Blvd De La Seigneurie to Lagimodiere Blvd
 - (i) Major items of Work as stated in Part B, Stage I
 - (ii) Hydro excavation of utility lines at two locations near Lagimodiere Blvd
 - (iii) Construction of crushed limestone pathway on the east side of Lagimodiere Blvd connecting to Sage Creek Residential Development
- (c) Generally, Part B should be commenced during Stage I of Part A. Part B1 and B2 can be constructed concurrently, although construction on Part B2 shall not commence unless the City has acquired the land on the east side of Lagimodiere.
- (d) Immediately following the completion of the Works of Part B, the Contractor shall clean up the Site and remove all plant, surplus material, waste and debris, other than that left by the City or other Contractors.

D18.1.4

Part C – Roundabout Construction (Lakewood at Beaverhill)

- (a) **Stage I** – Construction of West Half of Roundabout
 - (i) Removal of trees for all Stages
 - (ii) Removal of southeast channelization island
 - (iii) Construction of temporary asphalt pavements and sidewalks on east side
 - (iv) Closure of west leg of intersection and traffic staging
 - (v) Relocation of fence in northwest corner
 - (vi) Excavation and compaction of sub-grade
 - (vii) Installation of catchbasin
 - (viii) Construction of pavement structure with integral lip curb at centre apron
 - (ix) Construction of sidewalk and curb excluding staged sections
 - (x) Asphalt patch west half headers
 - (xi) Construction of temporary asphalt pavements and sidewalks in west half
- (b) **Stage II** – Construction of East Half of Roundabout
 - (i) Closure of east leg of intersection and traffic staging
 - (ii) Excavation and compaction of sub-grade
 - (iii) Installation of catchbasin
 - (iv) Construction of pavement structure with integral lip curb at centre apron
 - (v) Construction of sidewalk and curb
 - (vi) Paving stone installation in east half of centre apron and splitter islands
 - (vii) Asphalt patch east half headers
- (c) **Stage III** – Construction of Centre Apron and Splitter Islands
 - (i) Opening of all legs of intersection and traffic staging
 - (ii) Removal of temporary pavements and sidewalks in west half
 - (iii) Completion of construction of sidewalk and curb in west half
 - (iv) Paving stone installation in west half of apron and splitter islands
 - (v) Boulevard and centre island restoration and sod
- (d) See E6 for minimum requirements of traffic lanes to be left open at various times.
- (e) See drawings P-3300-25 and P-3300-26 for construction staging drawings.
- (f) Immediately following the completion of Stage III, the Contractor shall clean up the Site and remove all plant, surplus material, waste and debris, other than that left by the City or other Contractors.
- (g) It should be noted that more than one concrete crew may be required at any one time to complete the Work within the allotted number of Working Days

D19. CRITICAL STAGES

- D19.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:
- (a) Part C- Roundabout Construction (Lakewood at Beaverhill) - Shall not commence before June 22, 2009 and must be completed before September 4, 2009.
- D19.2 When the Contractor considers the Work associated with Part C to be completed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Completion. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.
- D19.3 The date on which Part C has been accepted by the Contract Administrator as being completed to the requirements of the Contract is the date on which completion of Part C has been achieved.

D20. SUBSTANTIAL PERFORMANCE

- D20.1 The Contractor shall achieve Substantial Performance within seventy-five (75) consecutive Working Days of the commencement of the Work as specified in D14.
- D20.2 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 re-inspected.
- D20.3 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.

D21. TOTAL PERFORMANCE

- D21.1 The Contractor shall achieve Total Performance within eighty (80) consecutive Working Days of the commencement of the Work as specified in D14.
- D21.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.
- D21.3 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.

D22. LIQUIDATED DAMAGES

- D22.1 If the Contractor fails to achieve Critical Stages or Substantial Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the following amounts per Working Day for each and every Working Day following the days fixed herein for same during which such failure continues:
- (a) Part C- Roundabout Construction (Lakewood at Beaverhill) – Three thousand dollars (\$3,000);
 - (b) Substantial Performance – Three thousand dollars (\$3,000).

D22.2 The amounts specified for liquidated damages in D22.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve critical stages or Substantial Performance by the days fixed herein for same.

D22.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D23. ACCELERATED COMPLETION

D23.1 Description

D23.1.1 This specification shall cover the accelerated completion of Part C of this contract.

D23.2 Acceleration of Work

D23.2.1 At no risk to the City, the Contractor at his own initiative, means, and expense, may undertake to complete the Works of this Contract to facilitate the safe reopening of the entire Site in Part C to traffic and pedestrians in advance of the Critical Stage end date as specified in D19.

D23.2.2 Reopening of the entire Site shall occur when all Work items listed in D18 are complete, including boulevard grading, topsoil, sod, and Site cleanup.

D23.2.3 In recognition of the fact that an early completion of the Works in Part C is of benefit to the City, the City will compensate the Contractor for said early completion on a per diem unit price basis, as hereinafter set out, provided that the City will not be liable to pay for any period of acceleration in excess of ten (10) Working Days.

D23.2.4 It is noted that certain delays on road rehabilitation Work are normal, due to Site conditions, necessary layout and dimensional changes. The Contract Administrator will attempt to resolve each situation as soon as possible. The Contractor is advised that no extension to the Critical Stage timeframe listed in D19 will be given for events of this sort which cause construction delay and are resolved within 48 hours of the requirement of change becoming known to both the Contractor and the Contract Administrator.

D23.3 Method of Measurement

D23.3.1 Subject to clause D23.2.3 hereof, accelerated completion will be measured on a unit basis per diem. The number of days to be paid for will be the total number of Working Days with which all of Part C is complete and safely reopened to vehicular and pedestrian traffic in advance of the Critical Stages date specified herein for Substantial Performance in D19, with all specified Works listed in D18 completed and acceptable to the Contract Administrator.

D23.4 Basis of Payment

D23.4.1 Subject to clause D23.2.3 hereof, accelerated completion will be paid for at the Unit Price per diem specified hereinafter for "Accelerated Completion" which price shall be payment in full for performing all operations undertaken and all other items incidental to the Work included in this Specification. Unit Price per diem = Three thousand dollars (\$3,000).

D23.4.2 Payment for this item is not identified on Form B: Prices, and shall not be included thereon. If accelerated completion does occur as specified herein, then payment will be made for this item as an addition to the contract.

D24. SCHEDULED MAINTENANCE

D24.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

- (a) Reflective Crack Maintenance (during one year warranty period) as specified in CW 3250-R6;
- (b) Sodding (maintenance period) as specified in CW 3510-R8 ;

(c) Seeding (maintenance period) as specified in CW 3520-R7, E21 ;

D24.2 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

D25. JOB MEETINGS

D25.1 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.

D25.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

D26. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

D26.1 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).

WARRANTY

D27. WARRANTY

D27.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire one (1) years thereafter for Part A, and two (2) years thereafter for Part B and C, unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

D27.2 Notwithstanding C13.2 or D27.1, 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.

D27.2.1 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.

FORM H1: PERFORMANCE BOND
(See D10)

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. 136-2009

The Province of Manitoba/City of Winnipeg Bishop Grandin E/B-Lakewood to Lagimodiere: Part A-Pavement Rehabilitation; Part B-Multi-Use Pathway Construction; Part C-Roundabout Construction (Lakewood at Beaverhill) 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 D10)

(Date)

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

RE: PERFORMANCE SECURITY – BID OPPORTUNITY NO. 136-2009

The Province of Manitoba/City of Winnipeg Bishop Grandin E/B-Lakewood to Lagimodiere: Part A- Pavement Rehabilitation; Part B-Multi-Use Pathway Construction; Part C-Roundabout Construction (Lakewood at Beaverhill)

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)

FORM J: SUBCONTRACTOR LIST
(See D11)

The Province of Manitoba/City of Winnipeg Bishop Grandin E/B-Lakewood to Lagimodiere: Part A-
Pavement Rehabilitation; Part B-Multi-Use Pathway Construction; Part C-Roundabout Construction
(Lakewood at Beaverhill)

<u>Portion of the Work</u>	<u>Name</u>	<u>Address</u>
<i>Concrete</i>		
<i>Asphalt</i>		
<i>Geotextile/Culverts</i>		
<i>Base Course & Sub-Base</i>		
<i>Topsoil, Sodding, Seeding</i>		
<i>Catchbasins/Manholes</i>		
<i>Paving Stones</i>		
<i>Installation/Placement:</i>		
<i>Asphalt Planing</i>		
<i>Concrete</i>		
<i>Asphalt</i>		
<i>Geotextile/Culverts</i>		
<i>Base Course & Sub-Base</i>		
<i>Topsoil, Sodding, Seeding</i>		
<i>Catchbasins/Manholes</i>		
<i>Paving Stones</i>		

FORM K: EQUIPMENT
(See D12)

The Province of Manitoba/City of Winnipeg Bishop Grandin E/B-Lakewood to Lagimodiere: Part A- Pavement Rehabilitation; Part B-Multi-Use Pathway Construction; Part C-Roundabout Construction (Lakewood at Beaverhill)

<p>1. Category/type: Concrete Restoration and Concrete Paving (Including Curbing)</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p>2. Category/type: Asphalt Paving</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p>3. Category/type: Asphalt Planing</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>

FORM K: EQUIPMENT
(See D12)

The Province of Manitoba/City of Winnipeg Bishop Grandin E/B-Lakewood to Lagimodiere: Part A- Pavement Rehabilitation; Part B-Multi-Use Pathway Construction; Part C-Roundabout Construction (Lakewood at Beaverhill)

4. Category/type: All Equipment working in vicinity of the Lagimodiere Feedermain

List all significant equipment (backhoes, typical haul trucks, concrete slip form paver, etc.) that will be in vicinity of feedermain in Part B2 of the work as per E26. Additional sheets or equipment diagrams can be used to supplement.

Equipment Type: _____ Make/Model: _____

Tare (Operating) Weight: _____ Payload Weight: _____

Equipment axle and load configuration (text or diagram):

Equipment Type: _____ Make/Model: _____

Tare (Operating) Weight: _____ Payload Weight: _____

Equipment axle and load configuration (text or diagram):

Equipment Type: _____ Make/Model: _____

Tare (Operating) Weight: _____ Payload Weight: _____

Equipment axle and load configuration (text or diagram):

Equipment Type: _____ Make/Model: _____

Tare (Operating) Weight: _____ Payload Weight: _____

Equipment axle and load configuration (text or diagram):

Equipment Type: _____ Make/Model: _____

Tare (Operating) Weight: _____ Payload Weight: _____

Equipment axle and load configuration (text or diagram):

FORM L: DETAILED WORK SCHEDULE
 (See D13)

The Province of Manitoba/City of Winnipeg Bishop Grandin E/B-Lakewood to Lagimodiere: Part
 A-Pavement Rehabilitation; Part B-Multi-Use Pathway Construction; Part C-Roundabout
 Construction (Lakewood at Beaverhill)

For each item of Work, indicate the cumulative percentage proposed to be completed by the end of each time period until 100% completion is achieved.								
Items of Work	Time Period in Working Days							
	10	20	30	40	50	60	70	80
Part A – Pavement Rehabilitation								
Stage I – South Curb Lane and Accel/Decel Lanes								
Stage II – North Median Lane								
Stage III – Final Asphalt Works								
Part B – Multi-Use Pathway Construction								
Stage I – Part B1 from Island Shore to De La Seig.								
Stage II – Part B2 from De La Seig. to Lagimodiere								
Part C – Roundabout Construction*								
Stage I – Construction of West Half of Roundabout								
Stage II – Construction of East Half of Roundabout								
Stage III – Construction of Apron and Splitter Islands								

Schedule is based on _____ concrete crews.

*Part C to be constructed between June 22, 2009 to September 4, 2009

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>	<u>Drawing (Original) Sheet Size</u>
P3300-01	Cover Sheet	A1
P3300-02	Pavement Rehabilitation – STA. 2+409 TO 2+550	A1
P3300-03	Pavement Rehabilitation – STA. 2+550 TO 2+700	A1
P3300-04	Pavement Rehabilitation – STA. 2+700 TO 2+825	A1
P3300-05	Pavement Rehabilitation – STA. 2+825 TO 2+975	A1
P3300-06	Pavement Rehabilitation – STA. 2+975 TO 3+125	A1
P3300-07	Pavement Rehabilitation – STA. 3+125 TO 3+275	A1
P3300-08	Pavement Rehabilitation – STA. 3+275 TO 3+400	A1
P3300-09	Pavement Rehabilitation – STA. 3+400 TO 3+550	A1
P3300-10	Pavement Rehabilitation – STA. 3+550 TO 3+700	A1
P3300-11	Pavement Rehabilitation – STA. 3+700 TO 3+850	A1
P3300-12	Pavement Rehabilitation – STA. 3+850 TO 4+000	A1
P3300-13	Pavement Rehabilitation – STA. 4+000 TO 4+050	A1
P3300-14	Multi-Use Pathway Construction – STA. 1+000 TO 1+125	A1
P3300-15	Multi-Use Pathway Construction – STA. 1+125 TO 1+275	A1
P3300-16	Multi-Use Pathway Construction – STA. 1+275 TO 1+400	A1
P3300-17	Multi-Use Pathway Construction – STA. 1+400 TO 1+520	A1
P3300-18	Multi-Use Pathway Construction – STA. 1+520 TO 1+700	A1
P3300-19	Multi-Use Pathway Construction – STA. 1+700 TO 1+850	A1
P3300-20	Multi-Use Pathway Construction – STA. 1+850 TO 2+000	A1
P3300-21	Multi-Use Pathway Construction – East of Lagimodiere Blvd.	A1
P3300-22	Sections and Details	A1
P3300-23	Roundabout Construction – Plan	A1
P3300-24	Roundabout Construction – Grading	A1
P3300-25	Roundabout Construction – Stage 1 &2	A1
P3300-26	Roundabout Construction – Stage 3 and Cross Sections	A1
P3300-27	Roundabout Construction - Sections and Details	A1

E2. GEOTECHNICAL REPORT

- E2.1 Further to C3.1, the geotechnical report is provided to aid the Contractor's evaluation of the existing pavement structure and asphalt overlay on Bishop Grandin Boulevard for Part A and existing soil conditions beneath the proposed pathway for Part B. The geotechnical report is contained in Appendix 'A'.

E3. OFFICE FACILITIES

- E3.1 The Contractor shall supply office facilities meeting the following requirements:
- (a) The field office shall be for the exclusive use of the Contract Administrator.
 - (b) The building shall be conveniently located near the Site of the Work.
 - (c) The building shall have a minimum floor area of 15 square metres, 2.4m with two windows for cross ventilation and a door entrance with a suitable lock.
 - (d) The building shall be suitable for all weather use. It shall be equipped with an electric heater and air conditioner so that the room temperature can be maintained between either 16-18°C or 24-25°C.
 - (e) The building shall be adequately lighted with fluorescent fixtures and have a minimum of two wall outlets..
 - (f) The building shall be furnished with one desk, one meeting table, one stool, one legal sized filing cabinet, and minimum 8 chairs..
 - (g) A portable toilet shall be located near the field office building. The toilet shall have a locking door and be for the exclusive use of the Contract Administrator and other personnel from the City.
 - (h) The field office building and the portable toilet shall be cleaned on a weekly basis immediately prior to each site meeting. The Contract Administrator may request additional cleaning when he deems it necessary.
- E3.2 The Contractor shall be responsible for all installation and removal costs, all operating costs, and the general maintenance of the office facilities.
- E3.3 The office facilities will be provided from the date of the commencement of the Work to the date of Total Performance.

E4. PROTECTION OF EXISTING TREES

- E4.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing boulevard trees within the limits of the construction area:
- (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of trees.
 - (b) Trees identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2400mm wood planks, or suitably protected as approved by the Contract Administrator.
 - (c) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches), with the outcome read in feet, from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
 - (d) Operation of equipment within the dripline of the trees shall be kept to the minimum required to perform the Work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the driplines of trees. The dripline of a tree shall be considered to be the ground surface

directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.

- (e) Work on-site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to branches does occur, they shall be neatly pruned.

E4.2 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the City Forester or his designate.

E4.3 No separate measurement or payment will be made for the protection of trees.

E4.4 Except as required in clause E4.1(c) and E4.1(e), Elm trees shall not be pruned at any time between April 1 and July 31.

E5. TRAFFIC CONTROL

E5.1 Further to clauses 3.6 and 3.7 of CW 1130-R1:

- (a) Where directed, the Contractor shall construct and maintain temporary asphalt ramps to alleviate vertical pavement obstructions such as manholes and planing drop-offs to the satisfaction of the Contract Administrator. Payment shall be in accordance with CW3410.
- (b) In accordance with the Manual of Temporary Traffic Control, the Contractor ("Agency" in the manual) shall make arrangements with the Traffic Services Section of the City of Winnipeg to place all temporary regulatory signs. The Contractor shall bear all costs associated with the placement of temporary traffic control devices by the Traffic Services Section of the City of Winnipeg in connection with the Works undertaken by the Contractor.

E6. TRAFFIC MANAGEMENT

E6.1 Further to clause 3.7 of CW 1130-R1 and the related Sequence of Work in D18:

E6.1.1 Traffic Management is unique for each of the three Parts of the overall Work. Each Part shall be subdivided into stages. Stages are further subdivided into major items of Work.

E6.1.2 Part A – Pavement Rehabilitation

- (a) **Stage I** – South Curb Lane and Acceleration/Deceleration Lanes
 - (i) Closure and rehabilitation of eastbound curb lane. Traffic travels in the median lane.
 - (ii) Where deceleration lanes exist, construction shall be staged with the curb lane to provide a minimum 50 metre long deceleration lane at any one time.
 - (iii) Repairs in median openings at intersections or yield lanes at pedestrian islands to be staged to allow all turning movements to occur.
- (b) **Stage II** – North Median Lane
 - (i) Closure and rehabilitation of eastbound median lane. Traffic travels in the curb lane.
 - (ii) Repairs in median openings at intersections to be staged to allow all turning movements to occur
- (c) **Stage III** – Final Asphalt Works
 - (i) Placement of scratch course and final lift of asphalt in all lanes. One lane may be closed at any one time.
 - (ii) Median openings and intersections may be temporarily closed during the asphalt placement and compaction Works as necessary.
- (d) Intersecting street access shall be maintained at all times, unless a closure is permitted by the Contract Administrator.
- (e) Closures of yield lanes at pedestrian islands shall be scheduled with the Contract Administrator

- (f) Pedestrian access will be restricted in the project area. Contractor to install "sidewalk closed" signs at Island Shore at Waterfront and at De La Seigneurie at Pere Oblat.
- (g) Ambulance/emergency vehicle access must be maintained at all times.

E6.1.3

Part B – Multi-Use Pathway Construction

- (a) **Stage I** – Part B1 from Island Shore Blvd to Blvd De La Seigneurie
 - (i) Pedestrian access does not need to be maintained in the project area. Contractor to install "sidewalk closed" signs at the intersection of the pathway with public streets as necessary to deter access.
- (b) **Stage II** – Part B2 from Blvd De La Seigneurie to Lagimodiere Blvd
 - (i) As stated in Stage I

E6.1.4

Part C – Roundabout Construction (Lakewood at Beaverhill)

- (a) **Stage I** – Construction of West Half of Roundabout
 - (i) Utilize flagpersons/barricades as necessary during tree and island removal, and placement of temporary asphalt pavement and sidewalks. Maintain traffic in all directions, except for short term closures (loading trucks, placing asphalt). Avoid short term closures during school arrival and dismissal times.
 - (ii) Closure of west leg of intersection. Maintain traffic on all other legs of intersection. (3-way stop controlled)
 - (iii) Construct temporary asphalt pavement and sidewalks for Stage II during closure of west leg.
- (b) **Stage II** – Construction of East Half of Roundabout
 - (i) Closure of east leg of intersection. Maintain traffic on all other legs of intersection. (3-way stop controlled)
- (c) **Stage III** – Construction of Centre Apron and Splitter Islands
 - (i) Opening of all legs of intersection.
 - (ii) Utilize flagpersons/barricades as necessary to maintain traffic in all directions, except for short term closures (loading trucks, placing concrete).
- (d) The Contractor is responsible for placing and maintaining all temporary traffic control in the Work area. The City of Winnipeg is responsible for placing and maintaining detour signage as necessary throughout the neighbourhood.
- (e) Maintain pedestrian access utilizing temporary sidewalks on one side of Beaverhill Blvd and one side of Lakewood Blvd around the project area. Pedestrian crossings of Lakewood Boulevard will be accommodated at neighbouring intersections. Pedestrian crossings of Beaverhill Boulevard will be accommodated in the construction area.
- (f) Ambulance/emergency vehicle access must be maintained at all times. The Contractor's twenty-four (24) hour emergency response phone number specified in D4.2 will be provided to Fire and Paramedic Station #15 located at 1083 Autumnwood Drive. The station will call the Contractor's emergency number to warn the Contractor if an emergency vehicle will be heading toward the Work area. The Contractor shall make every effort to immediately clear the open legs of the intersection of work trucks, unloading concrete trucks, etc. The Contractor is not responsible for temporarily opening a closed leg of the intersection for an emergency vehicle.

E7. PEDESTRIAN SAFETY

E7.1

During the project, a temporary snow fence shall be installed adjacent to existing and temporary sidewalks in Part C as necessary to prevent access to the construction area. The Contractor shall be responsible for maintaining the snow fence in a proper working condition. No measurement for payment shall be made for this Work.

E8. WATER USED BY CONTRACTOR

- E8.1 Further to clause 3.7 of CW 1120-R1, the Contractor shall pay for all costs associated with obtaining water in accordance with the Waterworks By-law. Sewer charges will not be assessed for water obtained from a hydrant.

E9. SURFACE RESTORATIONS

- E9.1 Further to clause 3.3 of CW 1130-R1, 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 until permanent repairs are completed. The Contractor shall bear all costs associated with temporary repairs and their maintenance.

E10. INFRASTRUCTURE SIGNS

- E10.1 The Contractor shall obtain infrastructure signs from the Traffic Services Sign Shop at 421 Osborne Street. The Contractor shall mount each sign securely to a rigid backing material approved by the Contract Administrator. The Contractor shall fasten each sign to a suitable support and erect and maintain one sign at each street as directed by the Contract Administrator. When the Contract Administrator considers the Work on the street complete, the Contractor shall remove and dispose of the signs and supports. No measurement for payment will be made for performing all operations herein described and all other items incidental to the work described

E11. RECYCLED CONCRETE BASE COURSE MATERIAL

DESCRIPTION

E11.1 General

- E11.1.1 Further to CW 3110, this specification covers supply and placement of recycled concrete base course material for Full-Depth Partial Slab Patches (Class A, B, C, & D), miscellaneous concrete slabs and sidewalks.

E11.2 Definitions

- E11.2.1 Deleterious material – are materials such as vegetation, organic material, wood, glass, plastic, metal, reinforcing steel, building rubble, brick, salvaged asphalt materials, clay, shale, and friable particles.

E11.3 Referenced Standard Construction Specifications

- (a) CW 3110 – Sub-Grade. Sub-Base and Base Course Construction.
- (b) CW 3230 – Full-Depth Patching of Existing Pavement Slabs and Joints.
- (c) CW 3235 – Renewal of Existing Miscellaneous Concrete Slabs.
- (d) CW 3325 – Portland Cement Concrete Sidewalk.

MATERIALS

E11.4 Recycled Concrete Base Course Material

- E11.4.1 Recycled concrete base course material when used for Full-Depth Partial Slab Patches (Class A, B, C, & D), miscellaneous concrete slabs and sidewalks will be considered equal to granular or limestone base course material specified in Section 2.2 of CW 3110.
- E11.4.2 Recycled concrete base course material will be approved by the Contract Administrator.

E11.4.3 Recycled concrete base course material will consist of sound durable particles produced by crushing, screening, and grading of recovered concrete materials, free from soft material that would disintegrate through decay or weathering.

E11.4.4 The recycled concrete base course material will be well graded and conform to the following grading requirements:

Recycled Concrete Base Course Material Grading Requirements

CANADIAN METRIC SIEVE SIZE	PERCENT OF TOTAL DRY WEIGHT PASSING EACH SIEVE
20 000	100%
5 000	40% - 70%
2 500	25% - 60%
315	8% - 25%
80	6% - 17%

E11.4.5 Recycled concrete base course material when subjected to the abrasion test will have a loss of not more than 35% when tested in accordance with grading B of ASTM C131, Test for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.

E11.4.6 The amount of deleterious material will be limited to a maximum of two percent of the total dry weight.

CONSTRUCTION METHODS

E11.5 Placement of Recycled Concrete Base Course Material

E11.5.1 Place and compact recycled concrete base course material as a levelling course to a maximum thickness of 50 millimetres.

E11.5.2 Spread materials uniformly to avoid segregation free of pockets of fine and coarse material.

E11.5.3 Level and compact to the finished elevation. Compact to 100% Standard Proctor Density for Full-Depth Partial Slab Patches (Class A, B, C, & D) and 90% Standard Proctor Density for miscellaneous concrete slabs and sidewalks.

E11.5.4 Maintain the finished material until the pavement or sidewalk is placed.

MEASUREMENT AND PAYMENT

E11.6 Recycled Concrete Base Course Material

E11.6.1 The supplying, placing and compaction of recycled concrete base course material will be measured on a volume basis and paid for at the Contract Unit Price per cubic metre for the "Supplying and Placing Base Course Material" as specified in accordance with CW 3110.

E11.6.2 No measurement or payment will be made for material placed as a levelling course under miscellaneous concrete slabs and sidewalks where the costs are included in accordance with CW 3235 and CW 3325.

E11.6.3 No measurement or payment will be made for materials rejected by the Contract Administrator.

E12. 20M DEFORMED TIE BAR

E12.1 Description

E12.1.1 General

(a) This specification covers the use of 20M deformed tie bars for use in tied transverse joints in concrete pavement. SD-213B specifies using 25M tie bars along transverse

edges for concrete pavement repairs of thickness greater or equal to 200mm. Although the concrete thickness on Bishop Grandin is greater than or equal to 200mm, 20M tie bars will be used for transverse tied edges as well as longitudinal tied edges on this project. This is due to observed pavement deterioration while attempting to drill 25M holes in concrete during the 2007 Bishop Grandin Rehabilitation between St. Anne's Road and Lakewood Boulevard.

- (b) Referenced Standard Construction Specifications
 - (i) CW 3230-R6 – Full-Depth Patching of Existing Slabs and Joints

E12.2 Materials and Equipment

E12.2.1 Equipment as per CW 3230-R6 Clause 5 and 8.

E12.3 Construction Methods

E12.3.1 Construction Methods as per CW 3230-R6 Clause 9.3.

E12.3.2 Install 20M bars in place of 25M bars for tied transverse joints as shown in SD-213B.

E12.4 Measurement and Payment

- (a) Measurement and payment as per CW 3230-R6 Clause 13.3.

E13. 150MM REINFORCED CONCRETE EROSION PAD

E13.1 Description

E13.1.1 General

- (a) This specification covers the construction of 150mm thick reinforced concrete erosion pad in the gravel shoulder at drainage locations adjacent to the curb lane.
- (b) Referenced Standard Construction Specifications
 - (i) CW 3235-R7 – Renewal of Existing Miscellaneous Concrete Slabs

E13.2 Materials

E13.2.1 Materials as per CW 3235-R7 Clause 2.

E13.3 Construction Methods

E13.3.1 Construction Methods as per CW 3235-R7 Clause 3.2.

E13.3.2 Refer to "Grouted Erosion Riprap Erosion Pad for Culvert Outlet or Pavement Drainage Swale" detail on the Construction Drawings for dimensions and grades.

E13.4 Measurement and Payment

- (a) 150mm reinforced concrete erosion pad will be measured on an area basis and paid for at the Contract Unit Price per square metre for "150mm Concrete Erosion Pad (Reinforced)". The area to be paid for will be the total number of square metres constructed in accordance with this specification, accepted and measured by the Contract Administrator.

E14. CURB AND GUTTER RENEWAL

E14.1 Description

E14.1.1 General

- (a) This specification covers the renewal of concrete mountable curb and gutter along the north and south gutters of Bishop Grandin Blvd.
- (b) Referenced Standard Construction Specifications
 - (i) CW 3230-R6 – Full-Depth Patching of Existing Slabs and Joints

(ii) CW 3240-R7 – Renewal of Existing Curbs

E14.2 Materials

E14.2.1 Materials as per CW 3230-R6 Clause 5 and CW 3240-R7 Clause 2.

E14.3 Equipment

E14.3.1 Equipment as per CW 3230-R6 Clause 8.

E14.4 Construction Methods

E14.4.1 Construction Methods as per CW 3230-R6 Clause 9 and CW 3240-R7 Clause 3.4.

E14.4.2 When the Curb and Gutter is to be renewed a one (1) m wide section (as measured from the back of curb) of the curb and gutter and adjacent road slab will be removed. The one (1) m wide section will be renewed as a Type B Longitudinal Full-Depth Patch -one side only (SD-214C) and 10m Deformed Stirrups will be placed along the center of the curb line as per SD-203A. Then the curb will be renewed separately.

E14.4.3 In the south gutter the existing curb is mountable and it will be renewed as such. In the north gutter the existing curb is barrier and it will be renewed as such.

E14.4.4 Refer to "Typical Proposed Cross Section" detail on the Construction Drawings for dimensions of the curb and gutter renewal and the shape of south curb renewal. Refer to SD-203A for the north gutter curb renewal.

E14.5 Measurement and Payment

- (a) Measurement and payment for Type B Longitudinal Full-Depth Patch of curb and gutter renewal as per CW 3230-R6 Clause 13.2.
- (b) Measurement and payment for south gutter curb renewal will be measured on a length basis and paid for at the Contract Unit Price per metre for "Mountable Curb 75mm ht (Separate)". The length to be paid for will be the total number of metres constructed in accordance with this specification, accepted and measured by the Contract Administrator.
- (c) Measurement and payment for north gutter curb renewal as per CW 3240-R7 Clause 4.3.

E15. PARTIAL-DEPTH PLANING OF EXISTING JOINTS

E15.1 Description

E15.1.1 General

- (a) This specification covers the Partial Depth Planing of Existing Joints in Portland Cement concrete pavements on streets to be resurfaced prior to constructing the new asphaltic concrete overlay.
- (b) Referenced Standard Construction Specifications
 - (i) CW 3230-R6 – Full-Depth Patching of Existing Slabs and Joints
 - (ii) CW 3450-R5– Planing of Pavement

E15.2 Equipment

E15.2.1 Equipment as per CW 3450-R5 Clause 3.

E15.3 Construction Methods

E15.3.1 Plane joints designated by the Contract Administrator for partial depth patching a width of 400 mm to 600 mm perpendicular to the joint, on each side of the joint, to a minimum depth of 50 mm and a maximum of 65 mm at the centre of the joint to remove ravelled concrete.

- E15.3.2 Finish edges of the planed section with a minimum 25 mm vertical sawcut to eliminate feathering of the asphaltic concrete material used to fill the planed area.
- E15.3.3 Should the depth of joint deterioration exceed the maximum indicated, as determined by the Contract Administrator, the entire joint shall be renewed and paid for in accordance with CW 3230-R6 as a full depth joint repair. Planing completed shall be paid for in accordance with Section 7.4 of this specification.
- E15.3.4 Should the depth of planning exceed the maximum indicated, the entire joint shall be renewed in accordance with CW 3230-R6 as a full depth joint repair. The Contractor shall be responsible for 70% of the cost of the full depth repair.
- E15.3.5 Dispose of material in accordance with Section 3.4 of CW 1130-R1.
- E15.4 Measurement and Payment
- E15.4.1 Partial-Depth Planing of Existing Joints
- (a) Partial Depth Planing of Existing Joints will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Partial Depth Planing of Existing Joints". The area to be paid for will be the total number of square metres of planning completed in accordance with this specification, accepted and measured by the Contract Administrator.

E16. ASPHALT PATCHING OF MISCELLANEOUS CONCRETE

- E16.1 Description
- E16.1.1 General
- (a) This specification covers the placement of asphalt patches in various situations to prepare a concrete pavement for subsequent placement of mainline asphalt pavement overlay. This includes patching partial and full depth concrete repairs, cracks and joints, and vertical faults.
- (b) Referenced Standard Construction Specifications
- (i) CW 1130-R1 – Site Requirements
- (ii) CW 3250-R7 – Joint and Crack Maintenance
- (iii) CW 3410-R8 – Asphaltic Concrete Pavement Works
- E16.2 Materials and Equipment
- E16.2.1 Asphalt Materials
- (a) Asphalt material supplied shall be as per CW 3250-R7 Clause 2.2 (Type II Asphalt Material)
- E16.2.2 Equipment
- (a) Equipment as per CW 3410-R8 Clause 8.
- E16.3 Construction Methods
- E16.3.1 Full Depth Concrete Repairs
- (a) Place asphaltic concrete over the newly constructed joint repair where there is a minimum of 20 mm elevation difference between repair surface and adjacent pavement surface. Remove any loose or debonded asphalt at the joint perimeter and place new asphaltic concrete in these areas as well.
- (b) Dispose of all material in accordance with Section 3.4 of CW 1130-R1.
- (c) Prior to placement of asphaltic concrete patching material, ensure surface is clean and dry.
- (d) Prepare the joint surface with a uniform application of Tack Coat applied in small quantities sufficient to wet the concrete surface.

- (e) Place and compact asphaltic concrete over the joint repair in accordance with CW 3410-R8 Clause 9.3 and to the satisfaction of the Contract Administrator so that the finished elevation of the patch is flush with surrounding asphalt surface.
- (f) Compact the asphalt material to an average 95% of the 75 blow Marshall Density of the paving mixture with no individual test being less than 90%.
- (g) Ensure that no traffic is allowed to cross the patched area until the asphalt has cooled to atmospheric temperature.

E16.3.2 Partial Depth Concrete Repairs

- (a) Prior to placement of asphaltic concrete patching material, blow planed area clean, remove any loose material and ensure the surface is dry.
- (b) Prepare the planed surface with a uniform application of Tack Coat applied in small quantities sufficient to wet the concrete surface.
- (c) Place and compact asphaltic concrete in the planed area in accordance with CW 3410-R8 Clause 9.3 and to the satisfaction of the Contract Administrator so that the finished elevation of the patch is flush with surrounding pavement surface.
- (d) Compact the asphalt material to an average 95% of the 75 blow Marshall Density of the paving mixture with no individual test being less than 90 %.
- (e) Ensure that no traffic is allowed to cross the patched area until the asphalt has cooled to atmospheric temperature.

E16.3.3 Crack/Joint Patching

- (a) Construction Methods as per CW 3250-R7 Clause 3.4.

E16.4 Measurement and Payment

- E16.4.1 Asphalt Patching of Miscellaneous Concrete will be measured on a weight basis and paid for at the Contract Unit Price per tonne for "Asphalt Patching of Miscellaneous Concrete". The weight to be paid for will be the total number of tonnes of asphalt placed and compacted in accordance with this specification and accepted by the Contract Administrator, as measured on a certified weigh scale.

E17. PATHWAY CONSTRUCTION EARTH WORK

E17.1 Description

E17.1.1 General

- (a) This specification covers the earth work related to the construction of the multi-use pathway and associated boulevard and ditch re-grading along the proposed pathway (Part B).
- (b) Referenced Standard Construction Specifications
 - (i) CW 1130-R1 – Site Requirements
 - (ii) CW 3110-R11 – Sub-Grade, Sub-Base and Base Course Construction
 - (iii) CW 3170-R3 – Earth Work and Grading

E17.2 Materials and Equipment

E17.2.1 Materials

- (a) Material supplied shall be as per CW 3170 Clause 5 and CW 3110-R11 Clause 2 and 3.9.

E17.2.2 Equipment

- (a) Equipment as per CW 3170-R3 Clause 8.

E17.3 Construction Methods

E17.3.1 Further to CW 1130-R1 Clause 3.15, the Contract Administrator will mark out earth work cut and fill alignment and elevations.

E17.3.2 Stripping Grass and Topsoil

- (a) Contractor to strip existing grass cover and topsoil within the limits identified by the Contract Administrator.
- (b) Haul and deliver stripped material to Maple Grove Park located at the northwest corner of St. Mary's Road and the south Perimeter Highway. Dump material in location specified by the Contract Administrator.
- (c) Clean up material dropped or spilled during hauling operations as directed by the Contract Administrator.
- (d) Appendix A contains information on topsoil depths noted in testholes at the Site.

E17.3.3 Ditch and Berm Earth Work

- (a) Refer to the Contract Drawings for typical cut/fill elevations along the length of the pathway, and limits of earth work in the ditch and berm area.
- (b) The Contractor is to note the following are estimated cut and fill volumes for the Work. This information is provided to assist bidders in estimation of level of effort for the Work only. Note these volumes include the existing topsoil. Actual earth work volumes will not be measured by the Contract Administrator:

<u>Part</u>	<u>Cut (m3)</u>	<u>Fill (m3)</u>
B1	1200	960
B2	180	560
TOTAL	1380	1520

- (c) Excavate in-situ material below the pathway and sub-cut to a depth 300 mm below the bottom of the pathway structure (300 mm below expected sub-grade elevation).
- (d) Utilize suitable excavated material to create a flat bench cut area under the pathway alignment and backslope of the ditch large enough for mechanical compaction equipment.
- (e) Compact benched area to a minimum of 90% Standard Proctor Density.
- (f) Excavate in-situ material on the front slope of the ditch to lines and grades and utilize to replace sub-grade to the bottom of the pavement structure and to fill the ditch sideslope.
- (g) Place and compact sub-grade to 95% Standard Proctor Density under pathway alignment, and to 90% under backslope, bottom, and frontslope of the ditch.
- (h) Place and compact sub-grade in maximum lifts of 400 mm compacted depth.
- (i) Construct and shape ditch grades to 50 mm below final design grade, and berm grades to 100 mm below design grade to allow for topsoil placement.

E17.4 Measurement and Payment

E17.5 Pathway Construction Earth Work

E17.5.1 Stripping existing grass and topsoil will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Stripping Topsoil". The area to be paid for will be the total area where existing grass and topsoil, generally between the front slope of the ditch and top of berm is removed in accordance with this specification, accepted and measured by the Contract Administrator.

E17.5.2 Ditch and Berm Earth Work will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Ditch and Berm Earth Work". The area to be paid for will be the total area where the sub-grade is removed, bench-cut, replaced, compacted (except

compaction under the pathway), graded, and shaped in accordance with this specification, accepted and measured by the Contract Administrator.

- E17.5.3 Sub-grade compaction immediately under the pathway structure will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Sub-Grade Compaction (Pathway)". The area to be paid for will be the total area under the pathway structure that is compacted in accordance with this specification, accepted and measured by the Contract Administrator.

E18. REMOVAL OF TREES

E18.1 Description

E18.1.1 General

- (a) This specification covers the removal of existing trees necessary for the completion of the Works in Part B and C of the contract.

E18.2 Materials and Equipment

E18.2.1 Not Applicable.

E18.3 Construction Methods

E18.3.1 General

- (a) Contractor shall remove designated trees as directed by the Contract Administrator on an "as required" basis in accordance with the requirements hereinafter specified.
- (b) The Contractor shall not complete a tree removal unless they receive authorization from the Contract Administrator.
- (c) The Contractor shall remove trees in a manner satisfactory to the Contract Administrator or designate and agrees that the Work may be inspected by City personnel.
- (d) The Contractor shall cut down designated trees and grub out the stumps and rootballs.
- (e) The Contractor shall remove and/or dispose of all material resulting from the Work immediately by removing to a landfill site, or by chipping and removing material to an appropriate location.
- (f) The Contractor shall repair any damage resulting from the Work to adjacent trees and shall report all damage immediately to the Contract Administrator.

E18.4 Measurement and Payment

- E18.4.1 Removal of Trees will be measured on a unit basis and paid for at the Contract Unit Price per tree and associated stump/roots for "Removal of Trees". The number to be paid for will be the total number of trees and associated stump/roots removed and disposed of in accordance with this specification and accepted by the Contract Administrator.

E19. ACCESSIBLE BENCH NODES

E19.1 Description

E19.1.1 General

- (a) This specification covers the construction of asphalt bench nodes along the multi-use pathway.
- (b) Referenced Standard Construction Specifications
- (i) CW 3410-R8 – Asphaltic Concrete Pavement Works

E19.2 Materials and Equipment

E19.2.1 Asphalt Materials

- (a) Asphalt material supplied shall be as per CW 3410-R8 Clause 5, 6 and 7 for Type 1A asphalt.

E19.2.2 Equipment

- (a) Equipment as per CW 3410-R8 Clause 8.

E19.3 Construction Methods

E19.3.1 Construction Methods as per CW 3410-R8 Clause 9.

E19.4 Measurement and Payment

- E19.4.1 Accessible Bench Nodes will be measured on a weight basis and paid for at the Contract Unit Price per tonne for "Accessible Bench Nodes". The weight to be paid for will be the total number of tonnes of asphalt placed and compacted in accordance with this specification and accepted by the Contract Administrator, as measured on a certified weigh scale.

E20. "BEEHIVE" MANHOLE COVERS

E20.1 Description

E20.1.1 General

- (a) This specification covers the supply and installation of "beehive" manhole covers, typically used in open swales or ditches as an alternative to City of Winnipeg Approved Product grated manhole cover AP-006.

E20.2 Materials and Equipment

E20.2.1 As per Contract Drawings.

E20.2.2 All steel shall be supplied in accordance with details on the Contract Drawings. All steel shall be hot dip galvanized after fabrication and all hardware shall be stainless steel.

E20.2.3 Cover to be Shopost Iron Works MK-A1 or approved equal in accordance with B5.

E20.3 Construction Methods

E20.3.1 General

- (a) Contractor to securely affix "beehive" cover to manhole reducer or riser utilizing stainless steel hardware.
- (b) Any galvanized surfaces that are damaged shall be coated with a galvanizing compound approved by the Contract Administrator

E20.4 Measurement and Payment

- E20.4.1 "Beehive" Manhole Covers will be measured on a unit basis and paid for at the Contract Unit Price per cover as "Beehive' Manhole Covers". The number to be paid for will be the total number of 'Beehive' Manhole Covers installed in accordance with this specification and accepted by the Contract Administrator.

E21. TOPSOIL, SEEDING AND SODDING

E21.1 Description

E21.1.1 General

- (a) Further to CW 3510-R9, CW 3520-R7 and CW3540-R5, this specification covers supply and placement of topsoil, sod and seed.

- (b) Generally, topsoil and sod is placed adjacent to the path and on the berm on the south side of the path. A sand/peat mixture and seed is placed in the ditch on the north side of the path.
- (c) Referenced Standard Construction Specifications
 - (i) CW 3510-R9– Sodding
 - (ii) CW 3520-R7 – Seeding
 - (iii) CW3540-R5 – Topsoil and Finish Grading for Establishment of Turf Areas

E21.2 Materials

E21.2.1 Topsoil

- (a) Topsoil for areas on the south side of the pathway (berm) shall conform to the standards outlined in CW 3540-R5, Clause 5.
- (b) Topsoil on the north side of the pathway (ditch) shall be a peat and sand mixture composed of: Sixty percent (60%) peat and forty percent (40%) sand.

E21.2.2 Sod

- (a) Sod shall conform to the standards outlined in CW 3510-R9, Clause 5.

E21.2.3 Seed

- (a) Seeding shall conform to the standards outlined in CW 3520-R7, Clause 5.
- (b) The seed mixture shall be composed of:
Fifty Five percent (55%) Slender wheatgrass, twenty percent (20%) Walsh Western wheatgrass, fifteen percent (15%) Northern wheatgrass and ten percent (10%) Green needlegrass.

E21.3 Construction Methods

E21.3.1 Topsoil

- (a) Prior to placing topsoil, all sub-grade areas except in areas within the edge of a tree canopy(or drip line) shall be scarified to a minimum depth of 50 mm. The Contractor shall use soil scarifying or pulverizing equipment suitable for the area involved and to the satisfaction of the Contract Administrator.
- (b) The topsoil on the south side of the pathway (berm) shall be applied as per CW 3540-R5, Clause 9 to a minimum 100 mm compacted depth.
- (c) The peat and sand topsoil mix shall be applied on the north side of the pathway (ditch) to a minimum 50 mm compacted depth.

E21.3.2 Sod

- (a) Sod shall be installed on the south side of the pathway (berm) and for a 2m width along the north edge of the pathway as per CW 3510-R9, Clause 9.
- (b) Sod placed on embankments with slopes of 1 vertical to 3 horizontal (18 degrees) or steeper shall be pegged to the subgrade as specified in CW 3510-R9, Clause 9.5.

E21.3.3 Seed

- (a) Seed, hydro-mulching, and maintenance shall be applied as per CW 3520-R7, Clause 9 to the topsoil over areas on the north side (ditch) of the path beyond the 2m wide section of sod.
- (b) Seeding shall be sown at a rate of 2.2 kg per 100 square meters.

E21.4 Measurement and Payment

E21.4.1 Topsoil

- (a) Measurement and Payment for topsoil as per CW 3540-R5, Clause 12 and 13.

- E21.4.2 Sod
(a) Measurement and Payment for sod as per CW 3510-R9, Clause 12 and 13.
- E21.4.3 Seed
(a) Measurement and Payment for seed as per CW 3520-R7, Clause 12 and 13.

E22. 6 MM LIMESTONE FOR THE SAGE CREEK PATH

E22.1 Description

- E22.1.1 Further to CW 3110-R11 the Work of this section comprises the furnishing of all labour, equipment and materials incidental and required to complete the installation of 6mm crushed limestone on the surface of the pathway east of Lagimodiere Boulevard as shown on the drawings.

E22.2 Materials

- E22.2.1 All Materials supplied under this Specification shall be of a type approved by the Contract Administrator and shall be subject to inspection and testing by the Contract Administrator;
- E22.2.2 Crushed limestone fines-6mm down consisting of hard, durable, angular particles, free from clay lumps, cementation, organic material, frozen material and other deleterious materials.
- E22.2.3 If materials have been tested by an independent testing laboratory within previous 2 months and have successfully passed tests equal to requirements of this specification, submit test certificates from testing laboratory showing suitability of materials for this project.

E22.3 Construction Methods

- (a) Crushed Limestone fines to a minimum compacted thickness of 13mm as finishing course. Compact to 95% standard proctor density.
- (b) Finished surface to be within 5mm of specified grade, but not uniformly high or low. Ensure positive drainage in adjacent areas.
- (c) Any Work not satisfactory as specified herein and as determined by the Contract Administrator for initial testing, shall be rectified by the Contractor. This process of inspection and correction shall continue until the Contract Administrator is satisfied that the Work is 100% complete and as per the construction drawings and specifications. All additional tests for failed or unacceptable results will be borne solely by the Contractor.

E22.4 Measurement and Payment

- E22.4.1 Crushed Limestone fines – 6mm down shall be measured on an volume basis and will be paid for at the Contract Unit Price per cubic metre for “Supplying and Placing 6mm Crushed Limestone Material.” The volume to be paid for will be the total volume placed in accordance with this Specification and accepted and measured by the Contract Administrator.

E23. HYDRO-EXCAVATION

E23.1 Description

- E23.1.1 General
(a) This specification shall cover the removal of earthen material immediately adjacent to underground utilities infrastructure by means of high pressure water spray, and the recovery of evacuated material by vacuum type means or equivalent method as approved by the Contract Administrator.

- (b) This Work is expected on Part B of the project at two hydro electricity crossings of the pathway. (approx. pathway station 2+000 and 2+130)

E23.2 Equipment

- E23.2.1 Hydro-Excavation unit shall be capable of maintaining a minimum working pressure of 10,000 psi, at a rate of flow of 10 to 12 gallons per minute. Unit should be adjustable, so as to provide adequate pressure to remove earthen material identified by the Contract Administrator.
- E23.2.2 Spray head shall be equipped with a rotating type nozzle, in order to provide a wider path of cut.

E23.3 Construction Methods

E23.3.1 Hydro-removal of earthen material

- (a) Earthen material adjacent to utility entity shall be sprayed with high pressure water so as to remove all such material identified by the Contract Administrator.

E23.3.2 Recovery of excavated material

- (a) The recovery of excavated material shall be done using vacuum type method, or other type method as approved by the Contract Administrator.
- (b) The recovery of material shall follow immediately behind the excavation, to avoid excavated areas from filling with excavated material.
- (c) The use of mechanical sweepers will not be allowed.
- (d) Dispose of material in accordance with Section 3.4 of CW 1130-R1.

E23.4 Measurement and Payment

E23.4.1 Hydro-Excavation

- (a) Hydro-Excavation of earthen material will be measured on an hourly basis and paid for at the Contract Unit Price per hour for "Hydro-Excavation of Utility Lines". The hours to be paid for will be the total number of hours of Hydro-Excavation in accordance with this specification, accepted and measured by the Contract Administrator.

E24. BASE COURSE FOR TEMPORARY SIDEWALK

E24.1 DESCRIPTION

E24.2 General

- E24.2.1 Further to CW 3110-R11, CW 3235-R7 this specification covers supply, placement, compaction and re-excavation of base course material for temporary sidewalks during roundabout construction. The sidewalk at all four corners must be realigned, but in order to maintain pedestrian access during construction temporary sidewalks must be constructed at locations marked by the Contract Administrator.

E24.3 Referenced Standard Construction Specifications

- (a) CW 3110-R11 – Sub-Grade, Sub-Base and Base Course Construction.
- (b) CW 3235-R7 – Renewal of Existing Miscellaneous Concrete Slabs.

MATERIALS

- E24.4 Granular base course materials as per Section 3 of CW 3110-R11.

CONSTRUCTION METHODS

- E24.4.1 Locations marked for temporary sidewalk will include, but not be limited to, sidewalk excavated for utility work, sidewalk excavations directly in front of resident entrances, and sidewalk leading to a side street or private approach.
- E24.4.2 The base course should be levelled and hand compacted to match the surrounding sidewalk to minimize the tripping hazard to local residents.
- E24.4.3 Other areas of sidewalk not backfilled shall be barricaded as per the Manual of Temporary Traffic Control in Work Areas on City Streets, 2003 Edition.
- E24.4.4 When the sidewalk is ready for renewal the granular backfill must be excavated and the excavation prepared as per Section 3 of CW 3235-R7.

MEASUREMENT AND PAYMENT

- E24.4.5 The supplying, placing, compaction and excavation of base course material for temporary sidewalks will be measured on a volume basis and paid for at the Contract Unit Price per tonne for the "Supplying and Placing Base Course Material."

E25. CHAIN LINK FENCE

DESCRIPTION

- E25.1 General
 - E25.1.1 This specification covers the removal and salvaging of existing chain link fencing in the NW portion of the roundabout project area, and the re-installation of said fencing along a new alignment.
 - E25.1.2 Referenced Standard Construction Specifications
 - (a) CW 3550-R2 – Chain Link Fencing.

MATERIALS

- E25.2 General
 - E25.2.1 All new materials as per CW 3550-R2. Salvaged fence materials as existing on site.

CONSTRUCTION METHODS

- E25.3 General
 - E25.3.1 Construction as per Contract Drawings and as per CW 3550-R2.
- E25.4 Salvage Fence
 - E25.4.1 Remove and temporarily store fencing for future reinstallation or stockpiling.
 - E25.4.2 Remove any concrete piles/bases within 0.3 metres of the ground surface. Backfill holes with soil.
 - E25.4.3 Salvage useable posts, fabric, turnbuckles, braces, and midrails.
 - E25.4.4 Excess fencing not required for reinstallation shall be the property of the Contractor.
- E25.5 Reinstall Fence
 - E25.5.1 Reinstall fencing utilizing salvaged materials. New concrete piles required. Other new miscellaneous hardware may be required.

MEASUREMENT AND PAYMENT

E25.6 Salvage Fence

E25.6.1 Removal and temporary storage/stockpiling of existing fence will be measured on a length basis and paid for at the Contract Unit Price per lineal metre for the "Items of Work" listed below. The length to be paid for will be the total amount of existing fencing that is removed, post holes filled, and fencing stored in accordance with this specification, accepted and measured by the Contract Administrator.

E25.6.2 Reinstallation of fencing will be measured on a length basis and paid for at the Contract Unit Price per lineal metre for the "Items of Work" listed below. The length to be paid for will be the total amount of fencing that is reinstalled, including new concrete piles and any other new hardware required to install the fence in accordance with this specification, accepted and measured by the Contract Administrator.

Items of Work:

Chain Link Fence

- (i) Salvage 1.22m Height
- (ii) Reinstall 1.22m Height

E26. OPERATING CONSTRAINTS FOR WORK IN CLOSE PROXIMITY TO THE LAGIMODIERE FEEDERMAIN

E26.1 Description

E26.1.1 This Section details operating constraints for all work to be carried out in close proximity to the North Lagimodiere Feedermain. Close proximity shall be deemed to be any construction activity within a 5 m offset from the centreline of the feedermain.

E26.2 General Considerations for Work in Close Proximity to the Lagimodiere Feedermain

E26.2.1 The Lagimodiere feedermain is a critical components of the City of Winnipeg Regional Water Supply System and work in close proximity to the pipelines shall be undertaken with an abundance of caution. The pipes cannot be taken out of service to facilitate construction and inadvertent damage caused to the pipes would likely have catastrophic consequences.

E26.2.2 Work around the Feedermain shall be planned and implemented to minimize the time period that work is carried out in close proximity to the pipes and to ensure that the pipelines are not subjected to excessive construction related loads, including excessive vibrations and/or concentrated or asymmetrical lateral loads during backfill placement.

E26.2.3 The Lagimodiere Feedermain is constructed of Prestressed Concrete Cylinder Pipe conforming to AWWA Standard C301. This section of the pipeline was installed in approximately 1987.

E26.2.4 AWWA C301 pipe has limited ability to withstand increased earth and live loading. Therefore, every precaution must be undertaken to ensure that applied loading during all phases of construction is within accepted loading parameters.

E26.2.5 Generally, loading conforming to legal highway loading for adjacent roadways or AASHTO HS 20 loading will be permitted, subject to review as outlined in Submittals section below.

E26.3 Submittals

E26.3.1 Submit proposed construction equipment specifications to the Contract Administrator for review seven (7) days prior to construction. Submittal shall include;

- (a) Equipment operating weight and dimensions including wheel or track base, track length or axle spacing, track widths or wheel configurations
- (b) Payload weights

(c) Load distributions in the intended operating configuration

E26.3.2 Submit a Construction Method Statement with proposed construction plan including haul routes, excavation equipment locations, loading positioning and base construction sequencing to the Contract Administrator for review seven (7) days prior to construction. Do not commence construction until the Construction Method Statement has been reviewed and accepted by the Contract Administrator.

E26.3.3 The Contract Administrator will review the equipment and construction method statement in light of the feedermain loading limitations.

E26.4 Protection of the Lagimodiere Feedermain During Construction

E26.4.1 Contractors carrying out repair work or working in close proximity to the Feedermain shall meet the following conditions and technical requirements:

(a) Pre-work, Planning and General Execution

- (i) No work shall commence at the site until the Construction Method Statement has been accepted and the Feedermain locations has been clearly delineated in the field.
- (ii) Work shall only be carried out with equipment that has been reviewed and quantified in terms of its loading implications by the Contract Administrator.
- (iii) For transverse crossings of the Feedermain in support of pavement construction activities, designate crossing locations and confine equipment crossing the pipe(s) to these locations. Reduce equipment speeds to levels that minimize the impacts of impact loading.
- (iv) For construction work activities either longitudinally or transverse to the alignment of the Feedermain work only with equipment and in the manner stipulated in the accepted Construction Method Statement and the supplemental requirements noted herein.
- (v) Subgrade, subbase and base construction shall be kept in a rut free condition at all times. Construction equipment is prohibited from crossing pipelines if the grade is insufficient to support the equipment without rutting.
- (vi) Granular material, construction material, soil or other material shall not stockpiled on the pipelines or within 5 metres of the pipe centerline.
- (vii) Stage construction such that the Feedermain is not subjected to significant asymmetrical loading at any time.
- (viii) Where work is in proximity to the Feedermain, utilize construction practices and procedures that do not impart excessive vibration loads on the Feedermain or that would cause settlement of the subgrade below the Feedermain.

(b) Demolition and Excavation

- (i) Concrete demolition and removal within 3 metres horizontally of the Feedermain shall be completed by sawcutting and removal, or use of hand held jackhammers. Use of machine mounted concrete breakers above the feedermain shall not be permitted.
- (ii) Where there is less than 1.6 metres of earth cover over the Feedermain and further excavation is required either adjacent to or over the feedermain, utilize only smooth edged excavation buckets, soft excavation or hand excavation techniques.
- (iii) Where there is less than 2.5 m of cover over the Feedermain, offset backhoe or excavation equipment from Feedermain, a minimum of 2.5 m from Feedermain centerline, to carry out excavation. Only single live loads will be permitted on the Feedermain at any one time.

(c) Subgrade Construction

- (i) Subgrade compaction shall be limited to static compaction methods and only with equipment that are well within the rated loading superimposed loading capacity of the Feedermain.

(ii) Stage work activities to minimize the time period that unprotected subgrade is exposed to the environment and protect the subgrade against the impacts of adverse weather if subbase/ base course construction activities are not sequential with excavation.

(d) Subbase and Base Course Construction

(i) Subbase or base course materials shall not be dumped directly on pipelines but shall be carefully bladed in-place.

(ii) Subbase compaction shall be either carried out by static methods without vibration or with smaller approved equipment such as hand held plate packers or smaller roller equipment.

E26.4.2 The Contractor shall ensure that all work crew members understand and observe the requirements of this specification. Prior to commencement of on-site work, the Contractor shall jointly conduct an orientation meeting with the Contractor Administrator with all superintendents, foremen and heavy equipment operators to make all workers on site are fully cognizant of the limitations of altered loading on the Feedermain, the ramifications of inadvertent damage to the pipelines, the constraints associated with work in close proximity to the Feedermain and the specific details of the Construction Method Statement in instances where a Construction Method Statement is in effect.

E26.4.3 Employees of the Contractor or any Subcontractor that fail to comply with the conditions for working in close proximity to the Feedermain shall be promptly removed from the Site.

E26.5 Measurement and Payment

E26.5.1 No measurement or payment will be made for the works listed in this specification.

APPENDIX 'A'

GEOTECHNICAL REPORT

APPENDIX 'A' - GEOTECHNICAL REPORT

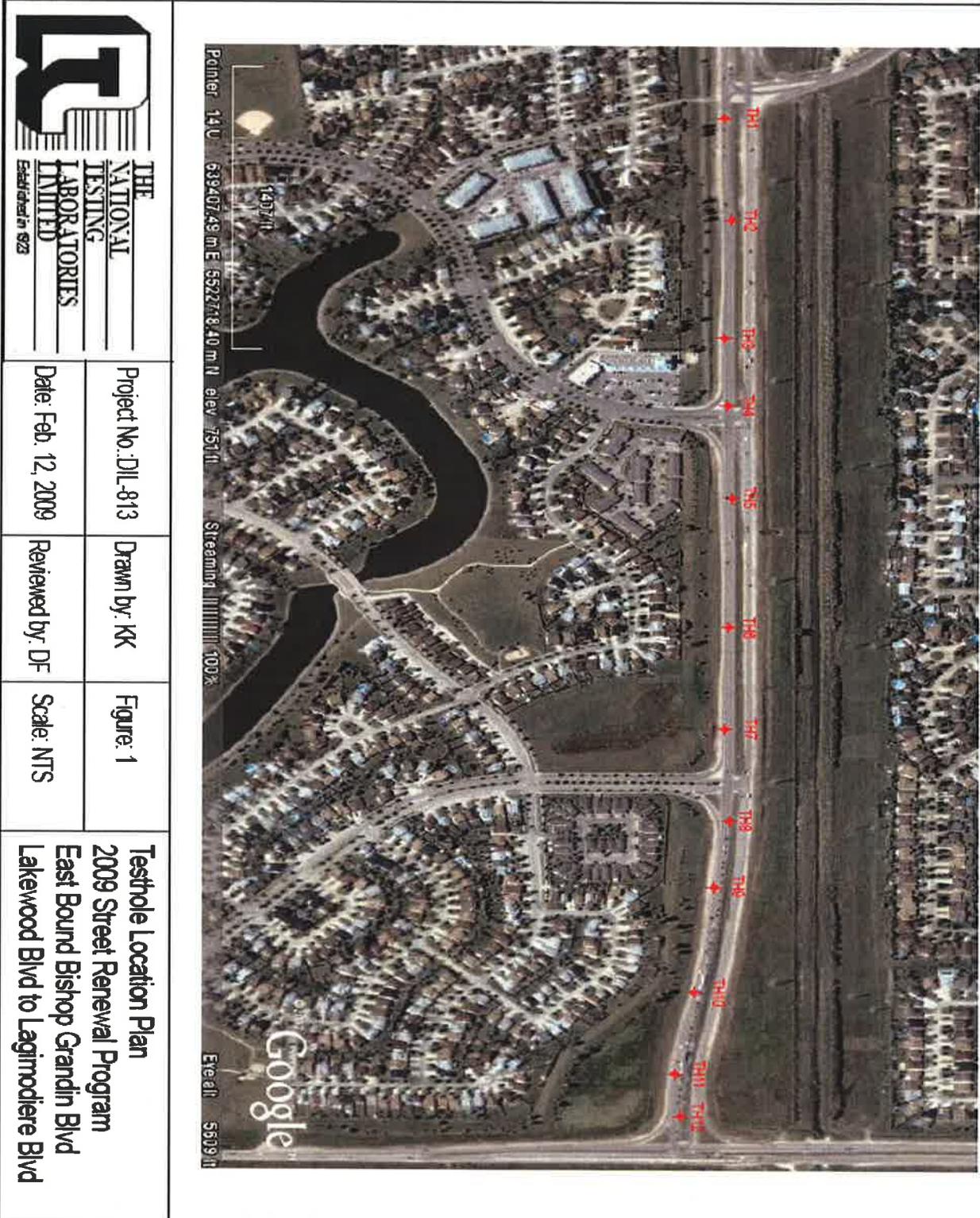
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The geotechnical report is provided to aid in the Contractor's evaluation of the existing concrete pavement and asphalt overlay for Part A, and the soil conditions beneath the proposed path for Part B. The information presented is considered accurate at the locations shown on the Drawings and at the time of drilling. However, variations in soil conditions may exist between test holes and fluctuations in groundwater levels can be expected seasonally and may occur as a result of construction activities. The nature and extent of variations may not become evident until construction commences.

Geotechnical Report for Part A – Roadway Rehabilitation

Test Hole Locations



Summary of Core Samples

City of Winnipeg
2009 Street Renewal Program
East Bound Bishop Grandin Boulevard Pavement Structure
Lakewood Boulevard to Lagimodiere Boulevard

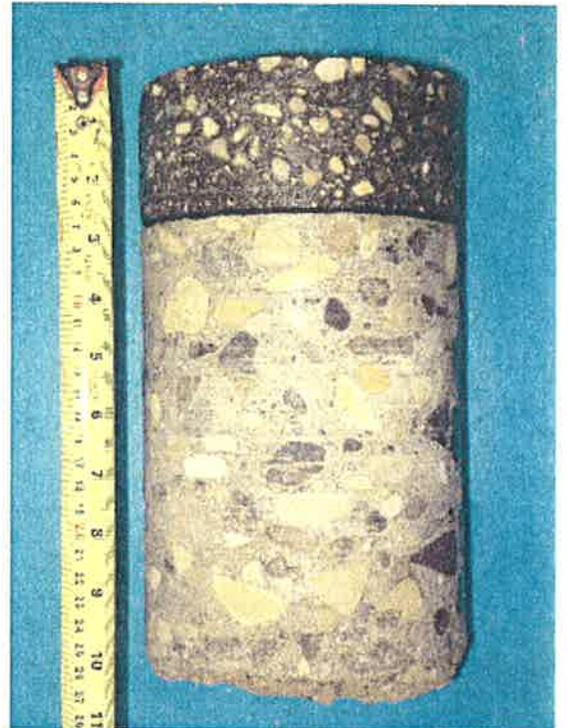
Testhole ID	Testhole Location	Asphalt Thickness (mm)	Concrete Thickness (mm)	Base Coarse Type
TH1	Centre of the south lane, 453 m west of the centre of Island Shore Boulevard intersection	65	200	Granular Base - 20 mm maximum aggregate size
TH2	Centre of the north lane, 299 m west of the center of Island Shore Boulevard intersection	60	194	Granular Base - 20 mm maximum aggregate size
TH3	Centre of the deceleration lane, 120 m west of the centre of Island Shore Boulevard intersection	65	222	Granular Base - 20 mm maximum aggregate size
TH4	Centre of the south lane, 18 m west of the centre of Island Shore Boulevard intersection	62	194	Granular Base - 20 mm maximum aggregate size
TH5	Centre of the north lane, 123 m east of the centre of Island Shore Boulevard intersection	67	192	Granular Base - 20 mm maximum aggregate size
TH6	Centre of the south lane, 318 m east of the centre of Island Shore Boulevard intersection	67	192	Granular Base - 20 mm maximum aggregate size
TH7	Centre of the deceleration lane, 84 m west of the centre of De La Seigneurie Boulevard intersection	65	230	Granular Base - 20 mm maximum aggregate size
TH8	Centre of the north lane, 55 m east of the centre of De La Seigneurie Boulevard intersection	61	200	Granular Base - 20 mm maximum aggregate size
TH9	Centre of the acceleration lane, 155 m east of the centre of De La Seigneurie Boulevard intersection	54	200	Granular Base - 20 mm maximum aggregate size
TH10	Centre of the south lane, 314 m east of the centre of De La Seigneurie Boulevard intersection	58	201	Granular Base - 20 mm maximum aggregate size
TH11	Centre of the deceleration lane, 109 m west of the west curb of Lagimodiere Boulevard	62	197	Granular Base - 20 mm maximum aggregate size
TH12	Centre of the north lane, 45 m west of the west curb of Lagimodiere Boulevard	55	230	Granular Base - 20 mm maximum aggregate size

Note: Testholes were drilled to a depth of 100 mm below the underside of the existing concrete pavement

Pavement Core Photos for Test Hole #1 - 4



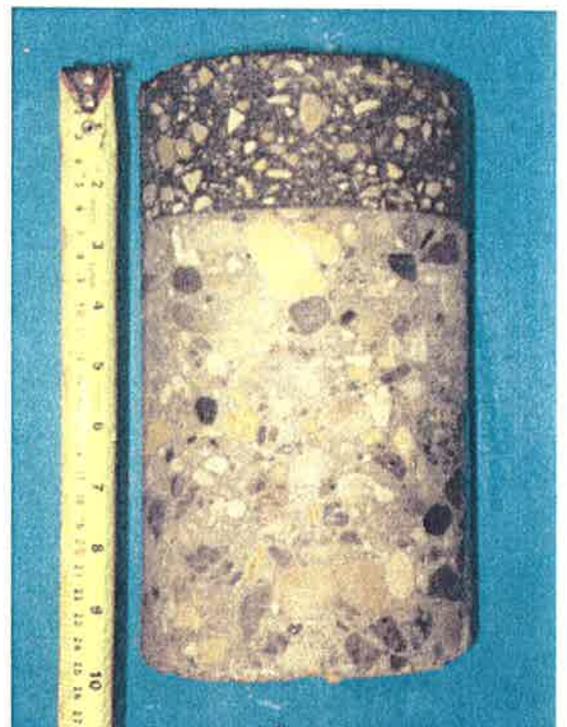
TH1 - East Bound Bishop Grandin



TH2 - East Bound Bishop Grandin



TH3 - East Bound Bishop Grandin



TH4 - East Bound Bishop Grandin

Pavement Core Photos for Test Hole #5 - 8



TH5 - East Bound Bishop Grandin



TH6 - East Bound Bishop Grandin



TH7 - East Bound Bishop Grandin



TH8 - East Bound Bishop Grandin

Pavement Core Photos for Test Hole #9 - 12



TH9 - East Bound Bishop Grandin



TH10 - East Bound Bishop Grandin

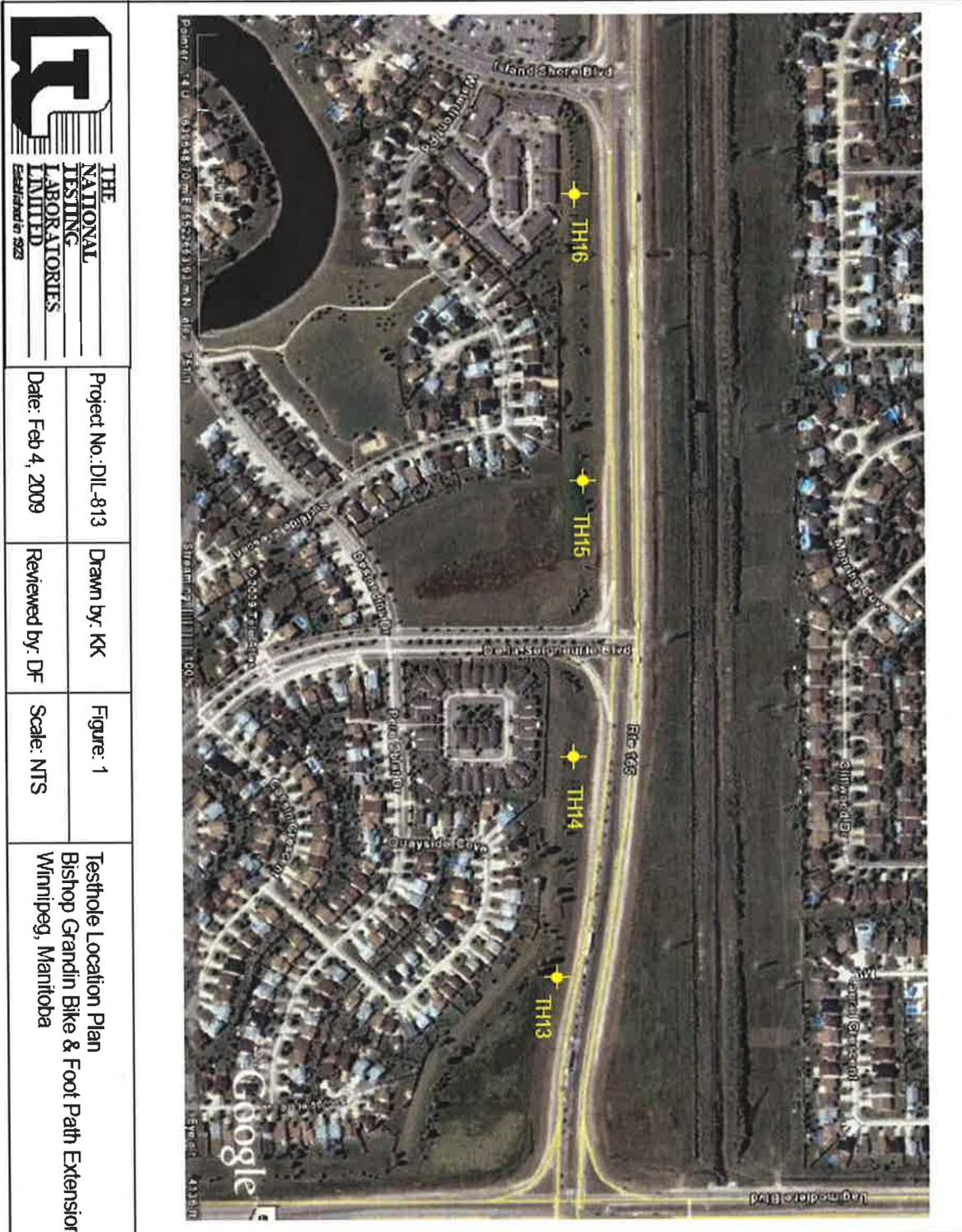


TH11 - East Bound Bishop Grandin

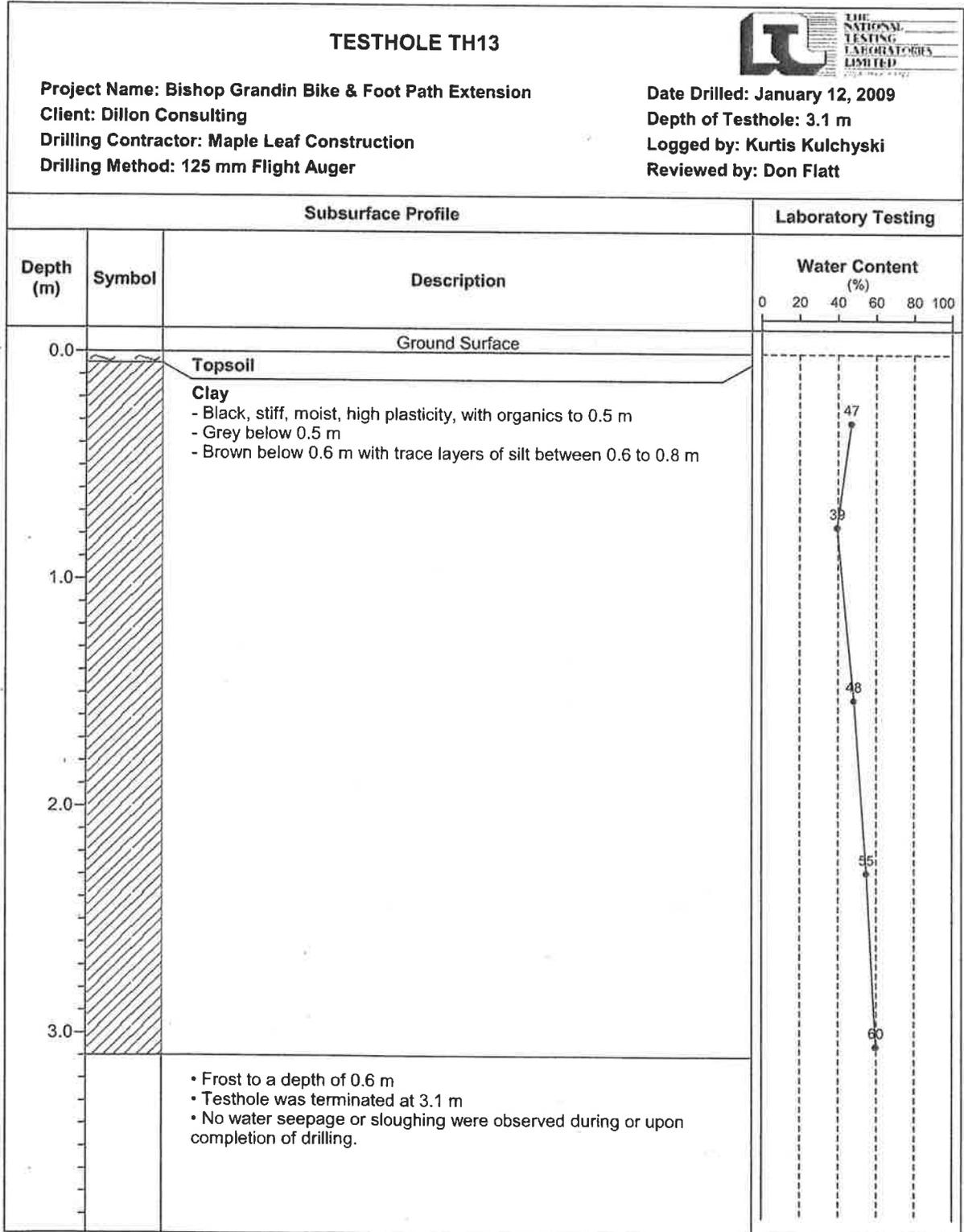


TH12 - East Bound Bishop Grandin

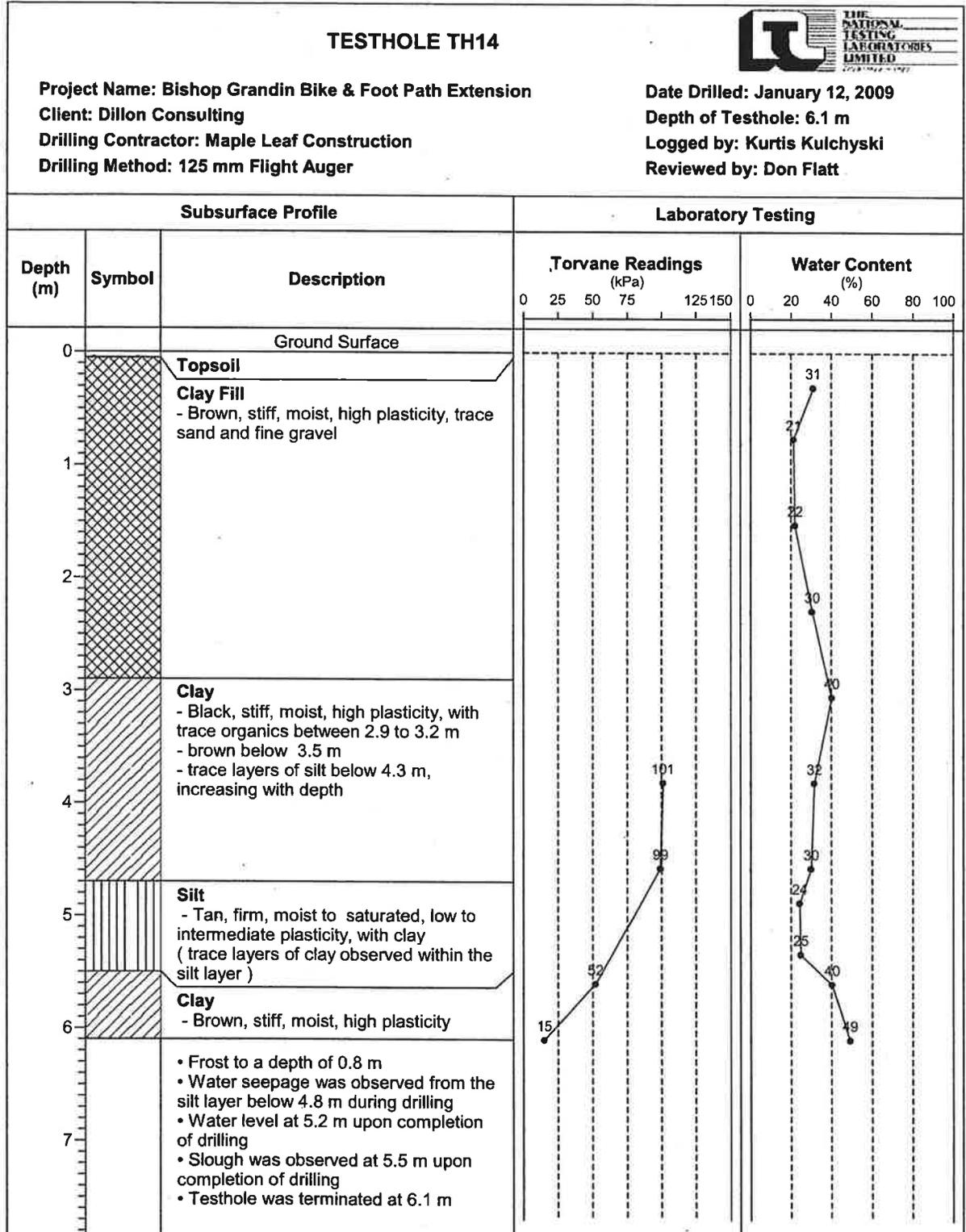
Geotechnical Report for Part B – Multi-Use Pathway Construction
Test Hole Locations



Test Hole Log for Test Hole #13



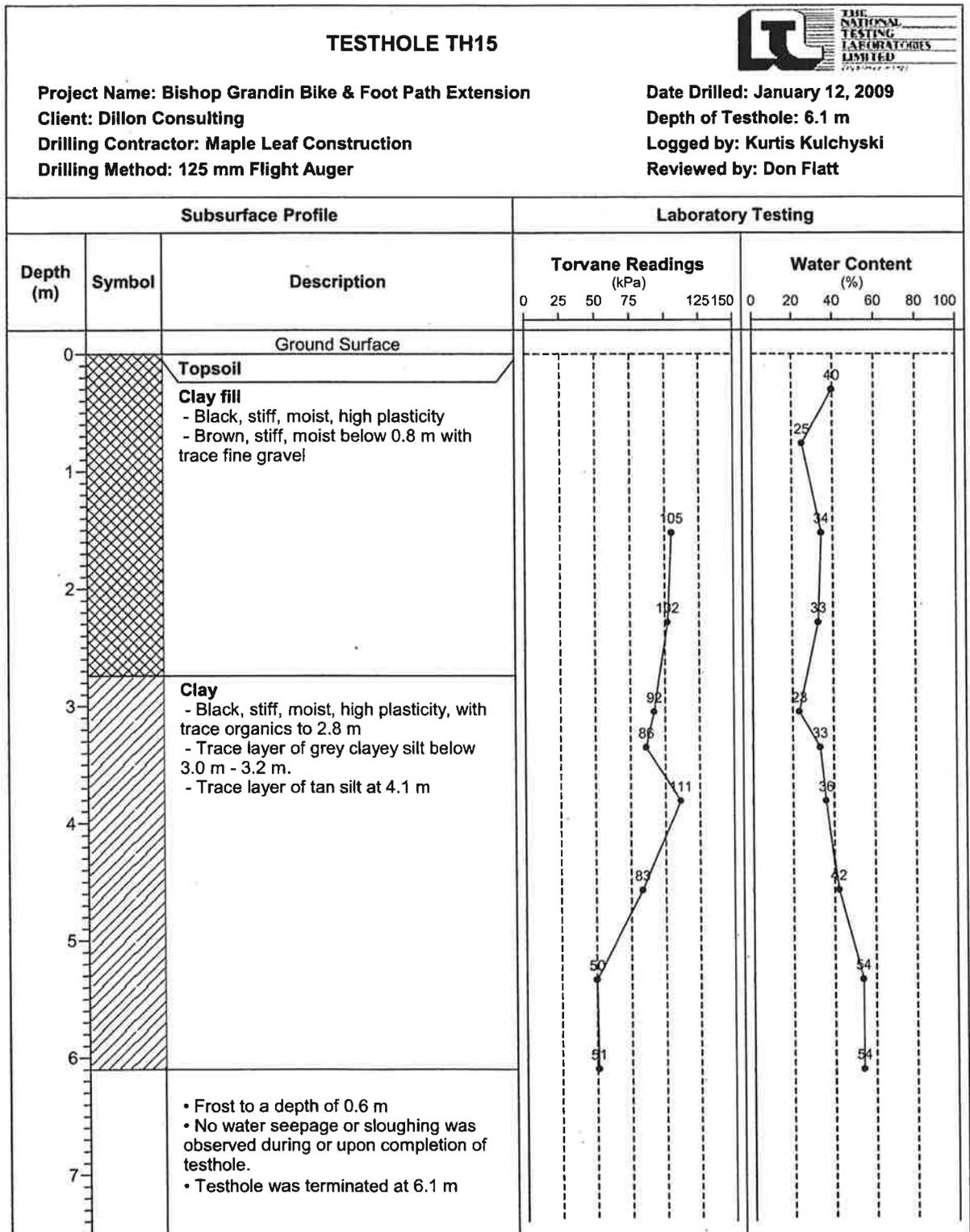
Test Hole Log for Test Hole #14



Project Name: Bishop Grandin Bike & Foot Path Extension
Client: Dillon Consulting
Drilling Contractor: Maple Leaf Construction
Drilling Method: 125 mm Flight Auger

Date Drilled: January 12, 2009
Depth of Testhole: 6.1 m
Logged by: Kurtis Kulchyski
Reviewed by: Don Flatt

Test Hole Log for Test Hole #15



Date Drilled: January 12, 2009
 Depth of Testhole: 6.1 m
 Logged by: Kurtis Kulchyski
 Reviewed by: Don Flatt

Test Hole Log for Test Hole #16

