



THE CITY OF WINNIPEG

BID OPPORTUNITY

323-2007 BID OPPORTUNITY

**CORYDON AVENUE WESTBOUND – PAVEMENT REHABILITATION
BEAVERBROOK STREET TO LANARK STREET, WAVERLEY STREET TO
CAMBRIDGE STREET – PAVEMENT RECONSTRUCTION MONTROSE STREET TO
WAVERLEY STREET**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

- B1.1 CORYDON AVENUE WESTBOUND – PAVEMENT REHABILITATION BEAVERBROOK STREET TO LANARK STREET, WAVERLEY STREET TO CAMBRIDGE STREET – PAVEMENT RECONSTRUCTION MONTROSE STREET TO WAVERLEY STREET

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, May 11, 2007.
- 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 Branch internet site at <http://www.winnipeg.ca/matmgt>.
- B4.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Branch internet 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.

B6. BID COMPONENTS

- B6.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices, hard copy;

- (c) 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, may result in the Bid being determined to be non-responsive.
- 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 Branch
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 shall be printed below such signatures.
- B7.4.2 All signatures should be witnessed, except where a corporate seal has been affixed.
- 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 B14.4.2, 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 Branch internet 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.

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 Branch internet site at <http://www.winnipeg.ca/matmgt>).
- 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 three (3) 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 Branch internet site 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, and shall be witnessed or sealed as required.

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 Branch, 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 Branch internet site 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 Branch internet site 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 (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 adjusted, if necessary, as follows:

- (a) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder is within the budgetary provision for the Work, no adjustment will be made to the Total Bid Price; or
- (b) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder exceeds the budgetary provision for the Work, the Total Bid Prices of all responsive Bids submitted by responsible and qualified Bidders will be adjusted by deducting item A, Corydon Avenue Westbound – Beaverbrook Street to Lanark Street (Pavement Rehabilitation).

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 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 Subject to B15.2, 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.

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.

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 Branch internet site at <http://www.winnipeg.ca/matmgt>.
- 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:

- (a) Pavement Rehabilitation
 - (i) Corydon Avenue Westbound from Beaverbrook Street to Lanark Street
 - (ii) Corydon Avenue Westbound from Waverley Street to Cambridge Street
- (b) Pavement Reconstruction
 - (i) Corydon Avenue Westbound from Montrose Street to Waverley Street

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

- (a) Temporary Detour Diversion – Cambridge to Montrose
 - (i) Removal of curb and boulevard
 - (ii) Excavation
 - (iii) Compaction of sub-grade
 - (iv) Placement of sub-base and base course material
 - (v) Placement of asphalt pavement (average thickness: 50mm)
 - (vi) Removal of pavement and base material associated with detour diversion (post construction)
 - (vii) Restoration of pavement, curb and boulevard (post construction)
- (b) Pavement Rehabilitation
 - (i) Planing of existing asphalt pavement overlay
 - (ii) Full depth concrete patches of existing slabs and joints
 - (iii) Replacement of catchbasins and connection pipe
 - (iv) Adjustment of catchbasins, manholes and water valves
 - (v) Construction of curb utilizing slip-form paving equipment
 - (vi) Renewal of existing sidewalk
 - (vii) Curb renewal at intersections
 - (viii) Boulevard restoration
 - (ix) Paving of asphalt overlay (average thickness: 100mm)

- (c) Pavement Reconstruction
 - (i) Removal of existing pavement
 - (ii) Excavation to sub-grade
 - (iii) Compaction of sub-grade
 - (iv) Replacement of catchbasins and connection pipe
 - (v) Installation of subdrains
 - (vi) Placement of separation/reinforcement fabric
 - (vii) Placement of geogrid
 - (viii) Placement and compaction of sub-base and base course materials
 - (ix) Adjustment of catchbasins, manholes and water valves
 - (x) Construction of 200mm concrete pavement (reinforced)
 - (xi) Construction of curb utilizing slip-form paving equipment
 - (xii) Curb renewal at intersections
 - (xiii) Paving of asphalt tie-ins
 - (xiv) Renewal of existing sidewalk
 - (xv) Boulevard restoration

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is KGS Group, represented by:

Roy Houston
Manager of Civil / Municipal Services
3rd Floor – 865 Waverley Street, Winnipeg, MB, R3T 5P4
Telephone No. (204) 896-1209
Facsimile No. (204) 896-0754

D3.2 At the pre-construction meeting, Roy Houston 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 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 All notices of appeal to the Chief Administrative Officer shall be sent to the following address or facsimile number:

The City of Winnipeg
Chief Administrative Officer Secretariat
Attn: Chief Administrative 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
Corporate 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 Branch internet site at <http://www.winnipeg.ca/matmgt>.

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 a contractual liability, unlicensed motor vehicle liability, non-owned automobile liability and products and completed

operations, to remain in place at all times during the performance of the Work and throughout the warranty period;

- (b) automobile liability insurance for owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;
- (c) an all risks Installation Floater carrying adequate limits to cover all machinery and equipment utilized during the performance of the Work.

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 fifteen (15) 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. DETAILED WORK SCHEDULE

D12.1 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.

SCHEDULE OF WORK

D13. COMMENCEMENT

- D13.1 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.
- D13.2 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; and
 - (viii) the detailed work schedule specified in D12.
 - (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.
- D13.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the letter of intent.

D14. WORKING DAYS

- D14.1 Further to C1.1(gg);
- D14.1.1 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.
- D14.1.2 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.
- D14.1.3 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.

D15. RESTRICTED WORK HOURS

- D15.1 Further to clause 3.10 of CW 1130, the Contractor shall require written permission 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.

D16. WORK BY OTHERS

- D16.1 Work by others on or near the Site will include but not necessarily be limited to:
- (a) City of Winnipeg Traffic Signals Systems Management Branch – Traffic signals at Corydon and Cambridge. Construction and implementation of temporary detour diversion must be coordinated with Traffic Signals Branch;
 - (b) City of Winnipeg Traffic Services – Temporary detour diversion for westbound traffic on Corydon between Montrose Street and Cambridge Street. Erection and maintenance of temporary detour diversion traffic control signings;

- (c) Manitoba Hydro Gas Division – Miscellaneous adjustments to lower gas services may be required; and
- (d) City of Winnipeg Geomatics.

D17. SEQUENCE OF WORK

D17.1 Further to C6.1, the sequence of work shall be as follows:

D17.1.1 The Work shall be divided into five (5) Stages. Each Stage shall be subdivided into major items of work.

- (a) **Stage I – Construction of Temporary Detour Diversion**
 - (i) Remove existing curb and boulevard;
 - (ii) Excavate to sub-grade within boulevard;
 - (iii) Compact sub-grade;
 - (iv) Place and compact sub-base and base course material; and
 - (v) Pave asphalt surface course.
- (b) Construction of temporary detour diversion between Montrose Street and Cambridge Street and erection of traffic control signings shall be completed prior to the commencement of any remedial construction works.
- (c) Further to D17.1.1(b), temporary traffic control signings shall be erected and maintained in accordance with the *Manual of Temporary Traffic Control in Work Areas on City Streets* (Revision December 2002) available at The City of Winnipeg, Public Works, Transportation internet site at <http://www.winnipeg.ca/publicworks/Transportation/manual-2003-04-23.pdf>
- (d) **Stage II – Corydon Avenue Westbound from Montrose Street to Waverley Street (Pavement Reconstruction – Sta 16+00 to Sta 17+26.5)**
 - (i) Removal of existing pavement and curb;
 - (ii) Excavation to sub-grade;
 - (iii) Compaction of sub-grade;
 - (iv) Installation of catchbasins and connection pipe;
 - (v) Installation of subdrains;
 - (vi) Placement of separation/reinforcement fabric;
 - (vii) Placement of geogrid;
 - (viii) Placement and compaction of sub-base and base course materials;
 - (ix) Adjustment of catchbasins, manholes and water valves;
 - (x) Construction of 200mm concrete pavement (reinforced);
 - (xi) Construction of curb utilizing slip-form paving equipment;
 - (xii) Construction of curb renewals at intersections;
 - (xiii) Paving of asphalt tie-ins at intersections;
 - (xiv) Renewal of existing sidewalk; and
 - (xv) Boulevard restoration.
- (e) **Stage III – Corydon Avenue Westbound from Waverley Street to Cambridge Street (Pavement Rehabilitation – Sta 17+26.5 to Sta 19+14.6)**
 - (i) Planing of existing asphalt pavement overlay;
 - (ii) Full depth concrete patches of existing slabs and joints;
 - (iii) Installation of catchbasins and connection pipe;
 - (iv) Adjustment of catchbasins, manholes and water valves;
 - (v) Construction of curb utilizing slip-form paving equipment;
 - (vi) Renewal of existing sidewalk;
 - (vii) Curb renewal at intersections;

- (viii) Boulevard restoration;
 - (ix) Paving of asphalt scratch course;
 - (x) Paving of asphalt surface course; and
 - (xi) Paving of asphalt tie-ins at intersections, alleys and approaches.
- (f) 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.
- (g) All asphaltic concrete work shall be performed using a lane-at-a-time method.
- (h) At the end of any day, there shall be no drop-off along any longitudinal joint, excepting the longitudinal joint between the gutter and approaches.
- (i) 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.
- (j) **Stage IV – Decommissioning of Temporary Detour Diversion**
- (i) Removal of pavement and base material associated with detour diversion; and
 - (ii) Restoration of pavement, curb and boulevard associated with detour diversion.
- (k) Works relating to Stage IV shall commence after temporary traffic detour signings have been removed and traffic has been restored to normal traffic flow on Westbound Corydon between Montrose and Cambridge.
- (l) **Stage V – Corydon Avenue Westbound from Beaverbrook Street to Lanark Street (Pavement Rehabilitation – Sta 1+00 to Sta 2+73)**
- (i) Planing of existing asphalt pavement overlay;
 - (ii) Full depth concrete patches of existing slabs and joints;
 - (iii) Installation of catchbasins and connection pipe;
 - (iv) Adjustment of catchbasins, manholes and water valves;
 - (v) Construction of curb utilizing slip-form paving equipment;
 - (vi) Renewal of existing sidewalk;
 - (vii) Curb renewal at intersections;
 - (viii) Boulevard restoration;
 - (ix) Paving of asphalt scratch course;
 - (x) Paving of asphalt surface course; and
 - (xi) Paving of asphalt tie-ins at intersections, alleys and approaches.
- (m) Further to C6.1, the sequence of work for stage V of the construction shall be as follows:
- (i) Construction activity is to be limited to one lane of the roadway at a time. No construction shall commence on the median lane until all work is completed on the curb lane.
 - (ii) Initial planing operations are to be limited to the curb lane of the roadway. Planing of the median lane of the roadway is not to commence until the Contract Administrator has approved the opening of the curb lane to traffic.
 - (iii) The Contractor shall delay placing the final lift of asphalt on the curb lane of the roadway, so that the final lift of all lanes is placed in one operation.

D17.1.2 Where the Contractor utilizes two (2) or more crews that work independently on the same major component of the Work as identified in D2.2(b), the Contractor may perform the construction operations described in D17.1.1(l) Stage V simultaneously to any other construction Stage.

D17.1.3 All temporary traffic control measures shall comply with the *Manual of Temporary Traffic Control in Work Areas on City Streets* (Revision December 2002) available at The City of Winnipeg, Public Works, Transportation internet site at <http://www.winnipeg.ca/publicworks/Transportation/manual-2003-04-23.pdf>

D18. SUBSTANTIAL PERFORMANCE

- D18.1 The Contractor shall achieve Substantial Performance within Fifty (50) consecutive Working Days of the commencement of the Work as specified in D13.
- D18.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.
- D18.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

D19. TOTAL PERFORMANCE

- D19.1 The Contractor shall achieve Total Performance within Fifty Five (55) consecutive Working Days of the commencement of the Work as specified in D13.
- D19.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.
- D19.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

D20. LIQUIDATED DAMAGES

- D20.1 If the Contractor fails to achieve Substantial Performance in accordance with the Contract by the day fixed herein for Substantial Performance, the Contractor shall pay the City one thousand dollars (\$1,000) per Working Day for each and every Working Day following the day fixed herein for Substantial Performance during which such failure continues.
- D20.2 The amount specified for liquidated damages in D20.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Substantial Performance by the day fixed herein for same.
- D20.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.
- D20.4 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D21. SCHEDULED MAINTENANCE

- D21.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:
- (a) Sodding as specified in CW 3510 – R9;
 - (b) Reflective Crack Maintenance as specified in CW 3250 – R6;
- D21.2 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

D22. JOB MEETINGS

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

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

- D23.1 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

D24. WARRANTY

- D24.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire two (2) years thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.
- D24.2 Notwithstanding C13.2 or D24.1, 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; or
- D24.2.1 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 dated the

_____ day of _____ , 20____ , for:

BID OPPORTUNITY NO. 323-2007

CORYDON AVENUE WESTBOUND – PAVEMENT REHABILITATION BEAVERBROOK STREET TO LANARK STREET, WAVERLEY STREET TO CAMBRIDGE STREET – PAVEMENT RECONSTRUCTION MONTROSE STREET TO WAVERLEY STREET
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)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

By: _____ (Seal)
(Attorney-in-Fact)

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)

CORYDON AVENUE WESTBOUND – PAVEMENT REHABILITATION BEAVERBROOK STREET TO LANARK STREET, WAVERLEY STREET TO CAMBRIDGE STREET – PAVEMENT RECONSTRUCTION
MONTROSE STREET TO WAVERLEY STREET

<u>Portion of the Work</u>	<u>Name</u>	<u>Address</u>
SURFACE WORKS:		
<i>Supply of Materials:</i>		
<i>Concrete</i>		
<i>Asphalt</i>		
<i>Base Course & Sub-Base</i>		
<i>Sod</i>		
<i>Geotextile / Geogrid</i>		
<i>Installation/Placement:</i>		
<i>Concrete</i>		
<i>Asphalt</i>		
<i>Base</i>		
UNDERGROUND WORKS:		
<i>Supply of Materials:</i>		
<i>Catchbasins</i>		
<i>Subdrain Pipe</i>		
<i>Connecting Pipe</i>		
<i>Catchbasin / Manhole Frames and Covers</i>		
<i>Installation/Placement:</i>		
<i>Catchbasins</i>		
<i>Subdrain Pipe</i>		
<i>Connecting Pipe</i>		
OTHERS:		
<i>Reflective Crack Maintenance</i>		

FORM L: DETAILED WORK SCHEDULE
(See D12)

**CORYDON AVENUE WESTBOUND – PAVEMENT REHABILITATION BEAVERBROOK STREET TO LANARK STREET, WAVERLEY STREET TO CAMBRIDGE STREET – PAVEMENT RECONSTRUCTION
MONTROSE STREET TO WAVERLEY STREET**

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					
	^	^	^	^	^	^
1. Temporary Detour Diversion						
- Curb / Boulevard Removal and Excavation						
- Base Construction						
- Asphalt Paving						
2. Corydon Avenue Westbound from Montrose Street to Waverley Street (Pavement Reconstruction)						
- Pavement Removal and Excavation						
- Catchbasin Replacement and Subdrain Installation						
- Geotextile/Geogrid Installation and Base Construction						
- Concrete Pavement Works						
- Sidewalk Renewal						
- Landscaping						
3. Corydon Avenue Westbound from Waverley Street to Cambridge Street (Pavement Rehabilitation)						
- Planing of Existing Asphalt Pavement Overlay						
- Concrete Joint and Slab Repairs						
- Catchbasin Replacement and Adjustments						
- Curb Renewal						
- Sidewalk Renewal						
- Landscaping						
- Asphalt Paving						

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 Branch internet site at <http://www.winnipeg.ca/matmgt>.
- 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>
	Cover Sheet	A1
P-3279-01	PAVEMENT REHABILITATION BEAVERBROOK ST. TO LANARK ST. STA. 1+00 TO STA. 2+00	A1
P-3279-02	PAVEMENT REHABILITATION BEAVERBROOK ST. TO LANARK ST. STA. 2+00 TO STA. 2+75	A1
P-3279-03	PAVEMENT RECONSTRUCTION MONTROSE ST. TO WAVERLEY ST. STA. 16+00 TO STA. 17+26.5	A1
P-3279-04	PAVEMENT REHABILITATION WAVERLEY ST. TO OXFORD ST. STA. 17+26.5 TO STA. 18+40	A1
P-3279-05	PAVEMENT REHABILITATION OXFORD ST. TO CAMBRIDGE ST. STA. 18+40 TO STA. 19+15	A1
SK-1	TEMPORARY DETOUR DIVERSION OAK STREET TO MONTROSE STREET	8.5 X 11
SK-2	TEMPORARY DETOUR DIVERSION WAVERLEY STREET TO CAMBRIDGE STREET	8.5 X 11
SK-3	TEMPORARY DETOUR DIVERSION CORYDON AVENUE AND CAMBRIDGE STREET INTERSECTION	8.5 X 11
SK-4	TEMPORARY DETOUR DIVERSION CAMBRIDGE STREET TO THURSO STREET	8.5 X 11

E2. GEOTECHNICAL REPORT

- E2.1 Further to C3.1, the geotechnical report is provided to aid the Contractor's evaluation of the existing soil conditions. The geotechnical report is contained in Appendix 'A'.

E3. PROTECTION OF EXISTING TREES

- E3.1 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:
- The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of trees.
 - 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.

E3.2 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.

E3.3 No separate measurement or payment will be made for the protection of trees.

E3.4 Elm trees cannot be trimmed between April 1 and July 31, inclusive.

E4. TRAFFIC CONTROL AND MANAGEMENT

E4.1 Further to clauses 3.6 and 3.7 of CW 1130-R1:

E4.1.1 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. No measurement for payment will be made for this work.

E4.1.2 In accordance with the Manual of Temporary Traffic Control in Work Areas on City Streets, 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.

E4.1.3 The Contractor shall maintain one westbound lane of traffic (Stage V) during construction of the respective westbound lane.

E4.1.4 The Contractor shall provide and maintain flagmen in accordance with the "Manual of Temporary Traffic Control in Work Areas on City Streets"

E4.1.5 If any pedestrian traffic is disrupted or rerouted at the site, the Contractor shall be responsible for supplying and installing all necessary signs and protection to the satisfaction of the Contract Administrator.

E4.1.6 The contractor shall take all other safety measures necessary to cope with any peculiar or unusual circumstances that have not been set out in the above-mentioned manual and shall, at all times, ensure that maximum protection is provided to the road-users and that his operations in no way interfere with the safe operation of traffic.

E4.1.7 The Contractor shall make every attempt to maintain, daily, all signage, pylons and barricades erected by City of Winnipeg Traffic Services for the Temporary Detour Diversion.

E4.1.8 Improper signing will be sufficient reason for the Contract Administrator or Inspector to immediately shut down the entire job.

E4.1.9 Intersecting street and alley approach access shall be maintained wherever possible. In the event that construction Works prevent access to intersecting streets or alleys, the

Contractor shall perform these Works in the shortest time possible and sign the street "Road Closed Local Access Only" at Grosvenor Avenue in accordance with the Manual of Temporary Traffic Control.

- (a) North/South traffic on either Beaverbrook Street or Lanark Street must be maintained during construction.
- (b) North/South traffic on intersecting streets with Corydon Avenue must be maintained at a minimum of 1 intersection between Montrose Street and Oxford Street during construction.
- (c) When no work is being performed in the intersection and providing it is safe for vehicles, north and south lane closures in the intersection will not be permitted.

E4.1.10 The Contractor will be responsible for pedestrian and traffic control at the site acceptable to the Contract Administrator.

E4.1.11 Should the Contractor be unable to maintain pedestrian or vehicular access to a residence or business, he shall review the planned disruption with the business or residence and the Contract Administrator, and take reasonable measures to minimize the impact. The Contractor shall provide a minimum of 24 hours notification to the affected residence or business and the Contract Administrator, prior to disruption of access.

E4.1.12 Pedestrian and ambulance/emergency vehicle access must be maintained at all times.

E5. TEMPORARY DETOUR DIVERSION

E5.1 General

E5.1.1 This Specification covers the supply, erection and maintenance of all applicable traffic control devices in accordance with the provision contained in the latest edition of the "Manual of Temporary Traffic Control in Work Areas on City Streets", issued by the City of Winnipeg and specified herein. It also includes construction of the Works necessary for the detour diversion as specified herein and shown on the Sketches provided.

E5.2 Materials

E5.2.1 General

- (a) The Contractor shall be responsible for the supply, safe storage, and handling of all materials as set forth in this Specification. All materials shall be handled in a careful and workmanlike manner, to the satisfaction of the Contract Administrator.
- (b) Unless specified otherwise herein, supply material in accordance with the City of Winnipeg Standard Construction Specifications for the applicable Works.

E5.2.2 Crushed Sub-Base Material

- (a) Crushed Sub-base material will have a maximum aggregate size of 50 millimetres and be supplied in accordance with Section 2.1 of CW 3110-R10.

E5.2.3 Asphalt Material

- (a) Asphalt material will be Type 1A and will be supplied in accordance with Section 5 and 6 of CW 3410-R7.

E5.3 Construction Methods

E5.3.1 Signage

- (a) The Contractor will be required to supply and erect traffic control signings and road and sidewalk closure barricades for the construction of the surface Works related to the temporary detour diversion.
- (b) If the Contractor requires lanes to be closed on Westbound Corydon during removal of the temporary detour diversion or any other time before or after Westbound Corydon is fully closed to traffic, he must supply and erect the necessary signage. The following conditions will also apply:

- (i) One of the two lanes in Eastbound Corydon and Westbound Corydon must be open at all times.

E5.3.2 Detour Diversion Construction

- (a) The Contractor will be responsible for the Detour Diversion shown on the Drawings and in accordance but not necessarily limited to the following list:
 - (i) Remove existing curb and boulevard and construct a temporary asphalt traffic detour lane through the existing median boulevard to allow one lane of Diverted Westbound Corydon to re-enter the existing curb lane of Westbound Corydon for temporary two-way traffic on the existing Eastbound lanes of Corydon between Montrose Street and Cambridge Street. The detour lane will be located in the median boulevard between Elm Street and Montrose Street (Sta. 15-63 to Sta. 16+07).
 - (ii) Remove existing boulevard at locations as shown on the Drawings or as directed by the Contract Administrator in accordance with Section 3.1 of Specification CW 3110.
 - (iii) Excavate to a depth of 350 millimetres below the top of the existing pavement.
 - (iv) Compact existing sub-grade to a minimum of 95% Standard Proctor Density.
 - (v) Place and compact crushed sub-base material in accordance with CW 3110 to a 300 millimetres compacted depth. Compact to a minimum of 100% Standard Proctor Density.
 - (vi) Place and compact asphalt material to a 50 millimetres compacted depth matching the top of the existing concrete pavement. Compact to an average of 95% percent of the 75 Blow Marshall Density of the paving mixture with no individual test being less than 90% percent.
 - (vii) Restore the above Works to their original, or better condition once Westbound Corydon between Montrose Street and Cambridge Street is reopened to traffic.
 - (viii) Restore eastbound traffic to the normal Corydon Avenue Westbound lanes.
- (b) The following Works are to be constructed in accordance with The City of Winnipeg Standard Construction Specifications indicated and as shown on the Drawings.
 - (i) Excavation and Granular Base: CW 3110-R9: Sub-grade, Sub-base and Base Course Construction;
 - (ii) Asphalt: CW 3410-R7: Asphaltic Concrete Pavement Works;
 - (iii) Curb Renewal: CW 3240-R6: Renewal of Existing Curbs; and
 - (iv) Boulevard Restoration: CW 3510-R9: Sodding.

E5.4 Method of Measurement

- E5.4.1 The detour diversion installation, removal and restoration will be paid for on a lump sum basis, as accepted by the Contract Administrator and no measurement will be made of these Works.

E5.5 Basis of Payment

- E5.5.1 The detour diversion will be paid for at the Contract Lump Sum Price for 'Temporary Detour Diversion' which price shall be payment in full for supplying all materials and for performing all operations herein described and all other items incidental to the Work included in this Specification.

E6. WATER USED BY CONTRACTOR

- E6.1 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.

E7. SURFACE RESTORATIONS

- E7.1 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.

E8. INFRASTRUCTURE SIGNS

- E8.1 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

E9. SUPPLY AND INSTALLATION OF PAVEMENT REPAIR FABRIC

DESCRIPTION

- E9.1 General
- E9.1.1 This specification covers the supply and installation of pavement repair fabric.
- E9.1.2 Referenced Standard Construction
- (a) CW 3130 – Supply and Installation of Geotextile Fabrics.

MATERIALS

- E9.2 Storage and Handling
- E9.2.1 Store and handle material in accordance with Section 2 of CW 3130.
- E9.3 Pavement Repair Fabric
- E9.3.1 Pavement repair fabric will be Glas Grid Road Reinforcement Mesh - Style 8501 or approved equal.

CONSTRUCTION METHODS

- E9.4 General
- E9.4.1 Install pavement repair fabric at random locations as directed by the Contract Administrator.
- E9.4.2 The extent of the placement limits and quantities required will be determined by the Contract Administrator and provided 48 hours prior to the placement of asphalt.
- E9.4.3 Proceed with installation upon completion and acceptance of the asphalt levelling course.
- E9.4.4 Install fabric in accordance with the manufacturer's specifications and recommendations.
- E9.4.5 Only construction equipment required to place the final asphalt surface course will be allowed to travel on the exposed fabric.
- E9.4.6 Replace damaged or improperly placed fabric.
- E9.4.7 Ensure temperature of the asphalt material does not exceed the melting point of the fabric.

MEASUREMENT AND PAYMENT

E9.5 Pavement Repair Fabric

- E9.5.1 The supply and installation of the pavement repair fabric will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Pavement Repair Fabric". The area to be paid for will be the total number of square metres of pavement repair fabric supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.

E10. SUPPLY AND INSTALLATION OF NON-WOVEN GEOTEXTILE FABRIC

- E10.1 Supply and install non-woven geotextile material fabric as Separation / Reinforcement Geotextile Fabric for sub-grades designated as unstable by the Contract Administrator.
- E10.2 Use only Drainage Fabric as approved and listed in accordance with section 4.4 of Approved Products for Surface Works.
- E10.3 Measurement and payment for non-woven geotextile fabric will be at the same Contract Unit Price per square metre for "Separation / Reinforcement Geotextile Fabric".

E11. SUPPLY AND INSTALLATION OF GEOGRID

DESCRIPTION

- E11.1 General
- E11.1.1 This specification covers the supply and installation of Geogrid on unstable Sub-grade soil conditions.
- E11.2 Referenced Standard Construction Specifications
- (a) CW 3130 – Sub-grade, Sub-base and Base Course Construction
 - (b) E12 – 100mm Crushed Pavement Sub-base Material
 - (c) E10 – Supply and Installation of Non-Woven Geotextile Fabric

MATERIALS

- E11.3 Materials will be polypropylene, extruded bi-axial single layer Geogrid.
- E11.4 Acceptable products will be Tenax LBO 302, Nilex BX 1200 or an equal approved by the Contract Administrator.
- E11.5 All Geogrid rolls must clearly show the product style number and unique roll number.
- E11.6 Storage and Handling
- E11.6.1 Store and handle in accordance with the manufacturer's recommendations.
- E11.7 Mill Certificate and MARV Data
- E11.7.1 Provide the Mill Certificate and MARV (Minimum Average Roll Data) Data upon request by the Contract Administrator.

CONSTRUCTION METHODS

- E11.8 General
- E11.8.1 Commence installation of Geogrid after material has been approved by the Contract Administrator and separation/reinforcement fabric material has been installed in accordance with E10 – Supply and Installation of Non-Woven Geotextile Fabric.
- E11.8.2 No sub-grade compaction shall be completed for sub-grades designated as unstable.

- E11.8.3 Unroll Geogrid as smooth as possible on the prepared sub-grade or separation/reinforcement fabric as applicable, in the direction of construction traffic.
- E11.8.4 Install the Geogrid in the longest continuous practical length, free from tension, stress, folds, wrinkles and creases.
- E11.8.5 Overlap joints a minimum of 900mm.
- E11.8.6 Tie adjacent rolls with joint fasteners in accordance to the manufacturer's recommendations.
- E11.8.7 Construction vehicles are not permitted directly on the Geogrid.
- E11.8.8 Place and compact sub-base material to a minimum depth of 300mm in accordance with E12 – 100mm Crushed Pavement Sub-base Material.
- E11.8.9 Avoid sudden stops or sharp turns by construction equipment during placement of sub-base materials.
- E11.8.10 Remove or replace Geogrid improperly installed or damaged as directed by the Contract Administrator.

MEASUREMENT AND PAYMENT

- E11.9 Geogrid
 - E11.9.1 Supply and installation of Geogrid will be measured on an area basis and paid for at the Contact Unit Price per square metre for "Supply and Install Geogrid". The area to be paid for will be the total number of square metres of Geogrid, supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.
 - E11.9.2 Only material placed within the designated sub-grade limits will be included in the payment for "Supply and Install Geogrid".
 - E11.9.3 No measurement or payment will be made for Geogrid removed and replaced due to improper installation or damaged materials.
 - E11.9.4 Adjacent roll joint fasteners will be included in payment for "Supply and Install Geogrid".

E12. 100MM CRUSHED PAVEMENT SUB-BASE MATERIAL

DESCRIPTION

- E12.1 Further to CW 3110, this specification covers the supply and placement of 100mm crushed pavement sub-base material for unstable sub-grades.
- E12.2 Referenced Standard Construction Specifications
 - E12.2.1 CW 3110 – Sub-grade, Sub-base and Base Course Construction
 - E12.2.2 E11 – Supply and Installation of Geogrid

MATERIALS

- E12.3 100mm crushed pavement sub-base material will be approved by the Contract Administrator. The 100mm crushed pavement sub-base material will conform to the following grading requirements:

CANADIAN METRIC SIEVE SIZE	PERCENT OF TOTAL DRY WEIGHT PASSING EACH SIEVE 100MM MAX. AGGREGATE
100 000	97% - 100%
25 000	40% Max.
80	5% Max.

- E12.3.1 Maximum size of material shall not exceed 150mm.
- E12.4 100mm crushed pavement sub-base material will be a mixture of reclaimed concrete and asphaltic concrete. The contents of the material will be limited to the following percentages based on weight.
- (a) minimum of 85% recycled concrete
 - (b) maximum of 15% recycled asphaltic concrete
 - (c) maximum of 3% clay
 - (d) maximum of 1% foreign material

CONSTRUCTION METHODS

- E12.5 Commence placement of 100mm crushed pavement sub-base material after the Contract Administrator has approved installation of the geogrid.
- E12.6 Place sub-base material by end dumping down the centre of the excavation. The sub-base shall be pushed forward and levelled to thickness equal to cover the entire sub-grade width, thickening the section to allow support for the hauling operations. This procedure shall continue until all sub-base material has been placed down the centre of the excavation.
- E12.7 Level sub-base material utilizing a track type dozer.
- E12.8 Initial compaction of the sub-base material shall consist of two complete passes utilizing vibratory type equipment capable of setting the material. Each pass shall be over lapped by half the width of the roller. All additional compaction shall be completed utilizing static type equipment. No trucks, rubber tire loaders or graders will be allowed to travel on the sub-base material until the Contract Administrator has approved the compaction of the sub-base.
- E12.9 The final compacted thickness of the sub-base material shall be a minimum of 300 mm thickness.

MEASUREMENT AND PAYMENT

- E12.10 The supplying, placing and compaction of crushed sub-base material will be measured on a weight basis and paid for at the Contract Unit Price per tonne for the "100mm Crushed Pavement Sub-base Material". The weight to be paid for will be the total number of tonnes of 100mm crushed pavement sub-base material supplied and placed in accordance with this specification, accepted and measured by the Contract Administrator.
- E12.11 The weight to be paid for will be the total number of tonnes of 100mm crushed pavement sub-base material as measured on a certified weigh scale.
- E12.12 Only material placed within the limits of excavation will be included in the payment for 100mm crushed pavement sub-base material.
- E12.13 No measurement or payment will be made for materials rejected by the Contract Administrator.

E13. RECYCLED CONCRETE BASE COURSE MATERIAL

DESCRIPTION

- E13.1 General
- E13.1.1 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.

E13.2 Definitions

E13.2.1 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.

E13.3 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

E13.4 Recycled Concrete Base Course Material

E13.4.1 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.

E13.4.2 Recycled concrete base course material will be approved by the Contract Administrator.

E13.4.3 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.

E13.4.4 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%

E13.4.5 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.

E13.4.6 The amount of deleterious material will be limited to a maximum of two percent of the total dry weight.

CONSTRUCTION METHODS

E13.5 Placement of Recycled Concrete Base Course Material

E13.5.1 Place and compact recycled concrete base course material as a levelling course to a maximum thickness of 50 millimetres.

E13.5.2 Spread materials uniformly to avoid segregation free of pockets of fine and coarse material.

E13.5.3 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.

E13.5.4 Maintain the finished material until the pavement or sidewalk is placed.

MEASUREMENT AND PAYMENT

E13.6 Recycled Concrete Base Course Material

- E13.6.1 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.
- E13.6.2 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.
- E13.6.3 No measurement or payment will be made for materials rejected by the Contract Administrator.

E14. PATCHING OF EXISTING PAVEMENT

DESCRIPTION

E14.1 General

- E14.1.1 This specification covers patching of existing concrete pavement in preparation for an asphalt overlay.
- E14.1.2 Referenced Standard Construction Specifications
 - (a) CW 3110 – Sub-Grade, Sub-Base and Base Course Construction.
 - (b) CW 3130 – Supply and Installation of Geotextile Fabrics.
 - (c) CW 3410 – Asphaltic Concrete Pavement Works.

MATERIALS

E14.2 Crushed Sub-Base Material

- E14.2.1 Crushed Sub-base material will have a maximum aggregate size of 50 millimetre and be supplied in accordance with Section 2.1 of CW 3110.

E14.3 Geotextile Fabric

- E14.3.1 Geotextile fabric will be supplied in accordance with Section 2 of CW 3130.

E14.4 Asphalt Material

- E14.4.1 Asphalt material will be Type 1A and will be supplied in accordance with Sections 5 and 6 of CW 3410.

CONSTRUCTION METHODS

E14.5 General

- E14.5.1 Remove existing concrete pavement to a minimum width of 1.5 metres at locations as shown on the Drawings or as directed by the Contract Administrator in accordance with Section 3.1 of Specification CW 3110.
- E14.5.2 Excavate to a depth of 350 millimetres below the top of the existing pavement.
- E14.5.3 Compact existing sub-grade to a minimum of 95% Standard Proctor Density.
- E14.5.4 Place separation/reinforcement geotextile fabric in accordance with Specification CW 3130.
- E14.5.5 Place and compact crushed sub-base material in accordance with CW 3110 to a 300 millimetres compacted depth. Compact to a minimum of 100% Standard Proctor Density.

- E14.5.6 Place and compact asphalt material to a 50 millimetres compacted depth matching the top of the existing concrete pavement. Compact to an average of 95% percent of the 75 Blow Marshall Density of the paving mixture with no individual test being less than 90% percent.
- E14.5.7 Each layer must be levelled and accepted by the Contract Administrator before the succeeding layer may be placed.
- E14.5.8 Additional excavation and placement of sub-base material beyond the identified pavement structure will be completed in accordance with CW 3110 as directed by the Contract Administrator.

MEASUREMENT AND PAYMENT

- E14.6 Pavement Patching
 - E14.6.1 Pavement patching will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Pavement Patching". The area to be paid for will be the total number of square metres of pavement patched in accordance with this specification, accepted and measured by the Contract Administrator.

APPENDIX 'A'

GEOTECHNICAL REPORT

APPENDIX 'A' - GEOTECHNICAL REPORT

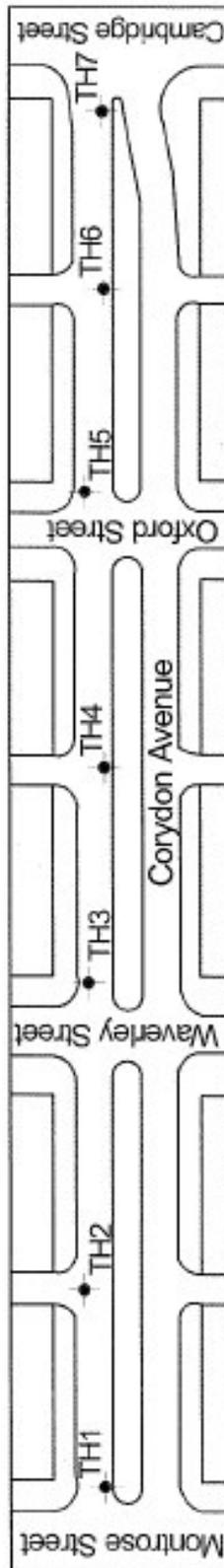
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The geotechnical report is provided to aid in the Contractor's evaluation of the existing pavement structure and/or soil conditions. The information presented is considered accurate at the locations shown on the Drawings and at the time of drilling. However, variations in pavement structure and/or 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 Corydon Avenue Westbound

Test Hole Locations #1 - #7

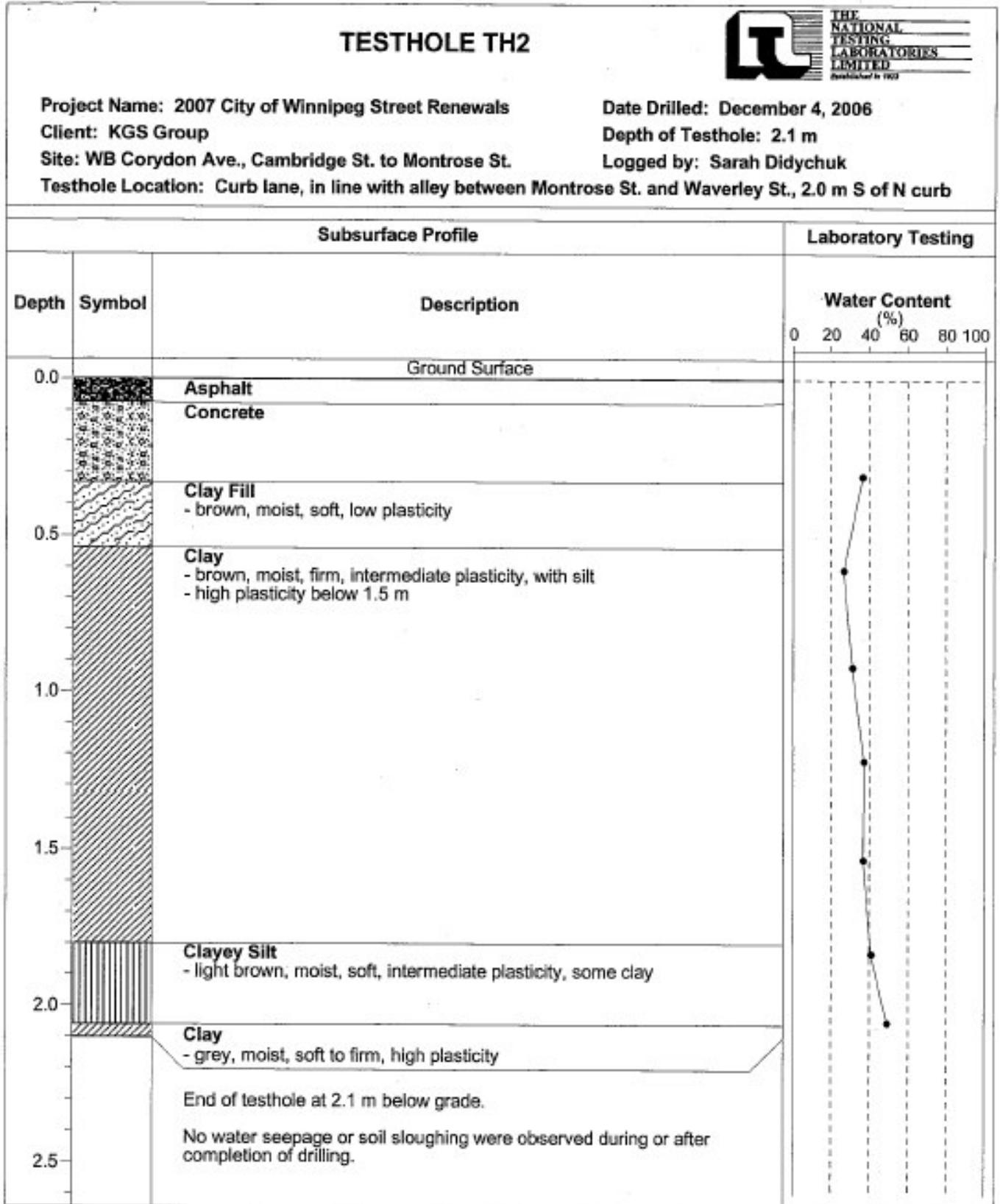


 THE NATIONAL TESTING LABORATORIES LIMITED <small>Established in 1923</small>	Project No.: KGS-624 Date: Dec. 6, 2006	Drawn By: SD Scale: NTS	Testhole Location Plan 2007 City of Winnipeg Street Renewals Corydon Avenue Westbound Cambridge Street to Montrose Street

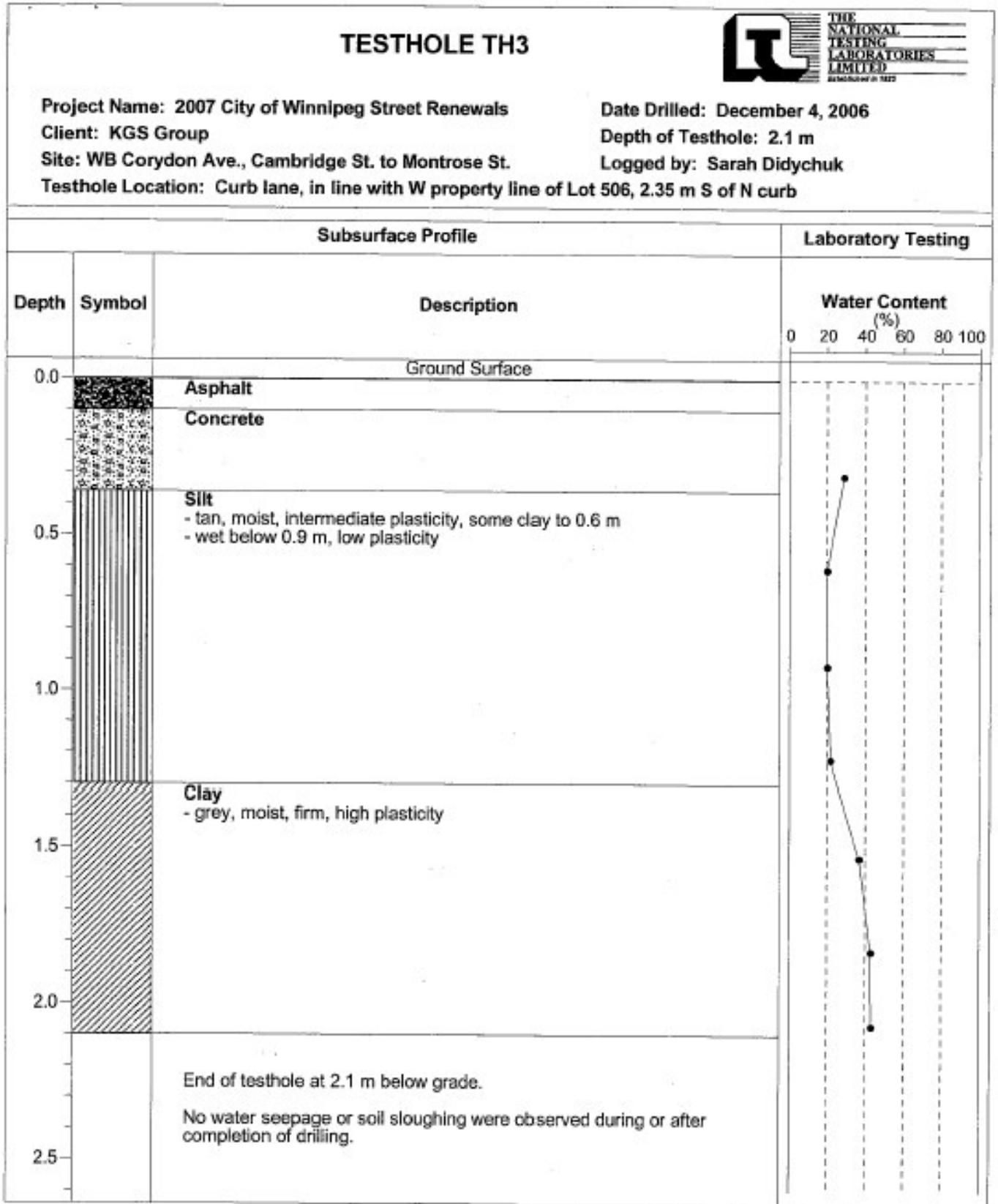
Test Hole Log #1 for Corydon Avenue

TESTHOLE TH1								
Project Name: 2007 City of Winnipeg Street Renewals Client: KGS Group Site: WB Corydon Ave., Cambridge St. to Montrose St. Testhole Location: Median lane, in line with W property line of Lot 502, 2.0 m from curb			Date Drilled: December 4, 2006 Depth of Testhole: 2.1 m Logged by: Sarah Didychuk					
Subsurface Profile			Laboratory Testing					
Depth (m)	Symbol	Description	Moisture Content (%)		Gravel (%)	Sand (%)	Silt (%)	Clay (%)
			PL	LL				
0.0		Ground Surface						
		Asphalt						
		Concrete						
0.5		Clay Fill - brown, moist, soft to firm, low plasticity, some sand						
1.0		Clayey Silt - tan, moist, soft, intermediate plasticity, with clay, trace fine grained sand			0.0	3.5	62.3	34.2
1.5		Clay - grey, moist, stiff, high plasticity, some silt pockets - brown below 1.8 m						
2.0		End of testhole at 2.1 m below grade. No water seepage or soil sloughing were observed during or after completion of drilling.						

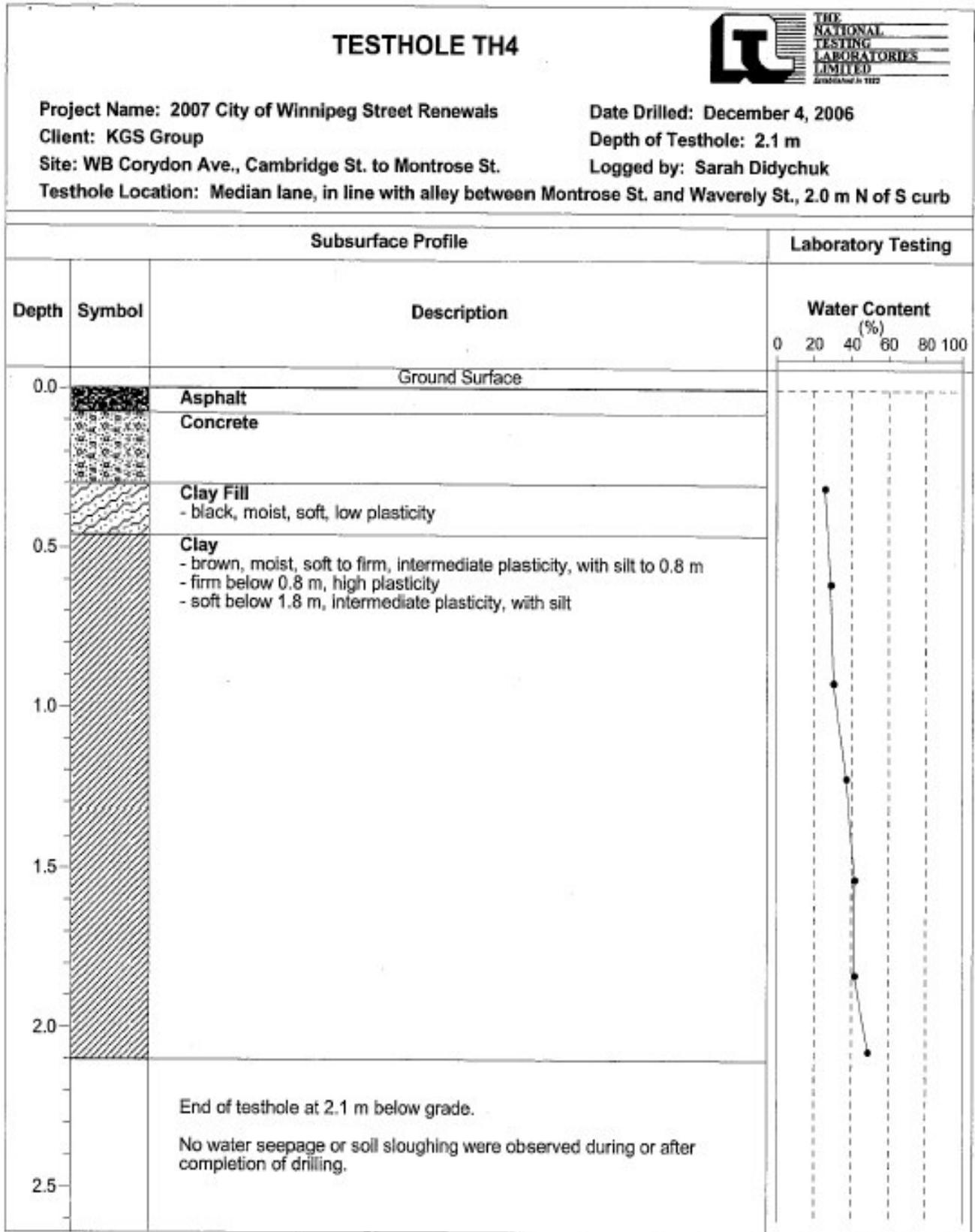
Test Hole Log #2 for Corydon Avenue



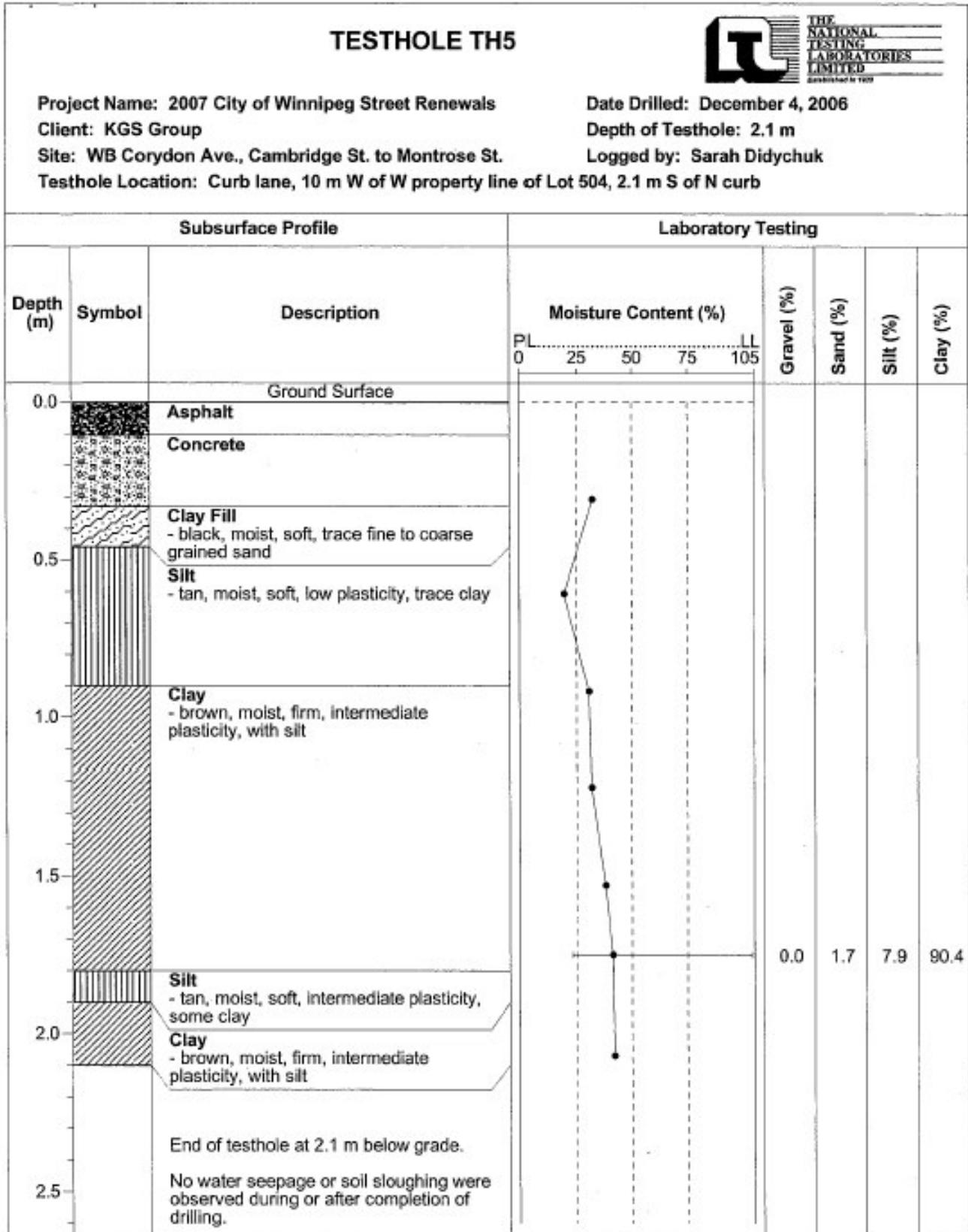
Test Hole Log #3 for Corydon Avenue



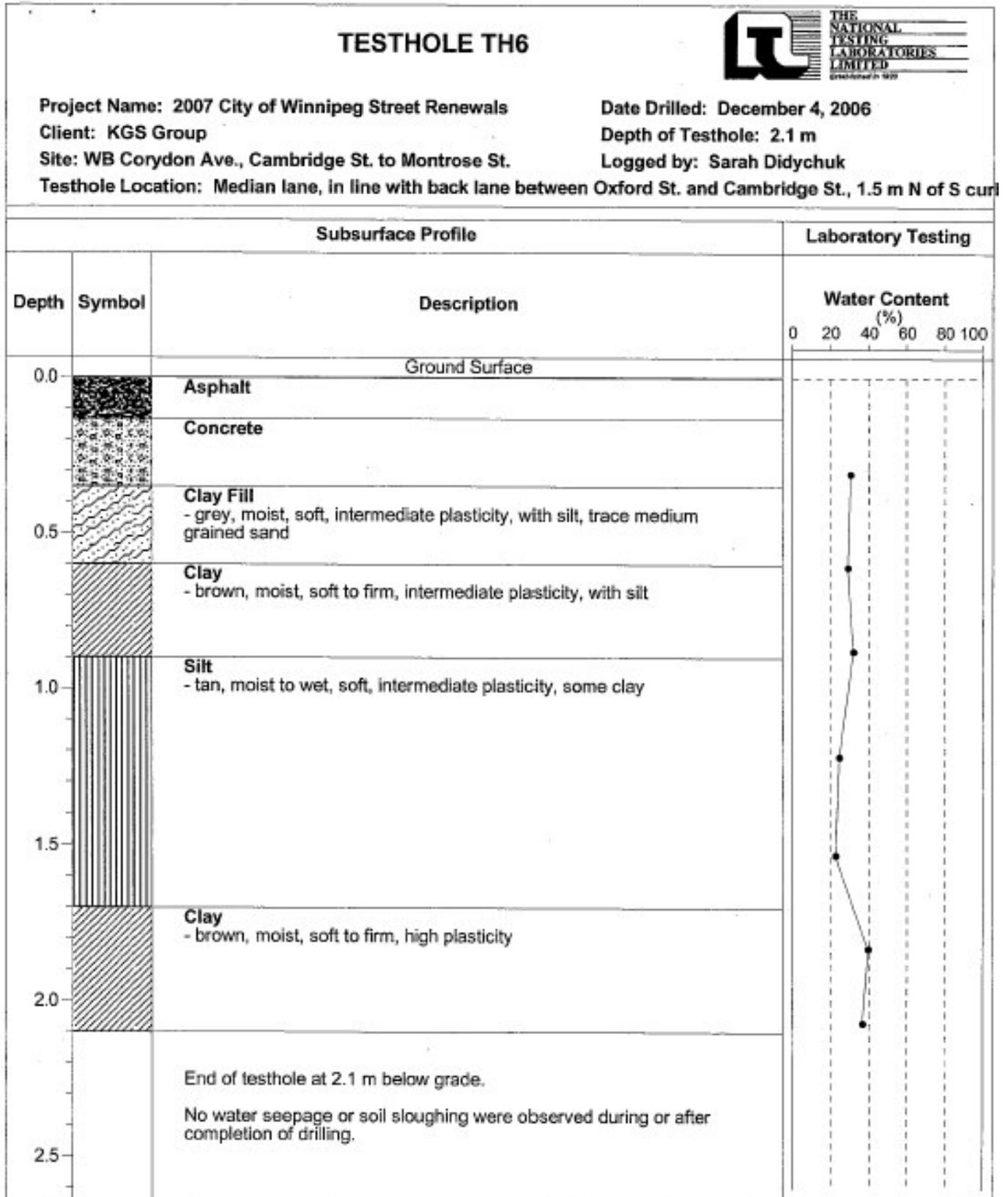
Test Hole Log #4 for Corydon Avenue



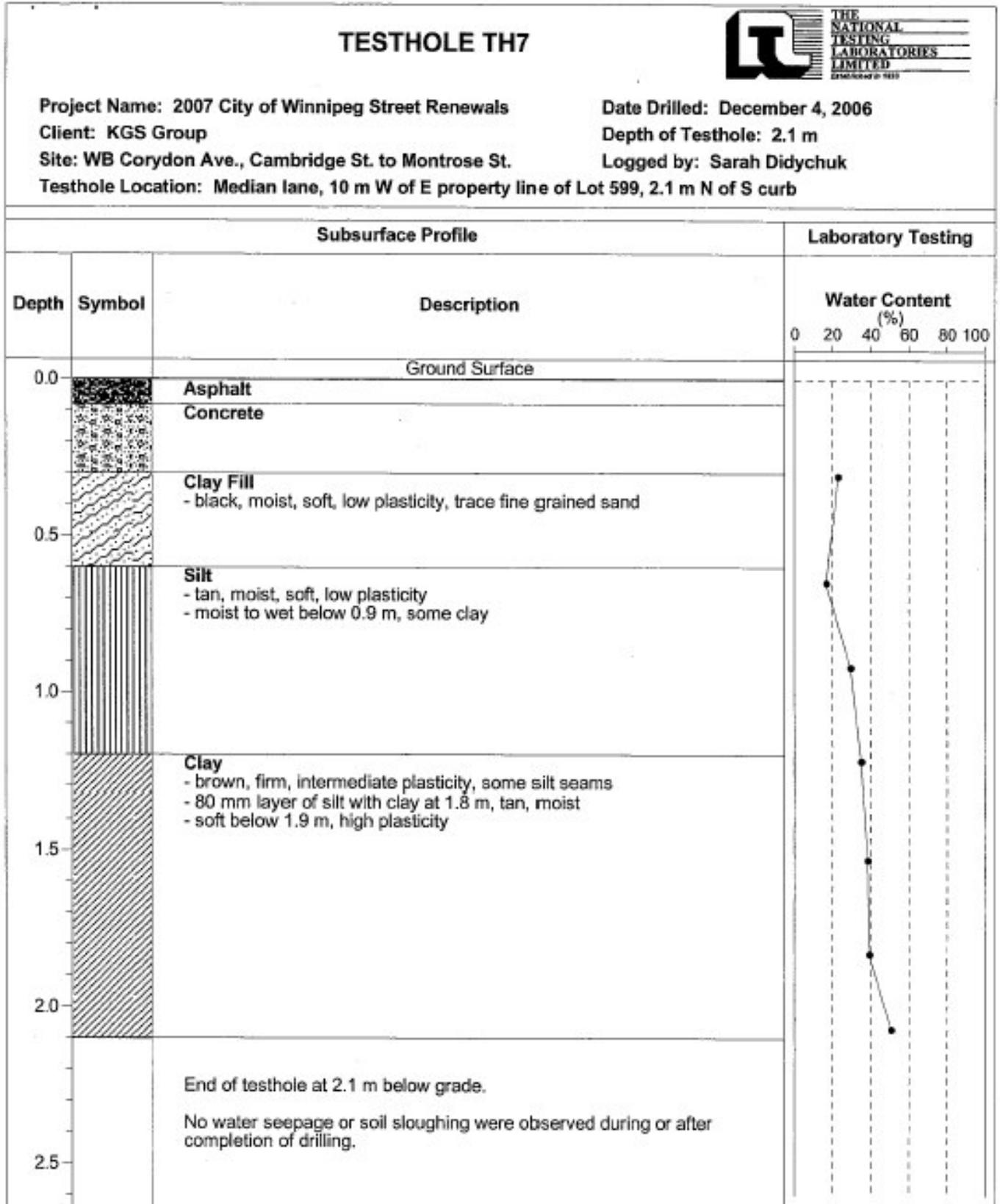
Test Hole Log #5 for Corydon Avenue



Test Hole Log #6 for Corydon Avenue



Test Hole Log #7 for Corydon Avenue



Pavement Core Photos 1 - 4

**2007 City of Winnipeg Street Renewals
Corydon Avenue Westbound
Cambridge Street to Montrose Street**



Corydon Ave. between Cambridge and Montrose St. - TH1



Corydon Ave. between Cambridge and Montrose St. - TH2



Corydon Ave. between Cambridge and Montrose St. - TH3



Corydon Ave. between Cambridge and Montrose St. - TH4

Pavement Core Photos 5 - 7

**2007 City of Winnipeg Street Renewals
Corydon Avenue Westbound
Cambridge Street to Montrose Street**



