



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 159-2012

**2012 REGIONAL STREET RENEWAL PROGRAM: CORYDON AVENUE
WESTBOUND – NIAGARA STREET TO CORDOVA STREET, PAVEMENT
RECONSTRUCTION / ST. JAMES STREET – SARGENT AVENUE TO WELLINGTON
AVENUE, MAJOR REHABILITATION**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

- B1.1 2012 REGIONAL STREET RENEWAL PROGRAM: CORYDON AVENUE WESTBOUND – NIAGARA STREET TO CORDOVA STREET, PAVEMENT RECONSTRUCTION / ST. JAMES STREET – SARGENT AVENUE TO WELLINGTON AVENUE, MAJOR REHABILITATION**

B2. SUBMISSION DEADLINE

- B2.1** The Submission Deadline is 12:00 noon Winnipeg time, May 25, 2012.
- 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 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

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.

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:

- (a) Pavement Reconstruction: Corydon Avenue Westbound from Niagara Street to Cordova Street
- (b) Pavement Rehabilitation: St. James Street from Sargent Avenue to Wellington Avenue
- (c) Combined Sewer Renewal: St. James Street at Sargent Avenue

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

- (a) Temporary Detour Pavement - Corydon Avenue
 - (i) Excavation and pavement removal
 - (ii) Compaction of existing subgrade
 - (iii) Placement of sub-base and base course material
 - (iv) Placement of asphalt pavement (average thickness: 75 mm)
 - (v) Removal of asphalt pavement, base material and placement of suitable site material
 - (vi) Boulevard restoration
- (b) Pavement Reconstruction – Corydon Avenue Westbound
 - (i) Removal of existing Portland Cement Concrete Pavement including all overlays, curb and sidewalk
 - (ii) Excavation
 - (iii) Compaction of existing subgrade
 - (iv) Installation of new catchbasins, lead pipe and subdrains
 - (v) Placement of separation geotextile, sub-base and base course materials
 - (vi) Adjustment of existing manholes and water valve boxes
 - (vii) Construction of new 230 mm concrete pavement (plain dowelled) utilizing slip-form paving equipment
 - (viii) Construction of new 200 mm concrete pavement (plain dowelled) on all side street approaches and new 200 mm concrete pavement (reinforced) on all back lane approaches
 - (ix) Construct splash strip utilizing slip-form paving equipment
 - (x) Complete curb renewal at intersections
 - (xi) Planing and paving of asphalt tie-ins
 - (xii) Renewal of existing sidewalk and installation of detectable warning surface tiles
 - (xiii) Boulevard restoration and site clean-up
- (c) Pavement Rehabilitation – St. James Street
 - (i) Planing of existing asphaltic concrete overlay
 - (ii) Construction of new 230 mm Plain Dowelled Concrete in the northbound gutter lane
 - (iii) Full depth concrete patches of existing slabs and joints as identified by the Contract Administrator
 - (iv) Installation of new catchbasins and lead pipe
 - (v) Abandon existing catchbasins and catch pits

- (vi) Adjustment of existing catchbasins, manholes and water valve boxes
- (vii) Renewal of existing barrier curb utilizing slip-form paving equipment
- (viii) Renewal of existing full-width sidewalk (east side) and installation of detectable warning tiles
- (ix) Removal of existing sidewalk and placement of full-width sidewalk (west side) and installation of detectable warning tiles
- (x) Placement of asphaltic concrete overlay (average thickness 80 mm)
- (xi) Boulevard restoration as required
- (d) Combined Sewer Renewal
 - (i) Installation of PVC sewer pipe by trenchless methods
 - (ii) Abandonment of existing sewer and manholes
 - (iii) Installation of manholes
 - (iv) Reconnection or renewal of sewer services
 - (v) Connection of catchbasin leads
 - (vi) Sewer and manhole video inspection

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is AECOM, represented by:

Mr. Kevin Rae, P.Eng.
Senior Transportation Engineer
99 Commerce Drive, Winnipeg, Manitoba R3P 0Y7
Telephone No. (204) 928-8430
Facsimile No. (204) 284-2040

D3.2 At the pre-construction meeting, Mr. Kevin Rae, 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. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE

D5.1 The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor are the property of the City and shall not be appropriated for the Contractors own use, or for the use of any third party.

D5.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.

D5.3 The following shall be confidential and shall not be disclosed by the Contractor to the media or any member of the public without the prior written authorization of the Contract Administrator;

- (a) information provided to the Contractor by the City or acquired by the Contractor during the course of the Work;
- (b) the Contract, all deliverables produced or developed; and

(c) any statement of fact or opinion regarding any aspect of the Contract.

D5.4 A Contractor who violates any provision of D5 may be determined to be in breach of Contract.

D6. NOTICES

D6.1 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.

D6.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D6.3, D6.4 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.

D6.3 Notwithstanding C21., all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following facsimile number:

The City of Winnipeg
Chief Financial Officer

Facsimile No.: (204) 949-1174

D6.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following address or facsimile number:

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

Facsimile No.: (204) 947-9155

D7. FURNISHING OF DOCUMENTS

D7.1 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

D8. AUTHORITY TO CARRY ON BUSINESS

D8.1 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.

D9. SAFE WORK PLAN

D9.1 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.

D9.2 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>

D10. INSURANCE

- D10.1 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.
- D10.2 Deductibles shall be borne by the Contractor.
- D10.3 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.
- D10.4 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.

D11. PERFORMANCE SECURITY

- D11.1 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.
- D11.1.1 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.
- D11.2 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.

D12. SUBCONTRACTOR LIST

D12.1 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.

D13. DETAILED WORK SCHEDULE

D13.1 The Contractor shall provide the Contract Administrator with a 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 The detailed work schedule shall consist of the following:

(a) a Gantt chart for the Work based on the C.P.M. schedule; and
acceptable to the Contract Administrator.

D13.3 Further to D13.2(a), the Gantt chart shall show the time on a weekly basis, required to carry out the Work of each trade, or specification division. The time shall be on the horizontal axis, and the type of trade shall be on the vertical axis.

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 D8;
- (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 D9;
- (v) evidence of the insurance specified in D10;
- (vi) the performance security specified in D11;
- (vii) the subcontractor list specified in D12; and
- (viii) the detailed work schedule specified in D13;

(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 Stage 1B – Corydon Avenue Westbound before July 1, 2012, and all construction works shall be completed by August 24, 2012. The Contractor may construct Stage 1A – Temporary Detour Diversion prior to July 1, 2012.

D14.4 The Contractor shall not commence the work on St. James Street before June 22, 2012, the Critical Stage Date of Bid Opportunity No. 132-2012, Watermain Renewals Contract No. 5.

D14.5 The City intends to award this Contract by June 22, 2012.

D14.5.1 If the actual date of award is later than the intended date, the dates specified for Critical Stages, Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

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.

D16.2 In accordance with the Manual of Temporary Traffic Control, Sections 2.03, 2.04, 2.05 and 2.06, should the Traffic Management Branch of the Public Works Department require that work on regional and residential streets be carried out at night or on Sundays or on public holidays, where permitted by the City of Winnipeg Police Department, or that work be restricted or suspended during peak traffic hours, no additional compensation will be considered to meet these requirements.

D17. WORK BY OTHERS

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

- (a) City of Winnipeg, Water and Waste Department – Bid Opportunity No. 132-2012 - Abandonment of existing 200 mm watermain and installation of new 250 watermain 6 m west of the east property line of St. James Street. Limits of the watermain renewal are from the south side of Sargent Avenue to the south side of Wellington Avenue. Expected start date is May 14, 2012, expected completion date is June 22, 2012.
- (b) Manitoba Telecom Services – Adjustment of existing manhole frames on the east side of St. James Street. Scheduling to be coordinated with sidewalk renewal; and
- (c) City of Winnipeg, Water and Waste Department, Bid Opportunity 271-2012 – Abandonment of existing 150 mm waterman and installation of a new 150 mm watermain 3 m west of the east property line of Cordova Street. Limits of the watermain renewal are from the south side of Fleet Avenue to the north side of Corydon Avenue. Expected start date is mid-July, expected completion date mid-August; and
- (d) Manitoba Hydro – Removal of existing street lighting on the north side of Corydon Avenue and installation of new street lighting on the north side of Corydon Avenue. Expected start date is unknown at this time, the Contractor will be required to coordinate his work with Manitoba Hydro's work; and
- (e) City of Winnipeg Traffic Services – Erection and maintenance of temporary traffic control signs. Supply and installation of permanent traffic signs and bases. Permanent pavement markings at crosswalks; and
- (f) Manitoba Hydro Gas Division – Miscellaneous adjustments to lower gas services may be required; and

- (g) City of Winnipeg Geomatics – Adjustments, inspection and identification of survey monuments; and
- (h) TeraSpan Networks – Safety watch during construction and lowering of fiber-optic cable at certain locations on Corydon Avenue.

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 two (2) Stages: Corydon Avenue and St. James Street. Each Stage shall be subdivided into sub-stages. Sub-stages are further subdivided into major items of work. Construction of both Stages can occur concurrently.

D18.2 Stage 1 - Corydon Avenue Westbound

(a) Stage 1A - Temporary Traffic Diversion - Corydon Avenue between Campbell Street and Waterloo Street

- (i) Remove existing curb and median;
- (ii) Excavate;
- (iii) Compact existing sub-grade;
- (iv) Place and compact sub-base and base course;
- (v) Place asphalt pavement;
- (vi) Remove detour asphalt pavement and base and place suitable site material; and
- (vii) Place topsoil and finish grading of all boulevard and median areas.

D18.2.1 Construction of Temporary Traffic Diversion and Erection of Traffic Control Signings shall be completed prior to the commencement of Stage 1B.

(b) Stage 1B - Pavement Reconstruction – Corydon Avenue Westbound between Cordova Street and Niagara Street

- (i) Remove existing pavement and curb;
- (ii) Trace existing eastbound leads to determine the locations where the leads cross the 2750 concrete storm relief sewer;
- (iii) Excavate;
- (iv) Install new catchbasins, connect new westbound leads and existing eastbound leads to the 2750 concrete storm relief sewer in the centre median of Corydon Avenue;
- (v) Install subdrains;
- (vi) Place separation fabric and geogrid as required;
- (vii) Place and compact sub-base and base course materials;
- (viii) Adjust existing manholes;
- (ix) Construct 230 mm concrete pavement (plain doweled) utilizing slip-form paving equipment;
- (x) Construct side street and back lane approaches;
- (xi) Construct splash strip utilizing slip-form paving equipment;
- (xii) Construct asphalt tie-ins at intersection locations;
- (xiii) Renew existing sidewalk;
- (xiv) Complete boulevard restoration; and
- (xv) Decommission traffic diversion and complete restoration.

D18.2.2 Immediately following the completion of the asphaltic concrete works of Stage 1, 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.

D18.3 Stage 2 – St. James Street

- (a) Stage 2A – Northbound Curb Lane
 - (i) Planing of existing asphalt pavement overlay;
 - (ii) Removal of existing curb and pavement;
 - (iii) Installation of new catchbasins and lead pipe;
 - (iv) Construct new 230 mm Plain Dowelled Concrete Pavement;
 - (v) Construct new 180 mm barrier curb using slip-form paving equipment;
 - (vi) Adjust manhole frames, catchbasins and valves;
 - (vii) Renew existing full-width sidewalk including installation of detectable warning tiles;
 - (viii) Boulevard grading and topsoil;
 - (ix) Placement of asphalt overlay (average thickness – 65 mm); and
 - (x) Complete approach tie-ins on the east side of St. James Street
- (b) Stage 2B – Sewer Renewal and Median Lanes
 - (i) Planing of existing asphalt pavement overlay;
 - (ii) Full depth concrete patches of existing slabs and joints;
 - (iii) Construct new 230 mm Plain Dowelled Concrete Pavement in southbound median lane over sewer renewal;
 - (iv) Adjust manhole frames and valves;
 - (v) Placement of asphalt overlay (average thickness – 80 mm).
- (c) Stage 2C – Southbound Curb Lane
 - (i) Planing of existing asphalt pavement overlay;
 - (ii) Removal of existing curb;
 - (iii) Full depth concrete patches of existing slabs and joints;
 - (iv) Installation of new catchbasins and lead pipe;
 - (v) Construct new 180 mm barrier curb using slip-form paving equipment;
 - (vi) Adjust manhole frames, catchbasins and valves;
 - (vii) Removal of existing sidewalk, construction of full-width sidewalk; and installation of detectable warning tiles;
 - (viii) Boulevard grading and topsoil;
 - (ix) Placement of asphalt overlay (average thickness – 80 mm);
 - (x) Complete approach tie-ins on the west side of St. James Street.

D18.3.1 Stages 2A and 2C must occur consecutively. The Contractor shall not begin a subsequent stage until the current stage has been completed.

D19. CRITICAL STAGES

D19.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:

- (a) Stage 1 – Corydon Avenue Westbound shall be completed by August 24, 2012.

D19.2 When the Contractor considers the Work associated with Stage 1 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 the Stage 1 Work has been accepted by the Contract Administrator as being completed to the requirements of the Contract is the date on which completion of Stage 1 has been achieved.

D20. SUBSTANTIAL PERFORMANCE

- D20.1 The Contractor shall achieve Substantial Performance within fifty-five (55) 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 sixty (60) 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) Stage 1 – Two thousand dollars (\$2,000);
 - (b) Substantial Performance – Two thousand dollars (\$2,000);
 - (c) Total Performance – One thousand dollars (\$1,000).
- 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. SCHEDULED MAINTENANCE

- D23.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:
- (a) Reflective Crack Maintenance on St. James Street and Corydon Avenue during one or two year maintenance warranty as specified in CW 3250-R7;
 - (b) Maintenance of seeded or sod areas as specified in CW 3510-R9 and CW 3520-R7.
- D23.2 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.

D24. ACCELERATED COMPLETION

D24.1 Description

D24.1.1 This specification shall cover the accelerated completion of Stage 2 – St. James Street of this contract.

D24.2 Acceleration of Work

D24.2.1 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 Stage 2 to traffic and pedestrians in advance of Substantial Performance as specified in D20.

D24.2.2 Reopening of the entire Site shall occur when all Work items listed in D18.3 are complete, including boulevard grading, topsoil, seed, and Site cleanup.

D24.2.3 In recognition of the fact that an early completion of the Works in Stage 2 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.

D24.2.4 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 number of Working Days listed in D20 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.

D24.3 Method of Measurement

D24.3.1 Subject to clause D24.2.3 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 Stage 2 is completed and safely reopened to vehicular and pedestrian traffic in advance of the number of Working Days specified herein for Substantial Performance in D18, with all specified Works listed in D18.3 completed and acceptable to the Contract Administrator.

D24.4 Basis of Payment

D24.4.1 Subject to clause D24.2.3 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 = Five thousand dollars (\$5,000).

D24.4.2 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.

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).

D26.2 For the purpose of determining Prime Contractor, Phase I shall be the 2012 Watermain Renewals Contract No. 5 – Bid Opportunity No. 132-2012 and Phase II shall be the 2012 Regional Street Renewal Program: Corydon Avenue Westbound – Niagara Street to Cordova Street, Pavement Reconstruction / St. James Street – Sargent Avenue to Wellington Avenue, Major Rehabilitation – Bid Opportunity No. 159-2012.

D26.3 Further to C6.26, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba), as follows:

- (a) For the Construction Project Site Phase II, upon the Contractor mobilizing to the site or Total Performance of Bid Opportunity No. 132-2012 (2012 Watermain Renewals Contract No. 5), whichever occurs first, as notified in writing by the Contract Administrator. Upon assuming the role of Prime Contractor, the Contractor shall assume responsibility for the safety and maintenance of all temporarily restored watermain shafts.

MEASUREMENT AND PAYMENT

D27. PAYMENT

D27.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D28. WARRANTY

D28.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire one (1) years thereafter for pavement rehabilitation works, and two (2) years thereafter for pavement reconstruction works, unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

D28.2 Notwithstanding C13.2 or D28.1, 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
- (b) Substantial Performance has been achieved.

D28.2.1 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 D11)

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. 159-2012

2012 REGIONAL STREET RENEWAL PROGRAM: CORYDON AVENUE WESTBOUND – NIAGARA STREET TO CORDOVA STREET, PAVEMENT RECONSTRUCTION / ST. JAMES STREET – SARGENT AVENUE TO WELLINGTON AVENUE, MAJOR REHABILITATION

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)

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 D12)

2012 REGIONAL STREET RENEWAL PROGRAM: CORYDON AVENUE WESTBOUND – NIAGARA STREET TO CORDOVA STREET, PAVEMENT RECONSTRUCTION / ST. JAMES STREET – SARGENT AVENUE TO WELLINGTON AVENUE, MAJOR REHABILITATION

<u>Portion of the Work</u>	<u>Name</u>	<u>Address</u>
<i>SURFACE WORKS:</i>		
<i>Supply of Materials:</i>		
<i>Concrete</i>		
<i>Asphalt</i>		
<i>Base Course & Sub-Base</i>		
<i>Sod</i>		
<i>Seed</i>		
<i>Installation/Placement:</i>		
<i>Concrete</i>		
<i>Asphalt</i>		
<i>Base Course & Sub-Base</i>		
<i>Sod</i>		
<i>Seed</i>		
<i>UNDERGROUND WORKS:</i>		
<i>Supply of Materials:</i>		
<i>Catchbasins</i>		
<i>Frames and Covers</i>		
<i>Installation/Placement:</i>		
<i>Catchbasins</i>		
<i>OTHERS:</i>		

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*.

<u>Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
	Cover Sheet, CT00	A1
P3333-01	St. James Plan/Profile - Sta. 0+000 to Sta. 0+110, CT01	A1
P3333-02	St. James Plan/Profile - Sta. 0+110 to Sta. 0+250, CT02	A1
P3333-03	St. James Plan/Profile - Sta. 0+250 to Sta. 0+360, CT03	A1
P3333-04	St. James Plan/Profile - Sta. 0+360 to Sta. 0+450, CT04	A1
P3332-01	Corydon Plan/Profile - Cordova Street to Sta. 0+160, CT05	A1
P3332-02	Corydon Plan/Profile - Sta. 0+160 to Sta. 0+280, CT06	A1
P3332-03	Corydon Plan/Profile - Sta. 0+280 to Niagara Street, CT07	A1
P3332-04	Construction Staging, CT08	A1
10121	Combined Sewer Renewal Plan/Profile, CU01	D

E2. GEOTECHNICAL REPORT

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

E3. OFFICE FACILITIES

- E3.1 The Contractor shall supply office facilities meeting the following requirements:
- The field shall be for the exclusive use of the Contract Administrator.
 - The building shall be conveniently located near the site of the Work.
 - The building shall have a minimum floor area of 25 square metres, a height of 2.4 m with two windows for cross ventilation and a door entrance with a suitable lock.
 - 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.
 - The building shall be adequately lighted with fluorescent fixtures and have a minimum of three wall outlets.
 - The building shall be furnished with one drafting table, table 3 m x 1.2 m, one stool, one four drawer legal size filing cabinet, and a minimum of 12 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 the Contract is completed.
- E3.4 On a one time basis, where directed by the Contract Administrator, the Contractor shall relocate the office facilities to a location more convenient for the remaining Work.

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:
 - (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 in Work Areas on City Streets, the Contractor ("Agency" in the manual) shall make arrangements with the Traffic Services Branch 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 Branch 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:

E6.1.1 Stage 1 – Corydon Avenue Westbound

- (a) Maintain a minimum of one lane of traffic in both the eastbound and westbound directions at all times.
- (b) The Contractor shall provide and maintain flagmen in accordance with the “Manual of Temporary Traffic Control in Work Areas on City Streets”.
- (c) 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.
- (d) When access to Cordova Street, Brock Street, Queenston Street or Niagara Street or any alleys are restricted at Corydon Avenue, the Contractor shall erect and maintain “Road Closed Local Access Only” signage on barricades at the north access points to these streets along Grosvenor Avenue for the duration of the closure.
- (e) When no work is being performed in the intersections and providing it is safe for vehicles, north and south lane closures in the intersection will not be permitted.

E6.1.2 Stage 2 – St. James Street

- (a) Maintain a minimum of one lane of traffic in both the northbound and southbound directions at all times.
- (b) East/West traffic at Sargent Avenue and Wellington Avenue intersection must be maintained during construction to allow for one lane of through traffic in each direction and one lane for left turning traffic in each direction. When no work is being performed in the intersection and providing it is safe for vehicles, east and west lane closures in the intersection will not be permitted.
- (c) Intersecting street and private approach access shall be maintained at all times.
- (d) 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.
- (e) Pedestrian and ambulance/emergency vehicle access must be maintained at all times.

E7. REFUSE AND RECYCLING COLLECTION

E7.1 While access to refuse and/or recycling collection vehicles is restricted, on collection day(s) the Contractor shall move all of the affected property owners refuse and/or recycling materials to a nearby common area, prior to an established time, in accordance with E7.2 to permit the normal collection vehicles to collect the materials. Immediately following recycling collection the Contractor shall return recycling receptacles to the addresses marked on the receptacles.

E7.2 Collection Schedule:

Corydon Avenue Westbound – Niagara Street to Cordova Street.

Collection Day(s): **Garbage pick-up is Manual, Garbage and Recycling Day 1**

Collection Time: **7:00 a.m. to 6:00 p.m.**

Common Collection Area: **Back Lane Pick-up: The Contractor shall provide a flagman on those days to assist refuse and recycling truck drivers to back down the back alleys in reverse. May affect Niagara, Queenston, Brock and Cordova Streets north of Corydon Avenue.**

St. James Street – Sargent Avenue to Wellington Avenue

Collection Day(s): **No City Collection**

Collection Time:

Common Collection Area:

E7.3 No measurement or payment will be made for the work associated with this specification.

E8. PEDESTRIAN SAFETY

E8.1 During the project, where identified by the Contract Administrator, a temporary snow fence shall be installed at specific locations where a hazard to pedestrians may exist for any significant duration. 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.

E9. WATER OBTAINED FROM THE CITY

E9.1 Further to clause 3.7 of CW 1120, the Contractor shall pay for all costs, including sewer charges, associated with obtaining water from the City in accordance with the Waterworks and Sewer By-laws.

E10. INFRASTRUCTURE SIGNS

E10.1 The Contractor shall obtain a minimum of three 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 a minimum of 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. SALT TOLERANT GRASS SEEDING

DESCRIPTION

E11.1 Further to CW 3520 and CW 3540, this specification shall cover sub-grade preparation and the supply and placement of Salt Tolerant Grass Seed.

MATERIALS

E11.2 Salt Tolerant Grass Seed

E11.2.1 Salt Tolerant Grass Seed for regional and collector boulevards, medians and interchange areas shall be a mixture composed of:

- (a) Seventy percent (70%) Fults or Nuttals Alkaligrass (*Puccinellia* spp.), twenty percent (20%) Audubon or Aberdeen Creeping Red Fescue and ten percent (10%) Perennial Ryegrass.

EQUIPMENT

- E11.3 Scarification equipment shall be suitable for the area being scarified, shall be capable of scarifying the sub-grade to the specified depth and shall be accepted by the Contract Administrator. For confined areas a toothed bucket may be acceptable. For larger areas tilling equipment may be required.

CONSTRUCTION METHODS

- E11.4 Preparation of Existing Grade
 - E11.4.1 Prior to placing topsoil, in areas to be seeded greater in width than 600 mm, prepare the existing sub-grade by scarifying to a minimum depth of 75 mm and to a maximum depth of 100 mm to the satisfaction of the Contract Administrator.
 - E11.4.2 Scarification shall consist of breaking up and loosening the sub-grade. No scarification shall occur within the edge of a tree canopy (or drip line).
- E11.5 Salt Tolerant Grass Seeding
 - E11.5.1 Salt Tolerant Grass Seed shall be sown at a rate of 2.2 kilograms per 100 square meters.

MEASUREMENT AND PAYMENT

- E11.6 Supply, placement and maintenance of Salt Tolerant Grass Seed will be paid for at the Contract Unit Price per square metre for "Salt Tolerant Grass Seeding", measured as specified herein, which price shall be payment in full for supplying all materials and for completing all operations herein described and all other items incidental to the work included in this Specification. Payment for Salt Tolerant Grass Seeding shall be in accordance with the following:
 - (a) Sixty five (65%) percent of quantity following supply and placement.
 - (b) Remaining thirty five (35%) percent of quantity following termination of the Maintenance Period.

E12. SUPPLY AND INSTALL DETECTABLE WARNING SURFACE TILES

DESCRIPTION

- E12.1 This specification covers the supply and installation of detectable warning surface tiles in sidewalk ramps and multi-use path ramps.

SPECIFICATIONS AND DRAWINGS

- E12.2 Referenced Standard Construction Specifications and Standard Details
 - (a) CW 3235 - Renewal of Existing Miscellaneous Concrete Slabs
 - (b) CW 3240 - Renewal of Existing Curbs
 - (c) CW 3310 - Portland Cement Concrete Pavement Works
 - (d) CW 3325 - Portland Cement Concrete Sidewalk
 - (e) SD-229C - Curb Ramp for Concrete Pavement
 - (f) SD-229D - Curb Ramp for Asphalt Overlay
- E12.3 SDE Drawings
 - (a) SDE-229A - Curb Ramp Layout for Intersections

- (b) SDE-229AA - Detectable Warning Surface Tile in Curb Ramps for Intersections, Layout Option 1
- (c) SDE-229AC - 300x300 Detectable Warning Surface Tile, Layout Option 3
- (d) SDE-229AD - 300x300 Detectable Warning Surface Tile, Layout Option 3 Detail
- (e) SDE-229AE - Curb Ramp for Pedestrian Corridor with a Traffic Control Device
- (f) SDE-229AF - Detectable Warning Surface Tile Orientation for Offset Intersections
- (g) SDE-229BB - Detectable Warning Surface Tile in Curb Ramps for Medians
- (h) SDE-229E - Curb Ramp Depressed Curb

MATERIALS

E12.4 Acceptable Detectable Warning Surface Tile product is:

- (a) 610 x 1220 mm (2'x 4') Cast in Place (Federal Yellow).
- (b) 300 x 300 mm (1'x1') Cast in Place (Federal Yellow).

Manufacturer - ADA Solutions Inc.
Supplier -
Brock White Canada
879 Keewatin Street
Winnipeg, Manitoba

Attention: Bernie Giesbrecht
Ph: 204-479-8089

or

Manufacturer - Armor Tile Tactile Systems
Supplier -
Alsip's Building Products
1 Cole Avenue
Winnipeg, Manitoba

Attention: Jason Alsip
Ph. 204-667-3330

- E12.4.1 Detectable warning surface tiles shall be Federal Yellow (USA); or Safety Yellow (Canada).
- E12.4.2 Detectable warning surface tiles shall be cast in place type with ribs. (Anchored type is not allowed)
- E12.4.3 Truncated domes on detectable warning surface tiles shall be in accordance with ADA Accessibility Guidelines (ADAAG).

CONSTRUCTION METHODS

E12.5 Selection of Layout Options

- E12.5.1 Select the appropriate design layout for detectable warning surface tiles according to the following prioritized order:
- E12.5.2 Layout Option One – Install detectable warning surface tiles in accordance with SDE-229A and SDE-229AA.
- E12.5.3 If two 610 mm x 1220 mm tiles would physically overlap each other, or would be within 150 mm of each other, or if one tile would lie within the circulation path towards the other tile, then install the detectable warning surface tiles according to the following order, Layout Option Two(2) or Three(3).

- E12.5.4 Layout Option Two – Separate the tiles by moving either one or both tiles along the curb line in opposite directions, in accordance with this Specification, and keeping the ramp and pedestrian road crossing as perpendicular to the road as is possible, as directed by the Contact Administrator.
- E12.5.5 Layout Option Three – Install detectable warning surface tiles in accordance with SDE-229AC and SDE-229AD.
- E12.6 General
- E12.6.1 Construct curb ramps, sidewalk ramps and multi-use paths in accordance with the referenced Standard Construction Specifications, Standard Details, and SDE drawings.
- E12.6.2 Detectable warning surface tile shall not be placed at private approaches or alleys.
- E12.6.3 All curb ramps opposite each other shall have the same width.
- E12.6.4 Construct the lip of the depressed curb in accordance with SDE-229E.
- E12.6.5 Construct ramp slopes in accordance with SD-229C and SD-229D. Use a ramp slope with preference for a slope as close to 5% maximum as possible.
- E12.6.6 Construct flare and curb taper slopes according to the following:
- (a) If the curb taper is within a grassed area, construct the curb taper 900 mm in length.
 - (b) When the flare and curb taper are in a full-width sidewalk and the sidewalk area at the top of the ramp is <1500 mm in width, construct the flare and curb taper at 5% slope to allow safe passage for wheelchairs in this area.
 - (c) When the flare and curb taper are in a full-width sidewalk and the sidewalk area at the top of the ramp is \geq 1500 mm in width, construct the flare and curb taper at 10% slope.
- E12.6.7 Install the detectable warning surface tile in accordance with E12.10.
- E12.6.8 Trim the corner of the tile at curb radii in accordance with SDE-229AA and SDE-229AD.
- E12.6.9 Install the detectable warning surface tiles as shown on the referenced drawings or as directed by the Contract Administrator.
- E12.6.10 Orient the detectable warning surface tiles perpendicular to the crossing direction.
- E12.6.11 Locate gratings, access covers and other appurtenances outside of the sidewalk ramps, depressed curbs, rest areas, and gutters in front of the depressed curbs, as directed by the Contact Administrator.
- E12.7 Medians and Refuge Islands
- E12.7.1 Where the distance from back of curb to back of curb is 1.32 m or greater, install one detectable warning surface tile 50 mm from the back of each curb.
- E12.7.2 Where the distance from back of curb to back of curb is less than 1.32 m, place the tiles 50 mm from the back of curb and cut the tile(s) to fill the remaining area between the curbs.
- E12.8 2.0 m Wide Depressed Curb for Multi-use Paths
- E12.8.1 Construct a curb ramp with a 2.0 m depressed curb at high volume collector and regional street intersections in accordance with SDE-229E, in accordance with Public Works Department guidelines and as directed by the Contract Administrator.
- E12.8.2 Construct the concrete ramp 2.0 m wide and a minimum of 1.50 m deep from back of curb.
- E12.8.3 Construct the curb ramp in accordance with SD-229C and SD-229D.

- E12.8.4 Install one 610 mm x 1220 mm tile centered to the 2.0 m wide depressed curb. The part of the tile nearest the curb must be 50 mm from the back of curb similar to tile placement in SDE-229AA.
- E12.9 3.5 m Wide Depressed Curb for Multi-use Paths
- E12.9.1 Construct a curb ramp with a 3.5 m depressed curb at low volume collector and residential street intersections in accordance with SDE-229E, in accordance with Public Works Department guidelines and as directed by the Contact Administrator.
- E12.9.2 Construct the concrete ramp 3.5 m wide and a minimum of 1.50 m deep from back of curb.
- E12.9.3 Construct the curb ramp in accordance with SD-229C and SD229D.
- E12.9.4 Install two (2) tiles in each concrete ramp, one (1) on each side for each direction. Place the short edge of each tile 150 mm from the edge of the concrete ramp, with both tiles in line with each other transversely across the concrete ramp. The tile(s) nearest the curb must be 50 mm from back of curb similar to tile placement in SDE-229AA.
- E12.9.5 Saw cut the middle of the concrete slab, perpendicular to the curb and to a depth of D/4. Cut additional sawcuts as directed by the Contract Administrator.

INSTALLATION INSTRUCTIONS

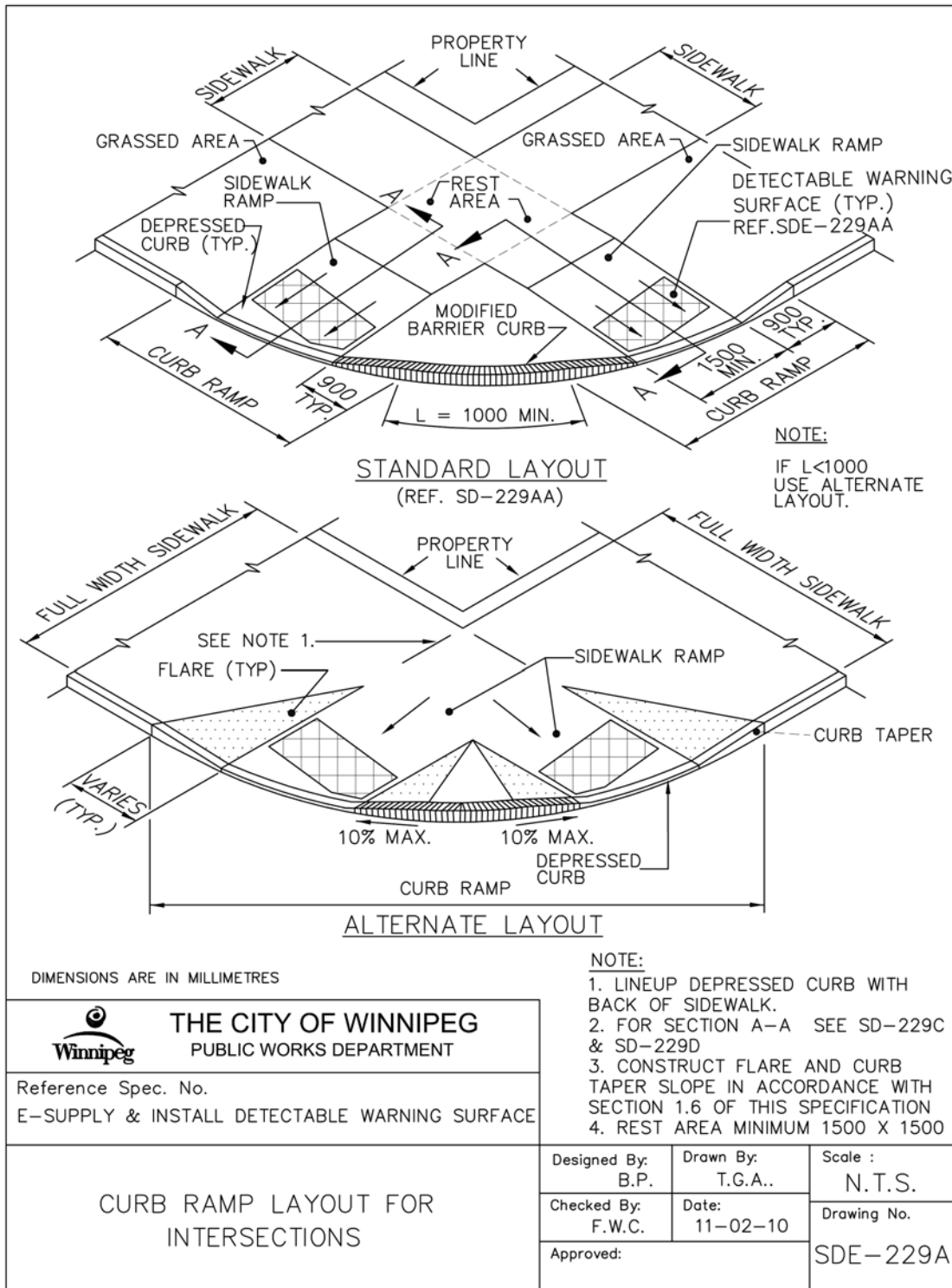
- E12.10 Installation Instructions for Cast In Place Inline Dome Detectable/Tactile Warning Surface Tile
- E12.10.1 During Cast in Place Detectable/Tactile Warning Surface Tile installation procedures, ensure adequate safety guidelines are in place and that they are in accordance with the applicable industry and government standards.
- E12.10.2 The specifications of the structural embedment flange system and related materials shall be in strict accordance with the contract documents and the guidelines set by their respective manufacturers. Do not set Cast in Place tiles in asphaltic concrete.
- E12.10.3 The physical characteristics of the concrete shall be consistent with the contract specifications. An overly wet mix will cause the tile to float. Under these conditions, suitable weights such as 2 concrete blocks or sandbags (12 kg) shall be placed on each tile.
- E12.10.4 Prior to placement of the Cast in Place Detectable/Tactile Warning Surface Tile system, the contract drawings shall be reviewed.
- E12.10.5 Pour and finish the concrete using typical mason's tools, however, 12 kg weights, and a large non-marring rubber mallet are specific to the installation of the Cast in Place Detectable/Tactile Warning Surface Tile system. A vibrating mechanism can be employed, if desired. The vibrating unit should be fixed to a soft base such as wood, at least 300 mm square.
- E12.10.6 The factory-installed plastic sheeting must remain in place during the entire installation process to prevent the splashing of concrete onto the finished surface of the tile. Remove the plastic sheeting after the concrete has set.
- E12.10.7 When preparing to set the tile, it is important that NO concrete be removed in the area to accept the tile. It is imperative that the installation technique eliminates any air voids under the tile. Holes in the tile perimeter allow air to escape during the installation process. Concrete will flow through the large holes in each embedment flange on the underside of the tile. This will lock the tile solidly into the cured concrete.
- E12.10.8 Drill additional 6 mm vent holes in the ribs under the tile as required to help seat the tile in the concrete.
- E12.10.9 The concrete shall be poured and finished true and smooth to the required dimensions and slope prior to the tile placement. The tile shall be placed in accordance with the contract drawings.

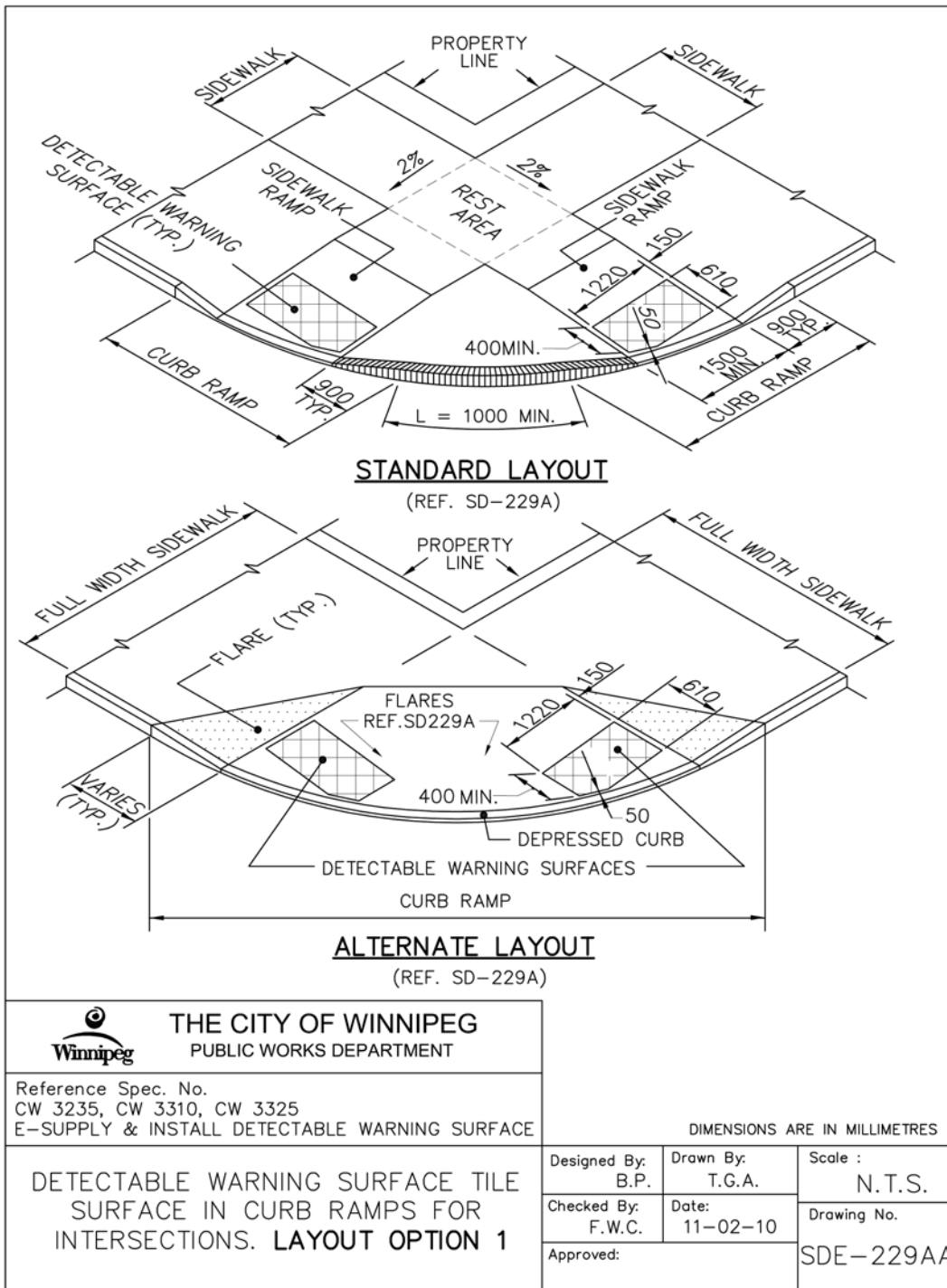
- E12.10.10 The Cast In Place Detectable/Tactile Warning Surface Tiles shall be tamped (or vibrated) into the fresh concrete to ensure that the surface of the truncated domes are flush to the adjacent concrete surface. Embedment of the tile so the top of the truncated domes are flush with the adjacent concrete will reduce the possibility of damage due to snow clearing operations. The embedment process should not be accomplished by stepping on the tile as this may cause uneven setting which can result in air voids under the tile surface.
- E12.10.11 While concrete is workable, a 3/8" radius edging tool shall be used to create a finished edge of concrete, a steel trowel shall then be used to finish the concrete around the tile's perimeter.
- E12.10.12 During and after the tile installation and the concrete curing stage, it is imperative that there is no walking, leaning or external force placed on the tile that may rock the tile causing a void between the underside of tile and concrete.
- E12.10.13 Following tile placement, review installation tolerances to contract drawings and adjust tile before the concrete sets. Two suitable weights of 12 kg each shall be placed on each tile as necessary to ensure solid contact of the underside of tile to concrete.
- E12.10.14 If required, individual tiles can be bolted together using 1/4 inch or equivalent hardware. This can help to ensure that adjacent tiles are flush to each other during the installation process. Tape or caulking can be placed on the underside of the bolted butt joint to ensure that concrete does not rise up between the tiles during installation. Any protective plastic wrap which was peeled back to facilitate bolting or cutting, should be replaced and taped to ensure that the tile surface remains free of concrete during the installation process.
- E12.10.15 Following the concrete curing stage, protective plastic wrap is to be removed from the tile surface by cutting the plastic with a sharp knife, tight to the concrete/tile interface. If concrete bled under the plastic, a soft brass wire brush will clean the residue without damage to the tile surface.
- E12.10.16 Tiles can be cut using a continuous rim diamond blade in a circular saw or mini-grinder. Use of a straightedge to guide the cut is advisable where appropriate.
- E12.10.17 Bolt 300 mm x 300 mm tiles together prior to placing in plastic concrete. This ensures that the surface of the tiles are flush with each other.


MEASUREMENT AND PAYMENT

- E12.11 Detectable Warning Surface Tiles shall be measured on a unit basis and paid for at the Contract Unit Price per unit for the "Items of Work" listed here below. The number of units to be paid for shall be the total number of detectable warning surface tiles supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.
- E12.11.1 Detectable Warning Surface Tiles:
- (a) 300 mm x 300 mm tiles
 - (b) 610 mm x 1220 mm tiles
- E12.12 The area under the detectable warning surface tile is part of the concrete sidewalk ramp and will be paid in accordance with CW 3235 or CW 3325.
- E12.13 The concrete sidewalk ramp and the concrete ramp for multi-use paths will be paid as 100 mm sidewalk in accordance with CW 3235 or CW 3325.
- E12.14 Curb ramp will be paid in accordance with CW 3240 or CW 3310.

DRAWINGS





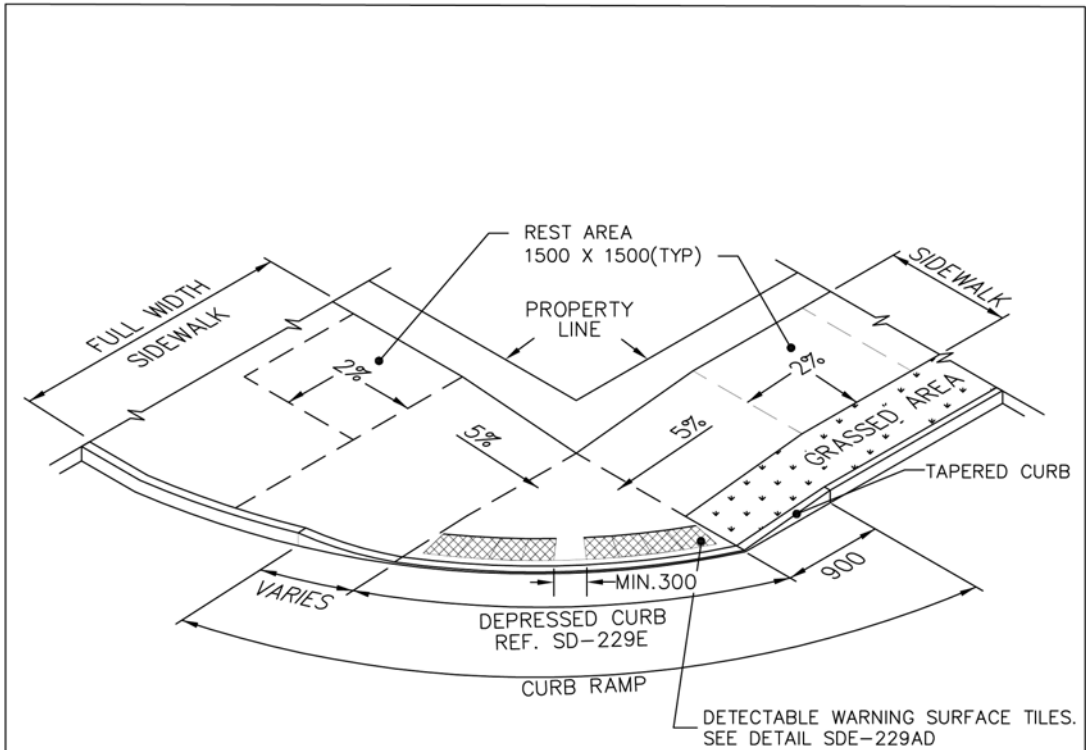
 **THE CITY OF WINNIPEG**
 PUBLIC WORKS DEPARTMENT

Reference Spec. No.
 CW 3235, CW 3310, CW 3325
 E-SUPPLY & INSTALL DETECTABLE WARNING SURFACE

DIMENSIONS ARE IN MILLIMETRES


**DETECTABLE WARNING SURFACE TILE
 SURFACE IN CURB RAMPS FOR
 INTERSECTIONS. LAYOUT OPTION 1**

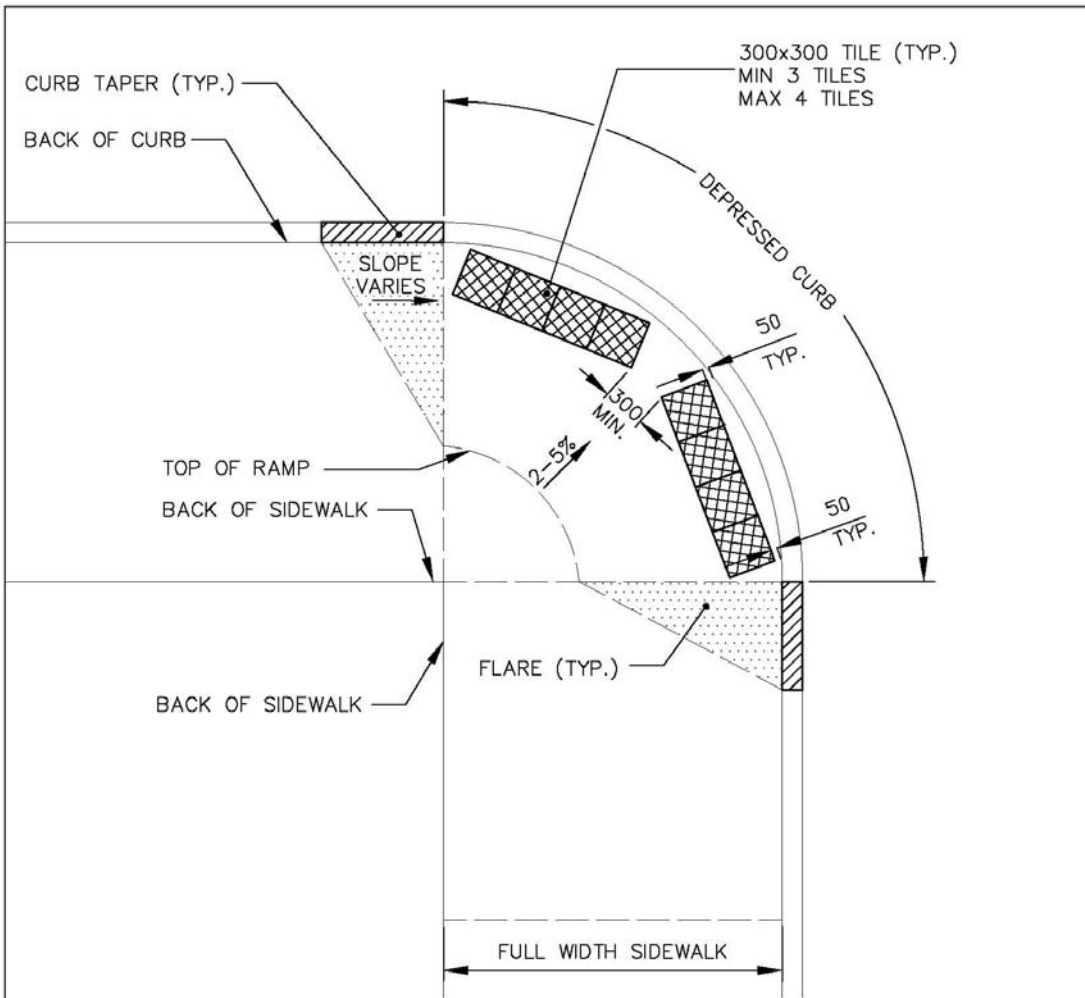
Designed By: B.P.	Drawn By: T.G.A.	Scale : N.T.S.
Checked By: F.W.C.	Date: 11-02-10	Drawing No.
Approved:		SDE-229AA



NOTES:

1. PLACE 300x300 DETECTABLE WARNING SURFACE TILES IN ACCORDANCE WITH "SELECTION OF LAYOUT OPTIONS" IN THIS SPECIFICATION.

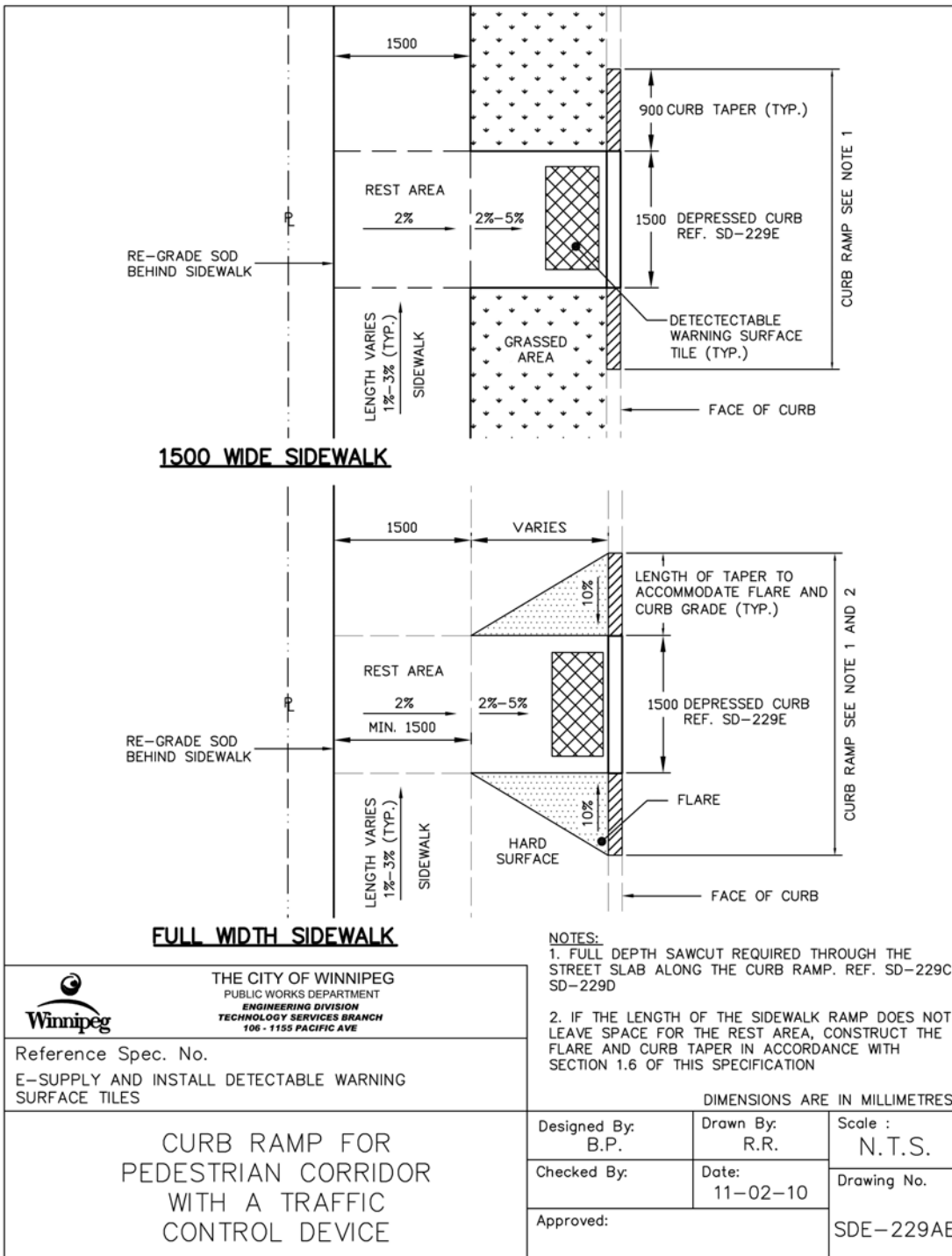
 THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT	DIMENSIONS ARE IN MILLIMETRES		
	Reference Spec. No. E-SUPPLY AND INSTALL DETECTABLE WARNING SURFACE TILES	Designed By: B.P.	Drawn By: R.R.
300 X 300 mm DETECTABLE WARNING SURFACE TILE LAYOUT OPTION 3	Checked By:	Date: 11-02-10	Drawing No.
	Approved:	SDE-229AC	

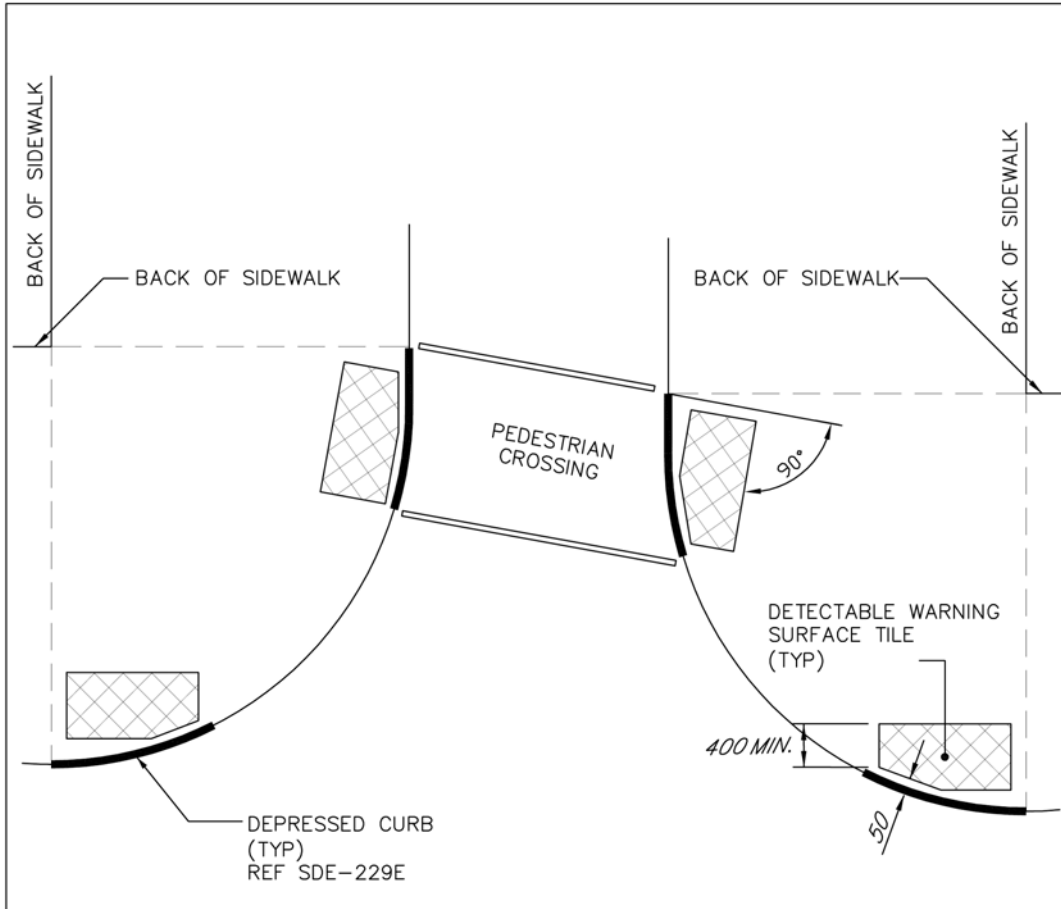


NOTES:
 1. WHEN THE SIDEWALK AREA AT THE TOP OF THE RAMP IS $\geq 1500\text{mm}$ OR $< 1500\text{mm}$ IN WIDTH, CONSTRUCT THE SLOPE OF THE CURB RAMP AND THE CURB TAPER IN ACCORDANCE WITH SECTION 1.6 OF THIS SPECIFICATION.


 <p>THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION TECHNOLOGY SERVICES BRANCH 106 - 1185 PACIFIC AVE</p>	Reference Spec. No.	
	E-SUPPLY AND INSTALL DETECTABLE WARNING SURFACE TILES	
<p>300x300mm DETECTABLE WARNING SURFACE TILE LAYOUT OPTION 3 DETAIL</p>		

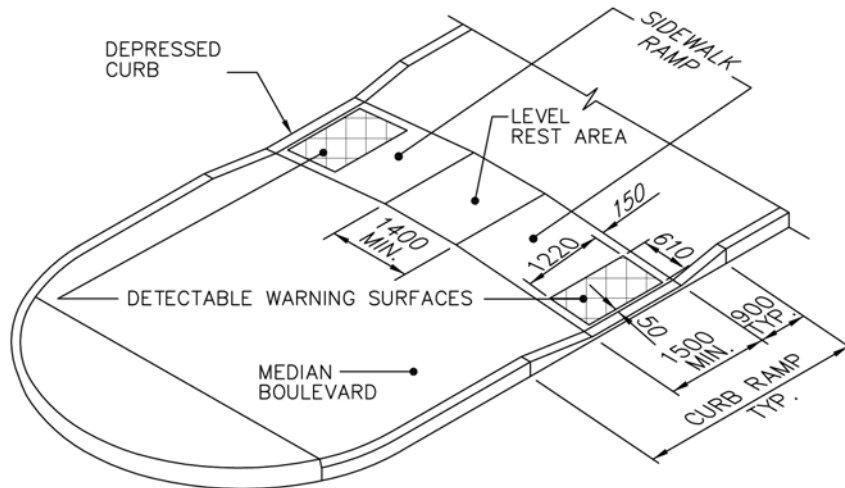
DIMENSIONS ARE IN MILLIMETRES		
Designed By: B.P.	Drawn By: R.R.	Scale : N.T.S.
Checked By:	Date: 11-02-10	Drawing No.
Approved:		SDE-229AD





- NOTES:**
 1. LOCATE END OF DEPRESSED CURB IN LINE WITH PROJECTED BACK OF SIDEWALK.
 2. CONSTRUCT FLARES IN ACCORDANCE WITH SDE-229A


 THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT			
Reference Spec. No. CW 3235, CW 3310, CW 3325 E-SUPPLY & INSTALL DETECTABLE WARNING SURFACE TILES			
DIMENSIONS ARE IN MILLIMETRES			
DETECTABLE WARNING SURFACE TILE ORIENTATION FOR OFFSET INTERSECTIONS	Designed By: B.P.	Drawn By: T.G.A.	Scale : N.T.S.
	Checked By: F.W.C.	Date: 11-02-10	Drawing No.
	Approved:		SDE-229AF

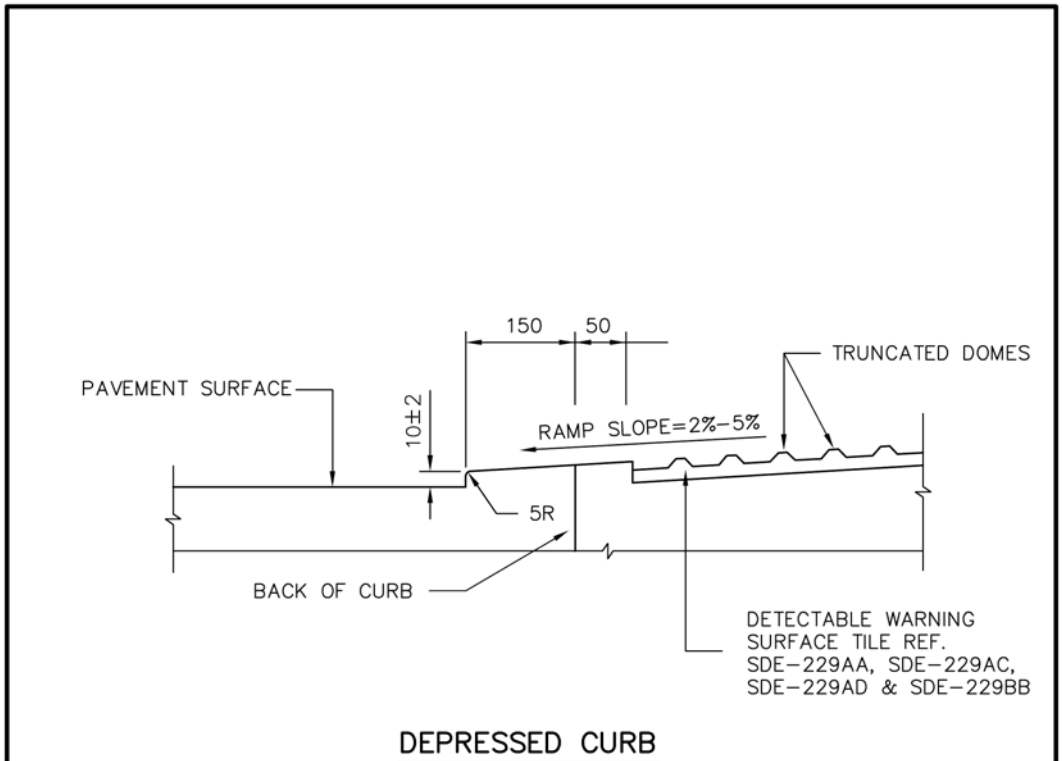


MEDIAN SIDEWALK CROSSING
 (REF. SD-229B)

NOTE:

1. FOR NARROW MEDIANS AND REFUGE ISLANDS < 1.32m IN WIDTH, PLACE DETECTABLE WARNING SURFACE FULL WIDTH, MAINTAINING 50mm SPACING FROM BACK OF CURB.


 THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT	DIMENSIONS ARE IN MILLIMETRES		
	Reference Spec. No. CW 3235, CW 3310, CW 3325 E-SUPPLY & INSTALL DETECTABLE WARNING SURFACE		
DETECTABLE WARNING SURFACE TILE IN CURB RAMPS FOR MEDIANS	Designed By: B.P.	Drawn By: T.G.A.	Scale : N.T.S.
	Checked By: F.W.C.	Date: 11-02-10	Drawing No.
	Approved:		SDE-229BB



DEPRESSED CURB

NOTES:

- 1) SIDEWALK RAMP SURFACE SHALL BE GIVEN A PARALLEL TEXTURED BROOM FINISH.
- 2) INSTALL DETECTABLE WARNING SURFACE SO THAT THE TOP OF THE TRUNCATED DOMES ARE FLUSH WITH THE SURFACE FO THE ADJACENT SIDEWALK.

 THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT		DIMENSIONS ARE IN MILLIMETRES		
Reference Spec. No. CW 3235, CW 3310, CW 3325 E-SUPPLY & INSTALL DETECTABLE WARNING SURFACE				
CURB RAMP DEPRESSED CURB		Designed By: B.P.	Drawn By: T.G.A.	Scale : N.T.S.
		Checked By: F.W.C.	Date: 11-02-10	Drawing No.
		Approved:		SDE-229E

E13. TEMPORARY TRAFFIC DIVERSION

DESCRIPTION

E13.1 General

- E13.1.1 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 traffic diversion as specified herein and shown on the Drawings.

MATERIALS

E13.2 General

- E13.2.1 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.
- E13.2.2 Unless specified otherwise herein, supply material in accordance with the City of Winnipeg Standard Construction Specifications for the applicable Works.

E13.3 Crushed Sub-Base Material

- E13.3.1 Crushed Sub-base material will have a maximum aggregate size of 50 mm and be supplied and installed in accordance with CW 3110-R15.

E13.4 Asphalt Material

- E13.4.1 Asphalt material will be Type 1A and will be supplied and constructed in accordance with CW 3410-R9.

CONSTRUCTION METHODS

E13.5 Signage

- E13.5.1 The Contractor shall be responsible for all traffic control and construction signage and barricades during construction of the temporary traffic detours on Corydon Avenue. A minimum of one lane per direction must be maintained at all times.
- E13.5.2 City of Winnipeg Traffic Services will sign the temporary traffic diversion while it is in operation.

E13.6 Traffic Diversion Construction

- E13.6.1 The Contractor will be responsible for the Traffic Diversion shown on the Drawings and in accordance but not necessarily limited to the following:
- (a) Remove existing curb, boulevard and construct a temporary asphalt pavement through the existing median to allow one lane of Westbound Corydon to enter the median lane of Eastbound Corydon Avenue for temporary bi-directional traffic on the existing eastbound lanes of Corydon between Cordova Street and Niagara Street. The detours will be located in the median between Campbell Street and Cordova Street and between Niagara Street and Waterloo Street.
 - (b) Remove existing boulevard and pavement at locations as shown on the Drawings or as directed by the Contract Administrator in accordance with Sections 3.1 and 3.2 of Specification CW 3110-R15.
 - (c) Excavate to a depth of 375 mm below the top of the existing pavement.
 - (d) Compact existing sub-grade to a minimum of 95% Standard Proctor Density.

- (e) Place and compact crushed sub-base material in accordance with CW 3110-R15 to a 300 mm compacted depth. Compact to a minimum of 100% Standard Proctor Density.
- (f) Place and compact asphaltic concrete to a 75 mm 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.
- (g) Restore the boulevards to their original or better condition once Westbound Corydon between Cordova Street and Niagara Street is reopened to traffic and normal traffic operations have been restored.

E13.6.2 The following Works are to be constructed in accordance with The City of Winnipeg Standard Construction Specifications indicated and as shown on the Drawings.

- (a) Excavation and Granular Base: CW 3110-R15: Sub-grade, Sub-base and Base Course Construction;
- (b) Asphalt: CW 3410-R9: Asphaltic Concrete Pavement Works;
- (c) Curb Removal and Installation: CW 3240-R9: Renewal of Existing Curbs; and
- (d) Boulevard Restoration: CW 3510-R20: Sodding.

MEASUREMENT AND PAYMENT

E13.7 The traffic diversion installation, removal and restoration will be measured and paid for on a unit price per item of work, measured as specified herein, which price shall be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the work.

E14. TERASPAN CABLE

E14.1 Further to CW 1120-R1, the Contractor shall pay for any costs for TeraSpan site safety watch where required when the Contractor is working in close proximity to TeraSpan's fibre-optic cable. TeraSpan shall notify the Contractor when site safety watch is required. The Contractor shall pay for any repairs from damage to the fibre-optic cable that is caused by the Contractor. The City will pay for any lowering of TeraSpan cable to relocate it under pavement or sidewalk.

E15. CONCRETE CURB

E15.1 Further to CW 3240-R9 and CW 3310-R14, 150 mm – 10M bars at 450 o/c to be installed at back of curb on St. James Street immediately after curb installation to tie the full-width sidewalk to the back of curb. Drilled bars will not be allowed.

E15.2 All costs associated with the installation of 150 mm – 10M bars are included in the concrete curb installation and no additional payment shall be made.

E16. TRACING OF EXISTING CATCHBASIN LEADS

E16.1 The Contractor shall trace the existing eastbound Corydon Avenue catchbasin leads within the limits of the construction works to determine the approximate location of the lead as it crosses the 2750 concrete storm relief sewer in the median. The approximate location of the crossover shall be marked on the surface to determine the approximate location for the new westbound catchbasin lead tie-ins to the 2750 storm relief sewer. The eastbound leads to be connected to the westbound leads if possible.

E16.2 All costs associated with the tracing of the leads to be included in "Connecting to the Existing Sewer", and no additional payment shall be made.

E17. BUS STOP UPGRADES

DESCRIPTION

E17.1 General

- E17.1.1 The "General Conditions and Supplemental Conditions" of this Specification and all documents listed in the Bid Opportunity shall apply to and govern all phases of the Work hereinafter specified and/or shown on the Drawings.

SPECIFICATIONS AND DRAWINGS

E17.2 Referenced Standard Construction Specifications

- (a) CW 3325-R5 Portland Cement Concrete Sidewalk
- (b) CW 3335-R1 Installation of Interlocking Paving Stones on a Lean Concrete Base

E17.3 Scope of Work

- E17.3.1 Work Included: The Work of this section comprises the furnishing of all labour, equipment and materials required to complete the supply and installation of cast-in-place concrete slabs and pavers as shown on the drawings and as hereinafter specified, including, but not necessarily confined to the following:

- (a) Excavation
- (b) Granular Fill work as required
- (c) Supply, erection and removal of all formwork as required
- (d) Blockouts for all paving bands in sidewalk
- (e) Supply and installation of interlocking paving stones (unit pavers)
- (f) Supply and installation of sand setting bed
- (g) Clean-up

MATERIALS

E17.4 Concrete Interlocking Paving Stones

- E17.4.1 Concrete interlocking paving stones (unit pavers) shall be Holland Stone Pavers, supplied by Barkman Concrete, contact Wayne Wiebe, phone 667-3310, as shown on the Drawings and as follows:

- (a) Blue Holland Stone 105 x 210 x 60 mm

E17.5 Sand

- E17.5.1 Clean brick sand as joint filler.
- E17.5.2 Clean brick sand as minimum 13 mm depth setting bed

CONSTRUCTION METHODS

E17.6 Excavation

- E17.6.1 The Contractor shall construct the subgrade surface to the following depths below the design grades shown on the Drawings for each area:

- (a) Concrete Sidewalk 150 mm
- (b) Concrete Sidewalk with Unit Paving 223 mm

E17.6.2 Interlocking paving stones

- (a) Interlocking paving stones shall be installed in block out in concrete sidewalk.

- (b) Contractor to verify the exact dimensions of pavers and panels prior to construction of block outs in concrete sidewalk.
- (c) Install concrete sidewalk as specified on Drawings.
- (d) Install sand bed to minimum 13 mm depth as specified on Drawings. Adjust depth of pavers under areas to be relevelled to ensure surface of pavers is flush with adjacent paving.
- (e) Do not compact setting bed prior to installation of pavers.
- (f) Spread only sufficient area which can be covered with pavers same day.
- (g) Lay pavers on sand bed hand tight.
- (h) Where paving pattern is interrupted by vertical structural elements pavers must be sawcut and fit true and hand tight.
- (i) Commence installation of pavers against edge to obtain straightest possible course for installation.
- (j) Pavers shall be cut with a saw only, to obtain true even undamaged edges. Chipped pavers are unacceptable.
- (k) Crews shall Work on installed pavers, not on sand layer.
- (l) Spread and fine grade brick sand over paving surface and sweep into joints, in several directions. Sand is incidental to the price for supply and installation of pavers.
- (m) Compact pavers with vibratory plate compactor having mass of at least 113 kg. Compaction is incidental to the price for supply and installation of paving stone.
- (n) Sweep remaining sand over all paving areas and remove from Site.
- (o) Replace at no extra cost all whole or cut stones marked as unacceptable.
- (p) Remove cracked, chipped, broken or otherwise damaged paving materials from Site immediately.
- (q) Upon completion, clean in accordance with manufacturer's recommendations.

MEASUREMENT AND PAYMENT

E17.7 Excavation, supply and installation of interlocking paving stones and concrete sidewalk will be measured and paid for at the contract lump sum price for "Bus Stop Upgrades" shall be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the Work included in this Specification.

E18. SLIP FORM PAVING ON CORYDON AVENUE

E18.1 Further to CW 3310-R14, the Contractor shall complete the mainline paving operations on Corydon Avenue Westbound utilizing a two lane paver at a proposed width of 7.75 m. All costs associated with paving shall be included in Slip Form Paving Construction of 230 mm Concrete Pavement (Plain Dowelled) and no additional payment shall be made.