

THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 202-2009

SUPPLY AND INSTALLATION OF ENTRANCE SIGNAGE - BRADY ROAD LANDFILL

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 SUPPLY AND INSTALLATION OF ENTRANCE SIGNAGE - BRADY ROAD LANDFILL

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, April 24, 2009.
- B2.2 Bids determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.
- B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

B3. SITE INVESTIGATION

- B3.1 Further to C3.1, the Contract Administrator or an authorized representative will be available at the Site from 09:00 am to 10:00 am on April 15, 2009 and from 03:00 pm to 4:00pm on April 16, 2009 to provide Bidders access to the Site.
- B3.2 The Bidder shall not be entitled to rely on any information or interpretation received at the Site investigation unless that information or interpretation is the Bidder's direct observation, or is provided by the Contract Administrator in writing.

B4. ENQUIRIES

- B4.1 All enquiries shall be directed to the Contract Administrator identified in D3.1.
- B4.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.
- B4.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.
- B4.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.
- B4.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.

B5. ADDENDA

- B5.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.
- B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <u>http://www.winnipeg.ca/matmgt</u>

- B5.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.2.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 7 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B6. SUBSTITUTES

- B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
 - (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
 - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
 - (c) identify any anticipated cost or time savings that may be associated with the substitute;
 - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
 - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an "approved equal" or as an "approved alternative", or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.
- B6.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.
- B6.7 If the Contract Administrator approves a substitute as an "approved equal", any Bidder may use the approved equal in place of the specified item.
- B6.8 If the Contract Administrator approves a substitute as an "approved alternative", any Bidder bidding that approved alternative may base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B14.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

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

B7. BID COMPONENTS

- B7.1 The Bid shall consist of the following components:
 - (a) Form A: Bid;
 - (b) Form B: Prices.
- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B7.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B7.5 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:

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

- B7.5.1 Samples or other components of the Bid Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid Submission.
- B7.6 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.7 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B14.1(a).
- B7.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to (204) 949-1178.
- B7.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.
- B7.8.2 Bids submitted by internet electronic mail (e-mail) will not be accepted.

B8. BID

- B8.1 The Bidder shall complete Form A: Bid, making all required entries.
- B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:
 - (a) if the Bidder is a sole proprietor carrying on business in his own name, his name shall be inserted;
 - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;

- (d) if the Bidder is carrying on business under a name other than his own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B8.2.1 If a Bid is submitted jointly by two (2) or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B8.4 Paragraph 9 of Form A: Bid shall be signed in accordance with the following requirements:
 - (a) if the Bidder is a sole proprietor carrying on business in his own name, it shall be signed by the Bidder;
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers;
 - (d) if the Bidder is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B8.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.
- B8.4.2 All signatures shall be original.
- B8.5 If a Bid is submitted jointly by two (2) or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B9. PRICES

- B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B9.1.1 Notwithstanding C12.2.3(c), prices on Form B: Prices shall not include the Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.
- B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.
- B9.4 Prices from Non-Resident Bidders are subject to a Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).
- B9.5 The Bidder shall state a separate price in Canadian funds for each of the following items of Work on Form B: Prices:
 - (a) Separate Price Item No. 3 and 4 shall be the amount to be deducted from the unit price if lane entrance signage and poles are removed from the Specifications.
- B9.5.1 Notwithstanding C12.2.3(c), prices on Form B: Prices shall not include the Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.
- B9.6 Prices from Non-Resident Bidders are subject to a Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B10. QUALIFICATION

- B10.1 The Bidder shall:
 - (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba; and
 - (b) be financially capable of carrying out the terms of the Contract; and
 - (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.
- B10.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
 - (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <u>http://www.winnipeg.ca/matmgt/debar.stm</u>
- B10.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
 - (a) have successfully carried out work similar in nature, scope and value to the Work; and
 - (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
 - (c) have a written workplace safety and health program if required pursuant to The Workplace Safety and Health Act (Manitoba).
- B10.4 Further to B10.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractors has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:
 - (a) a valid COR certification number under the Certificate of Recognition (COR) Program administered by the Manitoba Construction Safety Association or by the Manitoba Heavy Construction Association's Safety, Health and Environment Program; or
 - (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt).
- B10.5 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.
- B10.6 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

Representative Sample

- B10.7 The Contract Administrator shall require the successful Bidder to supply one (1) sample unit as described in B10.5, for detailed inspection and approval prior to delivery of the order. Failure to supply the sample unit within the prescribed time interval may result in termination of a contract.
- B10.8 The Bidder shall submit, within twenty (20) Business Days of a request by the Contract Administrator, a sample for detailed inspection and approval.
- B10.9 Should the Bidder not submit a sample that meets the approval of the Contract Administrator, the bid may be determined to be non-responsive in accordance with B14.2.

- B10.10 The sample if required shall be fully assembled when sent to the Contract Administrator.
- B10.11 The Bidder shall be responsible for all freight costs associated with the delivery and return of samples.
- B10.12 The detailed inspection, testing and approval will be based upon meeting the requirements of the specifications in the Bid Opportunity document.
- B10.13 Upon completion of testing and inspection the Contract Administrator will communicate to the Bidder that the pre-production sample has been:
 - (a) approved as submitted;
 - (b) approved subject to changes; or
 - (c) rejected and must be resubmitted.
- B10.14 Where the Contract Administrator has requested the sample be modified and re-submitted, in accordance with the specifications of the Bid Opportunity document, the Bidder shall:
 - (a) re-submit the modified sample within five (5) Business Days unless otherwise directed by the Contract Administrator;
 - (b) notify the Contract Administrator, in writing, of any changes to the sample other than those requested;
 - (c) be responsible for all freight costs associated with the delivery and return of samples.

B11. OPENING OF BIDS AND RELEASE OF INFORMATION

- B11.1 Bids will not be opened publicly.
- B11.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <u>http://www.winnipeg.ca/matmgt/bidopp.asp</u>
- 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 8 of Form A: Bid.
- B12.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work for the time period specified in Paragraph 8 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.

and;

- 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 9 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 9 of Form A: Bid; and
 - (c) if the notice has been given by any one of the persons specified in B13.1.3(b), declare the Bid withdrawn.
- B13.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B12.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

B14. EVALUATION OF BIDS

- B14.1 Award of the Contract shall be based on the following bid evaluation criteria:
 - (a) compliance by the Bidder with the requirements of the Bid Opportunity or acceptable deviation there from (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (pass/fail);
 - (c) Total Bid Price
 - (d) economic analysis of any approved alternative pursuant to B6.
- B14.2 Further to B14.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.
- B14.3 Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid or in other information required to be submitted, that he is responsible and qualified.
- B14.4 Further to B14.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.
- B14.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.
- B14.4.2 Further to B14.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.
- B14.4 Further to B14.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices adjusted, if necessary, as follows:
 - (a) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder is within the budgetary provision for the Work, no adjustment will be made to the Total Bid Price; or
 - (b) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder exceeds the budgetary provision for the Work, the Total Bid Prices of all responsive Bids submitted by responsible and qualified Bidders will be adjusted by progressively deducting

item(s) four (4) and five (5) in the order listed, until a Total Bid Price within the budgetary provision is achieved.

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.

B15. AWARD OF CONTRACT

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

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

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

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

- D2.1 The Work to be done under the Contract shall consist of supply, delivery and installation of entrance sign for Brady Road landfill
- D2.2 The major components of the Work are as follows:
 - (a) Install of round support pole;
 - (b) Construction of highway illuminated display sign;
 - (c) Lane entrance signs, fastened to existing concrete pad;
 - (d) Installation of two (2) pole street sign.

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is:

Darryl Drohomerski, C.E.T. Manager of Solid Waste Services Water and Waste 109 – 1199 Pacific Avenue Winnipeg MB R3E 3S8

Telephone No.: (204) 986 - 4484 Facsimile No.: (204) 774 - 6729

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

D4. CONTRACTOR'S SUPERVISOR

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

D5. NOTICES

- D5.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.
- D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D3.1.
- D5.3 Notwithstanding C21., all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following address or facsimile number:

The City of Winnipeg Chief Financial Officer Administration Building, 3rd Floor 510 Main Street Winnipeg MB R3B 1B9 Facsimile No.: (204) 949 - 1174

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

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

SUBMISSIONS

D6. AUTHORITY TO CARRY ON BUSINESS

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

D7. SAFE WORK PLAN

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

D8. INSURANCE

- D8.1 The Contractor shall provide and maintain the following insurance coverage:
 - (a) commercial general liability insurance, in the amount of at least two million dollars
 (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a
 cross-liability clause, such liability policy to also contain contractual liability, unlicensed
 motor vehicle liability, non-owned automobile liability and products and completed
 operations, to remain in place at all times during the performance of the Work and
 throughout the warranty period;
 - (b) automobile liability insurance for owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;
 - (c) all risks course of construction insurance in the amount of one hundred percent (100%) of the total Contract Price, written in the name of the Contractor and The City of Winnipeg, at all times during the performance of the Work and until the date of Total Performance.

- D8.2 Deductibles shall be borne by the Contractor.
- D8.3 The Contractor shall provide the Contract Administrator with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than seven (7) Calendar Days from notification of the award of Contract by Purchase Order.
- D8.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

D9. PERFORMANCE SECURITY

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

D10. SUBCONTRACTOR LIST

D10.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of Contract.

SCHEDULE OF WORK

D11. COMMENCEMENT

- D11.1 The Contractor shall not commence any Work until he is in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.
- D11.2 The Contractor shall not commence any Work on the Site until:
 - (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D6;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the Safe Work Plan specified inD7;
 - (iv) evidence of the insurance specified in D8;
 - (v) the performance security specified in D9;
 - (vi) the Subcontractor list specified in D10.

(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.

D12. LIQUIDATED DAMAGES

- D12.1 If the Contractor fails to achieve installation of the goods within the time specified in E2.1 Supply and Installation of Signage the Contractor shall pay the City two hundred and fifty dollars (\$ 250.00) per Calendar Day for each and every Calendar Day until the goods have been installed.
- D12.2 The amount specified for liquidated damages in D12.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Delivery by the day fixed herein for same.
- D12.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D13. DELIVERY

D13.1 Goods shall be delivered within thirty (30) Calendar Day(s) of the placing of an order, f.o.b. destination, freight prepaid to:

Brady Road Landfill Site 1901 Brady Road

- D13.2 The Contractor shall confirm each delivery with the Contract Administrator or his/her designate, at least three (3) Business Days before delivery.
- D13.3 Goods shall be delivered between 7:30 a.m. and 6:00 p.m. on Business Days.
- D13.4 The Contractor shall off-load goods as directed at the delivery location.

CONTROL OF WORK

D14. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

D14.1 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).

MEASUREMENT AND PAYMENT

D15. PAYMENT

D15.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

D16. PAYMENT SCHEDULE

D16.1 Further to C10, payment shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Contractor's invoice.

WARRANTY

D17. WARRANTY

D17.1 Warranty is as stated in C13.

D17.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire two (2) years thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

FORM H1: PERFORMANCE BOND (See D9)

KNOW ALL MEN BY THESE PRESENTS THAT

(hereinafter called the "Principal"), and

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

dollars (\$.)

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

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

BID OPPORTUNITY NO. 202-2009

SUPPLY AND INSTALLATION OF ENTRANCE SIGNAGE - BRADY ROAD LANDFILL

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____ .

The City of Winnipeg Bid Opportunity No. 202-2009 Template Version: C320081212 - C LR

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)

FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT (PERFORMANCE SECURITY) (See D9)

(Date)

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 202-2009

SUPPLY AND INSTALLATION OF ENTRANCE SIGNAGE - BRADY ROAD LANDFILL

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

(Name of Contractor)

(Address of Contractor)

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

Canadian dollars.

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

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

Partial drawings are permitted.

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

(Address)

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

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

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

(Date)

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

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

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

(Name of bank or financial institution)

Per:

(Authorized Signing Officer)

Per:

(Authorized Signing Officer)

FORM J: SUBCONTRACTOR LIST (See D10)

SUPPLY AND INSTALLATION OF ENTRANCE SIGNAGE - BRADY ROAD LANDFILL

Name	Address

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 <u>http://www.winnipeg.ca/matmgt/Spec/Default.stm</u>
- E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.2.3 Further to C2.4 (d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 The following are applicable to the Work:
- Drawing No. Drawing Name/Title Cover Sheet
- W09-008 F3 Base Plate detail
- W09-008 A Illuminated Directional Highway display
- W09-008 B Flag Style Directional Highway display
- W09-008-C Non-illuminated Directional Highway display
- W09-008-D1 Front Evaluation / Base details
- W09-008-D2 Cross Section / Base details
- W09-008-D3 Base Plate details
- W09-008-E1 Front Evaluation / Base details
- W09-008-E2 Base Plate details
- W09-008-F1 Front Evaluation / Base details
- W09-008-F2 Cross Section / Base details

E2. SUPPLY AND INSTALLATION OF SIGNAGE AND ENTERANCE MARKERS

- E2.1 The Contractor shall notify the Contract Administrator at least two (2) working days in advance of the anticipated delivery to the Site and erection of the posts/signs. The signage shall be completely installed within forty-five (45) Calendar Days.
- E2.2 The posts/signs shall be lifted and secured with nylon straps or other approved methods. Use of steel chains and steel hooks against aluminum surfaces and painted surfaces will not be permitted. All posts/signs and brackets shall be wrapped during transportation to the Site to protect the coated finish.

- E2.3 The Contractor shall ensure that the anchoring nuts of the anchor bolts are tightened according to the "turn-of-nut" method of the American Association of State Highways and Transportation Officials (AASHTO) Code.
- E2.3.1 Any areas of damaged on the posts shall receive field-applied touch-up painting.
- E2.3.2 Surfaces to receive touch-up painting shall be cleaned using a wire brush, a light grinding action, or mild blasting to remove loose scale, rust, paint, grease, dirt, or other contaminants. Preheat the surface to three hundred and fifteen (315) degrees celsius and wire brush the surface during preheating.

E3. SIGNAGE PLATES

- E3.1 The Work covered under this Specification shall include all operations related to the supply, fabrication, installation and delivery of signage for the entrance at the Brady Road landfill.
- E3.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of the Work as hereinafter specified.
- E3.3 Where referred to in the Specifications, sign(s) shall mean entrance signage and lane entrance indicators message panel.
- E3.3.1 All materials used for fabrication of support posts and sign plates shall be new, previously unused material.
- E3.3.2 Sign plates, shall consist of sheet aluminum (1/8th / 0.125 in. thick), flat sheet tension levelled, sign grade aluminum alloys 6061-T6, conforming to the requirements of ASTM B 209M, "Specifications for Aluminum and Aluminum-Alloy Sheet and Plate." Tensioned levelling is a technique that gives aluminum sheets a superior flatness and resistance to tearing at connections.
- E3.3.3 Bolts, nuts, washers, and machine screws shall be in accordance with ASTM A276 Type 316 stainless steel.
- E3.3.4 Bonding tape for attaching the stiffener bars to the aluminum sheets shall be 3M very high bond (VHB) tape used in the fabrication of traffic sign panels
- E3.3.5 The paint system for posts shall consist of an epoxy primer and two (2) coats of urethane topcoat. The paint finish colour shall be a Akzo Nobel Brushed Aluminum 390473 or as otherwise specified on the drawings.

E4. DRAWINGS

- E4.1 The attached shop drawings showing fabrication details and dimensions of all the different types of sign plates, consisting of prints on 11" x 17" sheet, shall be part of this Bid Opportunity and submitted to the Contractor at least ten (10) calendar days prior to start of fabrication.
- E4.2 The shape and dimensions of the signage/posts shall be in accordance with the details shown on the Drawings. The dimensions of the signage panel shall be within 1.5± mm of those specified and the finished sign panel shall be flat with a maximum allowable deflection of .005 (D) where (D) is the maximum dimension of the sign blank in any direction. The signs shall conform in quality and accuracy of detail to the dimensional and tolerance requirements of the specification. Where no tolerances are specified, the standard of workmanship shall be in accordance with normally accepted good practice.
- E4.3 All fabrication, including shearing, cutting, and drilling shall be completed before treating the metal and applying the face material. Cut all metal message panels to size and shape as per the dimensions for each sign. The panels shall be free of buckles, warp, dents, cockles, burrs, and defects resulting from fabrication. Edges of all substrate panel material shall be de-burred

to provide a smooth finished edge. Each face of the panel shall be finished to be a plain surface and flat.

- E4.4 Aluminum stiffener bars shall be attached to the back side of sign message panels and plates using 3M VHB tape in accordance with the manufacturer's instructions.
- E4.5 The sign fabrication surface of the substrate material shall be appropriately prepared prior to the application of sheeting or painting. Such preparation shall include degreasing and etching to promote adhesion of reflective materials as hereinafter recommended or as may be recommended by the sheeting manufacturer. The metal shall be treated by using conversion coating or anodizing to finish the metal before painting or applying reflective sheeting. The finished sign message panel shall have a uniform, light-coloured appearance, without splotches or stains. If the finishing procedure produces an iridescent colour, the shade should be uniform. The metal shall be thoroughly cleaned before finishing. The cleaning process shall begin by cleaning with an etch-type alkaline cleaner or with a vapour degreaser, using a trichloroethylene or perchloroethylene solvent. The cleaner shall be used according to the manufacturer's specifications. After using an alkaline etching cleaner, the metal shall be treated with an acid solution or desmutting compound. The desmutting compound shall be used according to the manufacture's specifications. The metal shall be finished with a chromate conversion coating or by anodizing with a chromic acid anodizing solution. The conversion-coating compound shall be used according to the manufacturer's specifications. The metal shall be carefully handled with a device or with clean cotton gloves between all cleaning and finishing operations and before applying the finish material. The metal shall never come in contact with greases, oils, dust, or other contaminants before applying the finish material.

E5. DRAWING AND ASSEMBLY INSTRUCTIONS

- E5.1 The Contractor shall submit drawings, material list, specifications for entrance signage, and descriptive information within five (5) Business Days when called by the Contract Administrator.
- E5.2 In sufficient detail to permit evaluation of the signage offered, the drawings must clearly show the dimensions of the signage and posts, the dimensions and arrangement of panel and assembly details.
- E5.3 The Contractor shall submit stamped structural engineer's drawings as per E4 for review and approval when requested by the Contract Administrator within five (5) Business Days. Engineer's drawings shall show all details of construction and fastenings for erections and shall be as specified or approved.
- E5.4 The Contractor shall submit full colour design drawings of sign faces and post including materials, lighting components, connections and fastenings for review and approval when requested by the Contract Administrator.
- E5.5 Auto-cad files of the design drawings shall be made available upon request by e-mail to the Contract Administrator.

E6. QUALITY CONTROL

- E6.1 All workmanship and all materials furnished and supplied under this Specification are subject to close and systematic inspection by the Contract Administrator, including all operations from the selection and production of materials, through to final acceptance of the work. The Contractor shall be wholly responsible for the control of all operations incidental thereto notwithstanding any inspection approval that may have been previously given. The Contract Administrator reserves the right to reject any materials or works that are not in accordance with the requirements of this Specification.
- E6.2 The Contractor shall be responsible for making a thorough inspection of materials to be supplied under this Specification. All material shall be free of surface imperfections and other defects.

- E6.3 The Contractor shall, at his own expense, correct such work or replace such materials found to be defective under this Specification in an approved manner to the satisfaction of the Contract Administrator.
- E6.4 The Contract Administrator will reject reflective sheeting if the material fails to meet any one of the designated requirements, if the material meets the requirements but later fails during sign fabrication or in actual field use. Cracks, wrinkles, delamination, colour change, or abnormal loss of reflectivity constitute failure.
- E6.5 The Contractor shall transfer to the Contract Administrator a performance warranty for the reflective sheeting used by the manufacturer, ensure that the warranties cover the full replacement cost, including material and labour, include in these warranties a provision that the warranty is subject to a transfer to the Contract Administrator, and submit a warranty from the manufacturer that states that the reflective sheeting processed, applied to sign blank materials, and cleaned meets the outdoor weathering photometric requirements of Canadian General Standards Board Specification 62-GP-11M.
- E6.6 The Contractor shall submit to the Contract Administrator the manufacturer's certification with respect to the sign sheeting. The certification shall: state that the named product conforms to the specifications contained herein and that representative samples thereof have been sampled and tested as specified; either be accompanied with a certified copy of the test results, or certify that such test results are on file with the manufacturer and will be furnished to the Contract Administrator upon demand; give the name and address of the manufacturer and the testing agency and the date of the tests, and set forth the means of identification which will permit field determination of the product delivered to the project as being the product covered by the certification. The Contractor shall be responsible for any costs of certification or for any costs of the sampling and testing of products in connection therewith. The Contract Administrator reserves the right to require samples to be submitted in addition to the requirement referred to above, and to test products for compliance with pertinent requirements irrespective of prior certification of the products by the manufacturer.

E7. STEEL POSTS, LANE ENTRANCE SIGNAGE AND SIGN MOUNTING PLATES

- E7.1 The Work covered under this Specification shall include all operations related to the supply, fabrication and delivery of new steel posts, entrance signage, and sign plate mounts.
- E7.2 The work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of the Work as hereinafter specified.
- E7.2.1 All hollow structural sections (HSS) for the steel posts shall conform to the requirements of CAN/CSA-G40.20M, Grade 350 W, Class H or Class C. Round steel pipe material for sign brackets shall conform to ASTM A53, Gr. 241 MPa, welded and seamless steel pipe. All other structural steel shall be CSA Standard G40.21 M, Grade 300 W.
- E7.2.2 The Contractor is advised that copies of mill test certificates showing the chemical and physical properties of all structural steel to be supplied under this Specification must be submitted to the Contract Administrator at least seven (7) days prior to the scheduled commencement of fabrication. Fabrication shall not commence until directed in writing by the Contract Administrator.
- E7.2.3 High-strength bolts, nuts and washers for connecting the brackets to the posts shall be hotdip galvanized Accurate Tension Torque Control Bolts, as supplied by Infasco, 700 Ouellette, Marieville, PQ, Canada J3M 1P6 (450) 658-8741, or equal as accepted by the Contract Administrator, and shall conform to the requirements of ASTM Specification A325, Type 1. Nuts shall be hot-dip galvanized and conform to the requirements of ASTM Specification A563, Grade C. Washers shall be hot-dip galvanized and conform to the requirements of ASTM Specification F436, Type 1.

E7.2.4 All other bolts, nuts, washers and screws shall be in accordance with ASTM A276 Type 316 stainless steel.

E8. GALVANIZING

- E8.1 All hot-dip galvanizing shall be in accordance with CSA G164 for a minimum net retention of 600 g/m2.
- E8.2 Repair of hot-dip galvanizing shall be done with self-fluxing, low-temperature, zinc-based alloy rods in accordance with ASTM A780-80 for "Repair of Damaged Hot-Dip Galvanized Coatings." Approved products are Galvalloy as manufactured by Metalloy Products Company, P.O. Box No. 3093, Terminal Annex, Los Angeles, California, and Welco Gal-Viz Galvanizing Alloy, as manufactured by Thermocote Welco, Highway 161, York Road, Kings Mountain, North Carolina. Locally, both products are available from Welder Supplies Limited, 25 McPhillips Street, Winnipeg.

E9. CONCRETE FOUNDATION

- E9.1 The Work covered under this Item shall include all concreting operations related to construction of cast-in-place concrete foundations in accordance with this Specification and as shown on the Drawings.
- E9.2 The Contractor shall be responsible for the supply, safe storage, and handling of all materials set forth in this Specification.
- E9.3 All Materials shall be handled and stored in a careful and workmanlike manner, to the satisfaction of the Contractor Administrator. Storage of materials shall be in accordance with CSA Standard CAN3-A23.1, "Storage of Material," except as otherwise specified herein.
- E9.4 All materials supplied under this Specification shall be subject to inspection and testing by the Contract Administrator or by the Testing Laboratory designated by the Contract Administrator. There shall be no charge to the City for any materials taken by the Contract Administrator for testing purposes. All materials shall conform to CSA Standard CAN3-A23.1. All testing of materials shall conform to CSA Standard CAN3-23.2.
- E9.5 Cement shall be Type HS, high sulphate-resistant hydraulic cement, conforming to the requirements of CSA A3001-03.
- E9.6 Use of pozzolans, fly ash, or silica fume will not be permitted for use in structural concrete supplied under this Specification.
- E9.7 Water used for mixing concrete shall be clean and free from injurious amounts of oil, acid, alkali, organic matter, or other deleterious substances. It shall be equal to potable water in physical and chemical properties.
- E9.8 The Contractor shall furnish in writing to the Contract Administrator, the location of the sources where aggregate will be obtained, in order that same may be inspected and tentatively approved by the Contract Administrator. Changes in the source of aggregate supply during the course of the Contract will not be permitted without notification in writing to and the expressed approval of the Contract Administrator.
 - (a) Fine aggregate shall consist of sand having clean, hard, strong, durable, uncoated grains; free from injurious amounts of dust, soft or flaking particles, shale, alkali, organic matter, loam, or other deleterious substances.