



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 606-2014

REPAIR OF THE NEWPCC SLUDGE CAKE STORAGE BINS

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 REPAIR OF THE NEWPCC SLUDGE CAKE STORAGE BINS

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, August 7, 2014.

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 9:00 am to 10:00 am on July 24, 2014 to provide Bidders access to the Site. Bidder representatives are to meet at the administration office building.

B3.2 The Bidder is advised that the Site Investigation is not mandatory, but is strongly recommended to observe existing Site and access conditions that will impact performance of the Work.

B3.3 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 D4.1.

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. CONFIDENTIALITY

B5.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:

- (a) was known to the Bidder before receipt hereof; or
- (b) becomes publicly known other than through the Bidder; or
- (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.

B5.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Bid Opportunity to the media or any member of the public without the prior written authorization of the Contract Administrator.

B6. ADDENDA

B6.1 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.

B6.2 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.

B6.2.1 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/bidopplasp>

B6.2.2 The Bidder is responsible for ensuring that he/she 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.

B6.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B7. SUBSTITUTES

B7.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.

B7.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.

B7.3 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.

B7.4 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.

B7.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her 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.

- B7.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.
- B7.6.1 The City will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B7.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her 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 B15.
- B7.9 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.
- B7.10 Notwithstanding B7.2 to B7.9, and in accordance with B8.7, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B15.1(a).

B8. BID COMPONENTS

- B8.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices;
- B8.2 Further to B8.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B7.
- B8.3 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.
- B8.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B8.5 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
- B8.5.1 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.
- B8.6 Bidders are advised not to include any information/literature except as requested in accordance with B8.1.
- B8.7 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 B15.1(a).

B8.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to 204 949-1178.

B8.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.

B8.8.2 Bids submitted by internet electronic mail (e-mail) will not be accepted.

B9. BID

B9.1 The Bidder shall complete Form A: Bid, making all required entries.

B9.2 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/her own name, his/her 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/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.

B9.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.

B9.3 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.

B9.4 Paragraph 10 of Form A: Bid shall be signed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his/her 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/her 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.

B9.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.

B9.4.2 All signatures shall be original.

B9.5 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.

B10. PRICES

B10.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B10.1.1 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.

B10.2 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.

B10.3 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.

B10.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B11. QUALIFICATION

B11.1 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.

B11.2 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>

B11.3 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);

B11.4 Further to B11.3(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 copy of their valid Manitoba COR certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Certificate of Recognition (COR) Program administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
- (b) a copy of their valid Manitoba SECOR™ certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Small Employer Certificate of Recognition Program (SECOR™) administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
- (c) 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/>).

B11.5 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.

B11.6 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.

B12. OPENING OF BIDS AND RELEASE OF INFORMATION

B12.1 Bids will not be opened publicly.

B12.2 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/>

B12.3 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/>

B12.4 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.

B13. IRREVOCABLE BID

B13.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.

B13.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work for the time period specified in Paragraph 9 of Form A: Bid.

B14. WITHDRAWAL OF BIDS

B14.1 A Bidder may withdraw his/her Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

B14.1.1 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.

B14.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid, and only such person, has authority to give notice of withdrawal.

B14.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:

- (a) retain the Bid until after the Submission Deadline has elapsed;
- (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid; and
- (c) if the notice has been given by any one of the persons specified in B14.1.3(b), declare the Bid withdrawn.

B14.2 A Bidder who withdraws his/her Bid after the Submission Deadline but before his/her Bid has been released or has lapsed as provided for in B13.2 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.

B15. EVALUATION OF BIDS

- B15.1 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 B11 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B7.
- B15.2 Further to B15.1(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.
- B15.3 Further to B15.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his/her Bid or in other information required to be submitted, that he/she is responsible and qualified.
- B15.4 Further to B15.1(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.
- B15.4.1 Further to B15.1(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.

B16. AWARD OF CONTRACT

- B16.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B16.2 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.
- B16.2.1 Without limiting the generality of B16.2, 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.
- B16.3 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 B15.
- B16.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.
- B16.4 Notwithstanding C4, the City may issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B16.5 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 repair of three (3) sludge cake storage bins located in the dewatering facility at the North End Water Pollution Control Centre.

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

- (a) Installation of new exterior roof support members to the sludge cake bin roofs.
- (b) Removal of the existing deteriorated interior roof support members.
- (c) Localized repair of deteriorated sections of plate.
- (d) Painting of the upper 1.5 m of the interior of the bins.

D3. DEFINITIONS

D3.1 When used in this Bid Opportunity:

- (a) "**NEWPCC**" means North End Water Pollution Control Centre;

D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is KGS Group, represented by:

Colin Siepman, P.Eng
Senior Structural Engineer/Project Manager

Telephone No. 204-896-1209

Facsimile No. 204-896-0753

D4.2 At the pre-construction meeting, Mr. Siepman will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D4.3 Bids Submissions must be submitted to the address in B8.5

D5. CONTRACTOR'S SUPERVISOR

D5.1 At the pre-construction meeting, the Contractor shall identify his/her designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

D6. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE

D6.1 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.

D6.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.

D6.3 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.

D6.4 A Contractor who violates any provision of D6 may be determined to be in breach of Contract.

D7. NOTICES

D7.1 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 facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.

D7.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D7.3, D7.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the facsimile number identified in D4.

D7.3 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

D7.4 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 facsimile number:

The City of Winnipeg
Legal Services Department
Attn: Director of Legal Services

Facsimile No.: 204 947-9155

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 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>

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 and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
- (b) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. The Limit of Liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence;
- (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.

D10.2 Deductibles shall be borne by the Contractor.

D10.3 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.

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 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.

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 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.

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 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.

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 C4.1 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;
- (b) a daily manpower schedule for the Work;

all acceptable to the Contract Administrator.

D13.3 Further to D16.2(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 activity/task shall be on the vertical axis.

D13.4 Further to D16.2(b), the daily manpower schedule shall list the daily number of individuals on the Site for each trade.

SCHEDULE OF WORK

D14. COMMENCEMENT

D14.1 The Contractor shall not commence any Work until he/she is in receipt of a Purchase Order 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 that the Contractor is 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;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the Safe Work Plan specified in D9;
 - (iv) evidence of the insurance specified in D10;
 - (v) the performance security specified in D11;
 - (vi) the Subcontractor list specified in D12; and
 - (vii) 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.
- (c) the Contractor has attended a Site orientation presentation provided by NEWPCC Management outlining safety.

D14.3 The City intends to award this Contract by September 22, 2014.

D15. CRITICAL STAGES

D15.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:

- (a) No Site Work shall be allowed until October 1, 2014.
- (b) No Work that requires shutdown of a sludge bin shall be allowed until October 15, 2014. All three (3) sludge bins will be in operation until this date.

- (c) A maximum of one (1) bin may be offline at any time due to operational constraints.
- (d) All bins must be operational by February 15, 2015.

D16. SUBSTANTIAL PERFORMANCE

- D16.1 The Contractor shall achieve Substantial Performance by February 15, 2015.
- D16.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.
 - D16.2.1 The Contractor shall be aware that three (3) separate Substantial Performance inspections will be required, representing one (1) inspection for each bin prior to re-commissioning. The Contractor shall notify the Contract Administrator a minimum of two (2) business days prior to the proposed date of each substantial performance inspection.
- D16.3 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.

D17. TOTAL PERFORMANCE

- D17.1 The Contractor shall achieve Total Performance by March 31, 2015.
- D17.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.
- D17.3 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.

D18. LIQUIDATED DAMAGES

- D18.1 If the Contractor fails to achieve Substantial Performance in accordance with the Contract by the day fixed herein for Substantial Performance, the Contractor shall pay the City one thousand five hundred dollars (\$1500.00) per Calendar Day for each and every Calendar Day following the day fixed herein for Substantial Performance during which such failure continues.
- D18.2 The amount specified for liquidated damages in D18.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Substantial Performance by the day fixed herein for same.
- D18.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D19. SCHEDULED MAINTENANCE

- D19.1 The Contractor shall allow NEWPCC personnel access to perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:
 - (a) Sludge cake bin flight auger inspection as specified in E4.

CONTROL OF WORK

D20. JOB MEETINGS

- D20.1 Regular bi-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.
- D20.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

D21. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D21.1 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).

D22. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

- D22.1 Further to B11.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require updated proof of compliance, as set out in B11.4

MEASUREMENT AND PAYMENT

D23. INVOICES

- D23.1 Further to C12, the Contractor shall submit a monthly invoice for work performed during the previous calendar month to the Contract Administrator listed in D4.1.
- D23.2 Invoices must clearly indicate, as a minimum:
- (a) the City's purchase order number;
 - (b) date of delivery;
 - (c) delivery address;
 - (d) type and quantity of work performed;
 - (e) the amount payable with GST and MRST shown as separate amounts; and
 - (f) the Contractor's GST registration number.
- D23.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.
- D23.4 Bid Submissions must be submitted to the address in B8.5.

D24. PAYMENT

- D24.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D25. WARRANTY

- D25.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire one (1) year thereafter, except where longer warranty periods are specified in the respective Specification sections, unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.
- D25.1.1 For the purpose of Performance Security, the warranty period shall be one (1) year.
- D25.2 Notwithstanding C13.2, 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 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.
- D25.2.1 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.606-2014

REPAIR OF THE NEWPCC SLUDGE CAKE STORAGE BINS

which is by reference made part hereof and is hereinafter referred to as the "Contract".

NOW THEREFORE the condition of the above obligation is such that if the Principal shall:

- (a) carry out and perform the Contract and every part thereof in the manner and within the times set forth in the Contract and in accordance with the terms and conditions specified in the Contract;
- (b) perform the Work in a good, proper, workmanlike manner;
- (c) make all the payments whether to the Obligee or to others as therein provided;
- (d) in every other respect comply with the conditions and perform the covenants contained in the Contract; and
- (e) indemnify and save harmless the Obligee against and from all loss, costs, damages, claims, and demands of every description as set forth in the Contract, and from all penalties, assessments, claims, actions for loss, damages or compensation whether arising under "The Workers Compensation Act", or any other Act or otherwise arising out of or in any way connected with the performance or non-performance of the Contract or any part thereof during the term of the Contract and the warranty period provided for therein;

THEN THIS OBLIGATION SHALL BE VOID, but otherwise shall remain in full force and effect. The Surety shall not, however, be liable for a greater sum than the sum specified above.

AND IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable as Principal, and that nothing of any kind or matter whatsoever that will not discharge the Principal shall operate as a discharge or release of liability of the Surety, any law or usage relating to the liability of Sureties to the contrary notwithstanding.

IN WITNESS WHEREOF the Principal and Surety have signed and sealed this bond the

_____ day of _____, 20____ .

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

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

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT
(PERFORMANCE SECURITY)**
(See D11)

(Date)

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO.606-2014
REPAIR OF THE NEWPCC SLUDGE CAKE STORAGE BINS

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 (2007 Revision), International Chamber of Commerce Publication Number 600.

(Name of bank or financial institution)

Per: _____
(Authorized Signing Officer)

Per: _____
(Authorized Signing Officer)

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
1-0101W-S0001-001	Cover Sheet
1-0101W-S0002-001	General Arrangement – Plan and Sections
1-0101W-S0003-001	Roof Repair – Sections and Details
	Plate Repair - Details

E2. HAZARDOUS MATERIALS

- E2.1 If asbestos or other hazardous materials are encountered during the Work of the Contract, the Contractor shall stop all work and notify the Contract Administrator immediately. Removal of hazardous materials shall be dealt with by the City and the Contractor shall await further instruction by the Contract Administrator.
- E2.2 The sludge cake (dewatered bio-solids) product stored in the bins may contain pathogenic bacteria. The Contractor must fully clean the interior of the sludge cake storage bins prior to any worker entrance into the bins without the use of supplied air breathing apparatus and skin protection.

E3. DANGEROUS WORK CONDITIONS

- E3.1 Further to clause C6.26 of the General Conditions for Construction, the Contractor shall be aware that the NEWPCC sludge cake storage bins are considered a confined space and shall follow the "Guidelines for Confined Space Entry Work" as published by the Manitoba Workplace Safety and Health Division.
- E3.2 The Contractor shall be aware of the potential hazards that can be encountered in the sludge cake storage bins such as explosive gases, toxic gases and oxygen deficiency.
- E3.3 The air in a confined space must be tested before entry and continuously during the time that personnel are inside the space. Equipment for continuous monitoring of gases must be explosion-proof and equipped with an audible alarm. The principal tests are for oxygen deficiency, explosion range and toxic gases. Testing equipment must be calibrated in accordance with manufacturer's specifications and shall be marked with a calibration sticker indicating the date of last calibration.
- E3.4 The Contractor shall ventilate all confined spaces as required and approved by the Manitoba Workplace Safety and Health Act (the "Act"). If no ventilation is supplied, a worker must wear a respirator or supplied air to enter the confined space.

- E3.5 Workers must wear a respirator with supplied air at all times when entering a sludge cake storage bin that has not been fully cleaned to remove all dewatered bio-solids.
- E3.6 Site Specific Safety Requirements
- (a) The Contractor shall install plywood on top of the lower mezzanine floor grating to protect workers below from weld sparks and falling tools and debris.
 - (b) The Contractor shall ensure all openings between the exterior bin members and grating are blocked to protect workers below from weld sparks, falling tools and debris.
 - (c) The Contractor must erect and maintain adequate signage at all entry points on all levels into the sludge cake storage building indicating that it is considered a construction site and that appropriate personal protective equipment should be worn at all times.
 - (d) The contractor must erect a temporary roof access platform for work on top of the sludge bins prior to new roof member installation due to the deteriorated condition of the existing bin roofs.
- E3.7 Grinding and/or welding to the exterior of a sludge bin currently in operation or not fully cleaned of bio-solids shall be considered hot work. Any proposed hot work must be outlined in the Safe Work Plan submittal as outlined in D9.
- E3.8 The Contract Administrator may issue a Stop Work Order to the Contractor if the above guidelines are not being followed. The Contractor shall not resume his operations until the Contract Administrator is satisfied the Contractor is following the appropriate procedures. The Contractor shall have no claim for extra time or costs due to the Stop Work Order for not following these safety guidelines.

E4. NEWPCC WORK REQUIREMENTS

- E4.1 To maintain adequate capacity in the sludge dewatering process, a maximum of one (1) sludge cake storage bin may be shutdown at any time. The Work Schedule shall reflect repair of the sludge cake storage bins in three phases, with each phase representing repair of a single bin.
- E4.2 The Contractor must provide minimum three (3) Business Days' notice prior to the required shut-down or re-commissioning of a sludge cake storage bin.
- E4.3 Operational Hours and Hoisting Restrictions
- (a) Regular work hours at the NEWPCC site are Monday to Friday, 07:30 to 16:00. Work conducted outside of these hours will be permitted but is subject to pre-approval by NEWPCC management.
 - (b) The NEWPCC sludge cake load-out truck bay will remain operational throughout the duration of the Work. Approximately ten (10) truckloads of sludge cake will be removed from the facility daily, from approximately 06:00 to 15:00. The Contractor is advised that hauling trucks have priority and right-of-way in the facility. Major hoisting operations requiring durations longer than 30 minutes are therefore to be completed outside of the regular trucking hours. Minor hoisting of materials can occur during trucking hours if coordinated with NEWPCC personnel.
 - (c) Sludge hauling trucks are required to be parked inside of the sludge load-out facility overnight from 15:00 to 06:00. The hauling trucks will be parked in a way to minimize impact on hoisting operations at the north end of the building.
 - (d) The overhead truck door located at the north end of the building can be used by the contractor for hoisting of materials. During winter months, the door cannot be left open for extended durations as to ensure the average interior temperature of the sludge cake bin building does not drop below 0°C for more than 10 minutes due to the presence of water lines and process piping that can freeze.
 - (e) NEWPCC personnel will access the lower mezzanine floor often during regular operating hours for maintenance. The Contractor shall be aware that NEWPCC personnel require full access to the areas surrounding the bottom of the bins and any control panels, and

pathways around these areas should be kept clear. NEWPCC personnel require intermittent access to the upper mezzanine floor during the Work so pathways should be kept clear to the bins.

- (f) The Contractor may use the overhead crane located in the adjacent centrifuge building to the west of the sludge bin facility, with the assistance of NEWPCC personnel to hoist materials to the lower mezzanine floor. The overhead crane cannot hoist materials to the upper mezzanine floor level.

E4.4 NEWPCC personnel will conduct a visual inspection of the flight augers located at the bottom of the sludge cake bin hoppers following the thorough wash down of the bin interior. The estimated duration of the inspection will be two (2) hours per bin.

E4.5 Bottom access hatches must remain secured during wash-out operations as several control panels located adjacent to these openings cannot be exposed to water. Contractor is to protect against accidental water exposure of equipment during wash down.

E5. CITY ASSISTANCE

E5.1 NEWPCC personnel will be available to provide assistance to the Contractor for sludge cake storage bin shut-down, lock-outs, including guidance on temporary disconnections and blanking off of the process piping and ducting.

E5.2 NEWPCC personnel will arrange for the sludge transport trucks to park below the bins during the required bin wash-down. The trucks will be required to direct wash water flow into the floor drainage system below. Contractor is to perform preliminary and thorough wash down of the interior of the bins and is to provide minimum three (3) Business Days' notice prior to bin wash-down.

E5.3 NEWPCC personnel will remove the two level sensors located adjacent to the existing hatch openings in each sludge bin roof during decommissioning and will reinstall prior to re-commissioning.

E6. MOBILIZATION AND DEMOBILIZATION

E6.1 Mobilization and demobilization will include but not be limited to start-up costs, equipment setup and removal, field office and storage facilities set-up and removal, site development and site cleanup.

E6.2 Mobilization and demobilization will be measured on a unit basis and paid for at the Contract Unit Price for "Mobilization and Demobilization" in accordance with this specification, accepted and measured by the Contract Administrator.

E6.3 50% of the Mobilization and Demobilization unit price will be paid on the first progress payment.

E6.4 The remaining 50% of the Mobilization and Demobilization unit price will be paid subsequent to the Substantial Performance of the Work and restoration and clean-up of the Site.

E7. OFFICE, WASHROOM AND STORAGE FACILITIES

E7.1 The Contractor shall supply office facilities meeting the following requirements:

- (a) The field office shall be for the use of site meetings and exclusive use of the Contractor.
- (b) The building shall be conveniently located near the Site of the Work. Available locations for the field office will be discussed during the Bidders Site Investigation. Placement of the building will be subject to approval from NEWPCC management.
- (c) The building shall be furnished with a desk, drafting table, 3m x 1.2m table, filing cabinet and a minimum of 8 chairs.
- (d) The building shall be adequately lighted with fluorescent fixtures.

- (e) The building shall be suitable for all weather use. It shall be equipped with an electric heater so that the room temperature can be maintained between 16-18°C.
- E7.2 The Contractors will be allowed the usage of the washroom facilities located within the sludge dewatering facility. The City reserves the right to revoke washroom usage within the facility if the washrooms are found to be unclean or used in a disrespectful manner.
- E7.3 If usage of the washroom facilities located within the sludge dewatering facility is revoked by the City, the Contractor shall supply washroom facilities meeting the following requirements:
 - (a) The building shall be suitable for all weather use. It shall be equipped with an electric heater so that the room temperature can be maintained between 16-18°C.
 - (b) The building shall be located adjacent to the field office.
 - (c) The building shall have holding tanks for potable and waste water. Supply of potable water and removal of wastewater shall be the Contractors responsibility.
 - (d) The building shall contain at minimum, one flushing toilet and one sink.
 - (e) The washroom shall be supplied with anti-bacterial soap and liquid hand sanitizer.
- E7.4 The contractor shall supply storage facilities meeting the following requirements:
 - (a) The building shall be located adjacent to the field office.
 - (b) The building shall be for the exclusive use of the Contractor for storage of equipment and materials.
- E7.5 The Contractor shall be responsible for all installation and removal costs, all operating costs and the general maintenance of the office, washroom and storage facilities.
- E7.6 The City will permit power to be supplied to the Site Office from an adjacent building as directed by NEWPCC personnel. The City will bear the utility costs associated with the Site Office power usage. The Contractor shall bear all associated connection and disconnection costs.
- E7.7 The field office building and the portable washroom should be cleaned on a weekly basis and immediately prior to each bi-weekly Site meeting. The Contract Administrator may request additional cleaning when he deems necessary.
- E7.8 The office, washroom and storage facilities will be provided from the date of Commencement of the Work until Total Performance.
- E7.9 Office and Washroom facilities are considered incidental to the Works of this Contract and no measurement or payment will be made for this item.

E8. SHOP DRAWINGS

- E8.1 Description
 - (a) This Specification shall revise, amend and supplement the requirements of CW1110.
 - (i) The term 'shop drawings' means drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data, including site erection drawings which are to be provided by the Contractor to illustrate details of a portion of the work.
 - (ii) The Contractor shall submit specified shop drawings to the Contract Administrator for review. All submissions must be in metric units. Where data is in imperial units, the correct metric equivalent shall also be on all submissions for Engineering review.
 - (b) Shop Drawings
 - (i) Original drawings are to be prepared by Contractor, Subcontractor, supplier, distributor, or manufacturer, which illustrate appropriate portion of work; showing fabrication, layout, setting or erection details as specified in appropriate sections.
 - (c) Contractor's Responsibilities

- (i) Review shop drawings, product data and samples prior to submission and stamp and sign drawings indicating conformance to the Contract requirements.
 - (ii) Verify:
 - (i) Field Measurements
 - (ii) Field Construction criteria
 - (iii) Catalogue numbers and similar data
 - (iii) Coordinate each submission with requirements of Work and Contract Documents. Individual shop drawings will not be reviewed until all related drawings are available.
 - (iv) Notify Contract Administrator, in writing at time of submission, of deviations from requirements of Contract Documents
 - (v) Responsibility for deviations in submission from requirements of Contract Documents is not relieved by Contract Administrator's review of submission, unless the Contract Administrator gives written acceptance of specified deviations.
 - (vi) Responsibility for errors and omissions in submission is not relieved by the Contract Administrator's review of submittals.
 - (vii) The Contractor shall make any corrections required by the Contract Administrator and shall resubmit the required number of corrected copies of Shop Drawings. The Contractor shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections requested by the Contract Administrator on the previous submission.
 - (viii) After Contract Administrator's review and return of copies, distribute copies to sub-trades as required.
 - (ix) Maintain one (1) complete set of reviewed shop drawings, filed by Specification Section Number, at the site of the work for use and reference of the Contract Administrator and Subcontractors.
- (d) Submission Requirements
- (i) Schedule submissions at least 7 Calendar days before dates reviewed submissions will be needed, and allow for a 7 Calendar day period for review by the Contract Administrator of each individual submission and re-submission, unless noted otherwise in the Contract Documents.
 - (ii) Submit five (5) paper prints of shop drawings. The Contractor is advised that the Contract Administrator will retain three (3) copies of all submittals and return two (2) copies to the Contractor.
 - (iii) Accompany submissions with transmittal letter, containing:
 - (i) Date
 - (ii) Project title and Bid Opportunity Number
 - (iii) Contractor's name and address
 - (iv) Number of each shop drawing, product data and sample submitted
 - (v) Specification Section, Title, Number and Clause
 - (vi) Drawing Number and Detail/ Section Number
 - (vii) Other pertinent data
 - (iv) Submission shall Include:
 - (i) Date and revision dates.
 - (ii) Project title and Bid Opportunity number.
 - (iii) Name of:
 - (i) Contractor
 - (ii) Subcontractor
 - (iii) supplier
 - (iv) manufacturer
 - (v) separate detailer when pertinent
 - (iv) Identification of product of material.

- (v) Relation to adjacent structure or materials.
 - (vi) Field dimensions, clearly identified as such.
 - (vii) Specification section name, number and clause number or drawing number and detail/section number.
 - (viii) Applicable standards, such as CSA or CGSB numbers.
 - (ix) Contractor's stamp, initialled or signed, certifying review of submission, verification of field measurements and compliance with Contract Documents.
- (e) Other Considerations
- (i) Fabrication, erection, installation or commissioning may require modifications to equipment or systems to conform to the design intent. Revise pertinent shop drawings and resubmit.
 - (ii) Material and equipment delivered to the site of the works will not be paid for at least until pertinent shop drawings have been submitted and reviewed.
 - (iii) Incomplete shop drawing information will be considered as stipulated deductions or the purposes of progress payment certificates.
 - (iv) No delay or cost claims will be allowed that arise because of delays in submission, re-submissions and review of shop drawings.

E8.2 Measurements and Payment

- (i) Preparation and submittal of Shop Drawings shall be considered incidental to the Works of this Contract and no measurement or payment will be made for this item.

E9. DEMOLITION OF STRUCTURES

E9.1 Description of Work

The Work required under this section shall include, but is not limited to, the following:

- (a) Removal of all existing interior sludge cake bin roof members.
- (b) Removal of corroded sections of steel plate on walls and roof as indicated by the Contract Administrator.
- (c) Modification of existing hatch openings as required.

E9.1.1 The Work required under this section shall include, but is not limited to, the following:

Removal of existing steel members and plate, performing cutting, demolition, existing equipment to be maintained, demolition and disposal of existing steel and clean-up of Work Site in anticipation of new Work for those demolition areas indicated on the drawings.

E9.1.2 The work to be done by the Contractor under this Section shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Works as described hereinafter.

E9.2 References

- E9.2.1 CSA S350-M1980 (R2003), Code of Practice for Safety in Demolition of Structures.
- E9.2.2 Manitoba Workplace Safety and Health Act, and all applicable National, Provincial, and Municipal regulations.

E9.3 Protection

- E9.3.1 Prevent damage of existing equipment and structure to remain. Provide bracing as required. Make good any damage caused by the demolition Work.

E9.3.2 Take precautions to support affected structures and, if safety of structure being demolished or adjacent structures appears to be endangered, cease operations and notify the Contract Administrator.

E9.4 Execution

E9.4.1 Inspection

- (a) Inspect Site with Contract Administrator and verify extent of items for removal, disposal, salvage and items to remain.
- (b) Notify and obtain approval of Contract Administrator before starting demolition.

E9.4.2 Safety Code and Requirements

- (a) Unless otherwise specified, carry out demolition in accordance with the City of Winnipeg Safety Directives and Guidelines.

E9.4.3 Demolition

- (a) Demolish structures to permit construction of new work as indicated.
- (b) Remove existing equipment, services, and obstacles where required for refinishing or making good of existing surfaces, and replace as Work progresses.
- (c) At end of each day's Work, leave Work in safe condition so that no part is in danger of toppling or falling
- (d) Do not sell or burn materials on Site.

E9.4.4 Demolition Tolerances

- (a) All demolition shall be done using equipment and procedure to prevent over-breakage of the existing structure.
- (b) Final demolition surfaces must remain locally within (13 mm) of the demolition lines, alignments, or limits shown on the drawings. Demolition beyond the limits shown shall be reviewed by the Contract Administrator. The Contractor shall repair excess demolition to the satisfaction of the Contract Administrator, and at no cost to the City where required.
- (c) All protrusions into the defined limits of demolition shall be removed if they interfere with the placement and alignment of embedded components or reinforcing steel.

E9.4.5 Disposal of Demolished Material

- (a) The Contractor shall be responsible for removal of debris and waste from the Work area to an appropriate solid waste disposal area approved by the Contract Administrator.
- (b) Metal debris shall be removed from Site and disposed of by the Contractor.

E9.5 Measurement and Payment

- (a) Demolition will be considered incidental to the Work listed in individual Part E specifications and shall be included in the associated prices for each applicable section. No direct measurement or payment will be made for this item.

E10. METAL FABRICATIONS

E10.1 Description

E10.1.1 General

- (a) This Specification shall cover the supply, fabrication, transportation, handling, delivery and placement of metal fabrications.

E10.2 Materials

- E10.2.1 All material shall be of a type acceptable to the Contract Administrator, and shall be subject to inspection and testing by the Contract Administrator.
- E10.2.2 Material intended for use in the various assemblies shall be new, straight, and clean with sharply defined profiles.
- E10.2.3 Steel Sections and Plates: to CAN/CSA G40.20/G40.21, Grade 300 W, except W, HP AND HSS sections, which shall be Grade 350 W.
- E10.2.4 Steel Pipe: to ASTM A53/A53M, seamless, galvanized, as specified by item.
- E10.2.5 Welding materials: to CSA W59.
- E10.2.6 Hot dipped galvanized steel repair material: Galvalloy and Gal-Viz
- E10.2.7 Stud Anchors: to ASTM A108, Grade 1020.
- E10.2.8 Aluminum: to CAN/CSA S157 and the Aluminum Association 'Specifications for Aluminum Structures'. Aluminum for plates shall be Type 6061-T651. Aluminum plate shall have an approved raised oval or multi-grip pattern.
- E10.2.9 Isolation sleeves shall be "Nyltite" – headed sleeves as manufactured by SPAE-Naur of Kitchener, Ontario, or approved equal.
- E10.2.10 Anchor bolts and fasteners: ASTM A276, Type 316 stainless steel, of ample section to safely withstand the forces created by operation of the equipment or the load to which they may be subjected.
- E10.3 Construction Methods
- E10.3.1 Submittals
- (a) The Contractor shall submit the qualifications of the fabricator and welders to the Contract Administrator for acceptance. Submit shop drawings in accordance with E8 clearly indicating material, core thickness, finishes, connections, joints, methods of anchorage, number of anchors, supports, reinforcement, details and accessories. Indicate field measurements on shop drawings.
- E10.3.2 Fabrications
- (a) Fabricate Work square, true, straight and accurate to required size, with joints close fitted and properly secured. Assemble Work in such a way that no disfigurements show in the finished Work, or impair the strength.
- (b) Confirm measurements for all fabrications before fabricating.
- (c) Pieces shall be of the sizes indicated on the Drawings and shall not be built up from scrap pieces. Confirm sizes with field measurements,
- (d) Where possible, fit Work and shop assemble, ready for erection.
- (e) Remove and grind smooth burrs, filings, sharp protrusions, and projections from metal fabrications to prevent possible injury. Correct any dangerous or potential harmful installations as directed by the Contract Administrator.
- (f) All steel welding shall conform to CSA Standard W.59. Fabricator shall be fully approved by the Canadian Welding Bureau, in conformance with CSA Standard W.47.1. Welding shall be done by currently licensed welders only.
- (g) All aluminum welding shall be in accordance with the requirements of CSA W59.2. The fabricator shall be fully certified in conformance with CSA Standard W47.2. All welding shall be done in a licensed welding shop, and no field welding will be permitted unless approved in writing, in advance, by the Contract Administrator.
- (h) Ensure exposed welds are continuous for length of each joint. File or grind exposed welds smooth and flush.
- (i) Seal exterior steel fabrications to provide corrosion protection in accordance with CAN3-S16.1.

- (j) Use self-tapping shake-proof flat-headed screws on items requiring assembly by screws.

E10.3.3 Erection

- (a) Do steel welding Work in accordance with CSA W59 and aluminum welding Work in accordance with CSA W59.2
- (b) Erect metal Work in accordance with reviewed shop drawings, square, plumb, straight, and true, accurately fitted, with tight joints and intersections.
- (c) Provide suitable means of anchorage acceptable to Contract Administrator such as dowels, anchor clips, bar anchors, expansion bolts and shields, and toggles where not specifically indicated on the Drawings.
- (d) Provide components for building in accordance with shop drawings and schedule.
- (e) Make field connections with bolts to CAN/CSA-S16, or weld.
- (f) Touch-up rivets, bolts and burnt or scratched surfaces that are to receive paint finish, with zinc primer after completion of erection.
- (g) Repair damaged galvanized surfaces and field welds with self-fluxing, low temperature, zinc-based alloy rods in accordance with ASTM A780, Repair of Damaged Hot Dip Galvanizing Coatings. The general procedure shall be to allow a small amount of the repair alloy to flow then spread by brushing briskly with a wire brush. Brushing shall be sufficient to obtain a bright finish. Repeat process three times to ensure a proper thickness is achieved. Temperatures shall be kept below 177°C (350°F) at all times. All heating of structural steel Work shall be done in the presence of the Contract Administrator.
- (h) Install access hatch frames square and level at the locations show on the Drawings. Install covers and adjust hardware to proper function.
- (i) Install electrochemical isolation gaskets and sleeves to electrically isolate dissimilar metals.

E10.4 Measurement and Payment

- E10.4.1 Supply, fabrication, transportation, handling, delivery and placement of metal fabrications will be considered incidental to the Work listed in individual Part E specifications and shall be included within the associated process for each applicable section. No direct measurement or payment will be made for this item.

E11. PAINTING

E11.1 Description

This specification shall cover all painting to be completed in the Work.

E11.2 References

- (a) Master Painters Institute (MPI)
 - (i) Architectural Painting Specifications Manual.
- (b) Society for Protective Coatings (SSPC)
 - (i) Systems and Specifications Manual, SSPC Painting Manual, Volume Two.
- (c) National Fire Code of Canada

E11.3 Quality Assurance

- (a) Conform to latest MPI requirements for painting Work including preparation and priming.

E11.4 Delivery, Handling and Storage

- (a) Deliver and store materials in original containers with labels intact. Observe manufacturer's recommendations for storage and handling.

- (b) Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling storage, and disposal of hazardous materials.

E11.5 Site Requirements

- (a) Unless specifically pre-approved by product manufacturer, perform no painting Work when:
 - (i) Substrate and ambient air temperatures are expected to fall outside MPI or paint manufacturer's prescribed limits.
 - (ii) The maximum moisture content of the substrate exceeds MPI or paint manufacturer's prescribed limits.
- (b) Apply paint finish only:
 - (i) In areas where dust is no longer being generated by related construction operations or when wind or ventilation conditions are such that airborne particles will not affect quality of finished surface.
 - (ii) Apply paint only to adequately prepared surfaces and to surfaces within moisture limits noted herein.
 - (iii) Apply paint only when previous coat of paint is dry or adequately cured.

E11.6 Materials

- (a) Only paint materials listed in the MPI Approved Products List (APL) are acceptable for use on this project.
- (b) Paint materials for paint systems shall be products of a single manufacturer.

E11.7 Painting Systems

- (a) Upper 1.5 m of Bin Interior:
 - (i) Surface Preparation to SSPC-SP10 (Near-White Blast)
 - (ii) 1 Coat Sherflex Elastomeric Polyurethane (50-60 mils DFT) or approved equivalent in accordance with B7. Colour to be beige.
- (b) Bin Interior - Plate Repairs Located Below Upper 1.5 m:
 - (i) Surface Preparation to SSPC-SP3 (Power Tool Cleaning)
 - (ii) 1 Coat Sherflex Elastomeric Polyurethane (50-60 mils DFT) or approved equivalent in accordance with B7. Colour to be beige.
- (c) Bin Exterior - Plate Repairs and New Exterior Structural Steel:
 - (i) Surface Preparation to SSPC-SP3 (Power Tool Cleaning)
 - (ii) 2 Coats Bar-Rust 235 (6-8 mils DFT per coat). Colour to be safety yellow to match existing.

E11.8 Execution – General

- (a) Perform preparation and operations for painting in accordance with MPI Painting Specifications Manual except where specified otherwise.
- (b) Do repainting of previously painted surfaces in accordance with MPI Maintenance Repainting Manual, except where specified otherwise.
- (c) Apply paint materials in accordance with paint manufacturers' written application instructions.
- (d) Paint all new Work, except prefinished items or where indicated otherwise.
- (e) Do not paint galvanized steel, aluminum fabrications, mechanical and electrical equipment unless noted otherwise.

E11.9 Existing Conditions

- (a) Investigate existing substrates for problems related to proper and complete preparation of surfaces to be painted. Repair damages, defects, unsatisfactory or unfavorable conditions before proceeding with Work.

- (b) Conduct moisture testing of surfaces to be painted using a properly calibrated electronic moisture meter and report findings to Contract Administrator. Do not proceed with Work until conditions fall within acceptable range as recommended by manufacturer.

E11.10 Protection

- (a) Protect existing building surfaces and adjacent structures from paint splatters, markings and other damage by suitable non-staining covers or masking. If damaged, clean and restore such surfaces as directed by Contract Administrator.
- (b) Protect items that are permanently attached such as Fire Labels on doors and frames.
- (c) Protect factory finished products and equipment.
- (d) Protect passing pedestrians and general public in and about the building.
- (e) Remove electrical cover plates, light fixtures, surface hardware on doors, and other surface mounted equipment, fittings and fastenings prior to undertaking any painting operations. Securely store items and re-install after painting is completed.

E11.11 Dust Control and Containment

- (a) The high-rate exhaust duct located at the centre of the bin roof shall be disconnected prior to any work within the bin, including abrasive blast cleaning.
- (b) Provide an air supply into the sludge cake storage bin roof exhaust port with discharge ducts from the bottom of the sludge bin to create a downdraft condition. Discharge ducts are to be vented outdoors.
- (c) Reattach the high-rate exhaust system to the top of the bin following completion of the interior coatings. Bottom hatches should be left open to allow an updraft air movement through the interior of the bin during the cure process to mitigate the coating fume accumulation within the building.

E11.12 Cleaning and Preparation

- (a) Clean and prepare surfaces in accordance with MPI Painting Specification Manual requirements. Refer to MPI Manual in regard to specific requirements.
- (b) Sand and dust between coats as required to provide adequate adhesion for next coat and to remove defects visible from a distance up to 1000 mm.
- (c) Clean metal surfaces to be painted by removing rust, loose mill scale, welding slag, dirt, oil, grease and other foreign substances in accordance with MPI requirements. Remove traces of blast products from surfaces, pockets and corners to be painted.
- (d) Touch up of shop primers with primer as specified in applicable section. Major touch-up including cleaning and painting of field connections, welds, rivets, nuts, washers, bolts, and damaged or defective paint and rusted areas, shall be by supplier of fabricated material.

E11.13 Application

- (a) Apply paint by brush, roller, airless sprayer. Conform to manufacturer's application instructions unless specified otherwise.
- (b) Apply coats of paint as a continuous film of uniform thickness. Repaint thin spots or bare areas before next coat of paint is applied.
- (c) Painting coats specified are intended to cover surface completely. If necessary apply additional coats until satisfactory coverage is obtained. Provide additional coats at no additional cost to Contract.
- (d) Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by manufacturer.
- (e) Sand and dust between coats to remove visible defects.
- (f) Do not paint copper, bronze, chromium plate, nickel, stainless steel, aluminum, lead and other bright metals, unless specified otherwise.

- (g) Clean shop applied paint surfaces that become marked. Touch up with primer and paint as required.

E11.14 Restoration

- (a) Clean and re-install all hardware items removed before undertaken painting operations.
- (b) Remove protective coverings and warning signs as soon as practical after operations cease.
- (c) Remove paint splashing on exposed surfaces that were not painted. Remove smears and spatter immediately as operations progress, using compatible solvent.
- (d) Protect freshly completed surfaces from paint droppings and dust. Avoid scuffing newly applied paint.
- (e) Restore areas used for storage, cleaning, mixing and handling of paint to clean condition.

E11.15 Method of Measurement and Payment

- (a) Painting will be considered incidental to the Work listed in individual Part E specifications and shall be included in the associated price for each applicable item. No direct measurement for payment will be made for this item.

E12. SUGGESTED CONSTRUCTION SEQUENCE

E12.1 Description

This specification shall cover a suggested construction sequence for the Contractor to follow.

E12.2 Suggested Construction Sequence

- (a) Install temporary bin roof access platforms.
 - (i) Due to the deteriorated interior roof members, workers shall not access the top of the bin without the use of a temporary platform.
- (b) Grind existing exterior painted surfaces requiring welding for new member installation from the temporary access platform erected in step (a). Grind down existing projecting weld lines requiring a flat surface for new member installation.
- (c) Coordinate bin shutdown with NEWPCC personnel.
 - (i) Provide a minimum three (3) Working Days' notice of the proposed date to shutdown the bin.
- (d) Perform preliminary pressure wash-down of the interior of the bin from the roof level hatches.
- (e) Install interior scaffolding with workers inside bin using supplied air.
 - (i) Due to the inability to complete a full wash-down in step (d), particularly of the roof from the hatches above, all sludge cake cannot be fully removed prior to man entry. Due to possible toxic gasses released by the product, the use of supplied air is required for workers entering the bin.
- (f) Thorough pressure wash-down of the entire interior of the bin with worker inside using supplied air.
- (g) Install exterior HSS tubes from the temporary access platform erected in step (a).
- (h) Install new enlarged roof hatches.
- (i) Remove corroded interior roof support members.
- (j) Sandblast interior of bins to expose deteriorated areas of plate.
 - (i) A preliminary sandblast is required to assess the extent of the deterioration of the plate and for the Contract Administrator to identify areas to be patched.

- (ii) A complete sandblast for upper 1.5 m of bin interior and localized sandblast of corroded areas located below the upper 1.5 m.
- (k) Install exterior channels from temporary platform.
- (l) Complete local plate repairs.
- (m) Re-sandblast interior of bin for coating application.
- (n) Apply interior and exterior coatings and cure.
- (o) Prepare bin for recommissioning.

E12.3 Submittals

The suggested construction sequence has been provided for reference only. The Contractor shall clearly state the intended construction sequence within the Detailed Work Schedule submitted in accordance with D13.

E13. ROOF MEMBER REPLACEMENT

E13.1 Description

This specification will cover installation of the new exterior roof members and removal of the existing deteriorated interior members.

E13.2 Materials

- (a) All materials to be of a type acceptable to the Contract Administrator, and shall be subject to inspection and testing by the Contract Administrator.
- (b) Steel Members: to E10.
- (c) Welding Materials: to CAN/CSA W59.
- (d) Coatings: to E11.

E13.3 Installation of New Roof Members and Hatches

- (a) Install bearing plates for the new exterior HSS and channel members around the perimeter of the bins.
- (b) Install new HSS roof members prior to removal of any interior members. Grinding of the existing projecting roof plate seam weld is required prior to HSS installation. The Contractor is to cinch the existing plate tight to the underside of the HSS members during installation to account for distortion and sag in the existing plate.
- (c) Cut enlarged roof hatch openings and install channels around hatch opening.
- (d) Install all remaining channels members. The Contractor is to cinch the plate tight to the underside of the channel sections during installation to account for distortion and sag in the existing plate. It is recommended that the existing interior members are removed prior to this step.
- (e) Painting of the new roof members shall be completed as specified in E11.

E13.4 Removal of Existing Roof Members

- (a) Removal of the existing deteriorated interior roof members can be completed after the installation of new HSS roof members in E13.3.

E13.5 Method of Measurement and Payment

- (a) Roof Member Replacement shall be measured on a per bin unit basis and paid at the Contract Unit Price for "Roof Member Replacement and Hatch Installation – Each Bin." Said price 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.

E14. PLATE REPAIR

E14.1 Description

This specification will cover repair of deteriorated sections of plate on walls and roof of the sludge cake bins.

E14.2 Materials

- (a) All materials to be of a type acceptable to the Contract Administrator, and shall be subject to inspection and testing by the Contract Administrator.
- (b) Steel Plate: to E10.
- (c) Welding Materials: to CAN/CSA W59
- (d) Coatings: to E11.

E14.3 Construction Methods

- (a) Following a complete thorough wash down of the interior of a bin, the Contractor shall sandblast the upper 1.5 m of interior walls and roof to expose the full extent of plate deterioration and section loss. In addition, the Contract Administrator will indicate local areas in the lower portions of the bin that will require sandblasting to expose localized deterioration of the plate.
- (b) The Contract Administrator will field locate and mark out all wall and roof areas requiring plate repair.
- (c) The Contractor shall perform local plate repairs using the plate patching details and weld seam repair details as shown in the drawings. The Contractor shall notify the Contract Administrator if a particular plate repair is not applicable to the details as shown in the Drawings.
- (d) The Contractor is to sandblast and apply localized coatings to plate repair areas located below the upper 1.5 m of the walls. The coating shall be feathered a minimum of 100 mm around the repair to ensure smoothness of the wall.
- (e) Plate repair locations shall be painted in accordance with E11.

E14.4 Measurement and Payment

- (a) Plate Patch Repairs smaller than 200 cm² shall be measured on a unit basis and paid for at the Unit Price for "Plate Patch Repairs – Small." Said price 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.
- (b) Plate Patch Repairs larger than 200 cm² (0.02 m²) and smaller than 600 cm² (0.06 m²) shall be measured on a unit basis and paid for at the Unit Price for "Plate Patch Repairs – Large." Said Price 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.
- (c) Plate Weld Seam Repairs shall be measured on a linear metre basis and paid for at the Unit Price for "Plate Seam Repairs." Said price 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.

E15. INTERIOR COATING

E15.1 Description

This specification will cover coating of the interior upper walls and roof of the sludge cake bins.

E15.2 Materials

All materials and paint to be as specified in E11.

E15.3 Construction Methods

- (a) The Contractor shall sandblast the upper 1.5 m portion of the walls and entire roof of the bin interior following installation of the new roof members and localized plate repairs of the walls and roof. Surface preparation shall be as specified in E11.
- (b) Coating of the upper 1.5 m portion of the walls and roof as specified in E11.

E15.4 Measurement and Payment

- (a) Interior Coating to the Upper Portion of Each Bin shall be measured on a unit per-bin basis and paid for at the Unit Price for "Interior Coating of Upper Portion - Each Bin." Said price 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.
- (b) Interior and exterior coatings associated with local plate repair as well as exterior coatings associated with exterior members shall be included in unit prices applicable to the associated items as specified in E13 and E14.

E16. CASH ALLOWANCE FOR REPAIRS

E16.1 Description

- (a) The Cash Allowance for Repairs is intended to be used for remedial repairs directed and authorized by the Contract Administrator under E13, E14 and E15.
- (b) The City reserves the right to delete any or all of the Cash Allowance from the contract if the Work intended to be covered by the Cash Allowance is not required, or if the Works intended are found to be more extensive than the provisional Cash Allowance.

E16.2 Method of Measurement and Basis of Payment

- (a) Cost of repairs shall be evaluated by the methods outlined in C7.4, and a Change Order prepared by the Contract Administrator. Cost of the Change Order will be paid on the Progress Estimate and deducted from the Cash Allowance. If the valuation of the authorized work exceeds the Value of the Cash Allowance, the Contract Value will be adjusted by the shortfall.