



THE CITY OF WINNIPEG

REQUEST FOR PROPOSAL

RFP NO. 85-2016

**REQUEST FOR PROPOSAL FOR PROFESSIONAL CONSULTING SERVICES FOR THE
PROVISION OF PRELIMINARY DESIGN SERVICES FOR THE TACHE BOOSTER PUMPING
STATION AND SURGE TOWER UPGRADES**

Proposals shall be submitted to:

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

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 REQUEST FOR PROPOSAL FOR PROFESSIONAL CONSULTING SERVICES FOR THE PROVISION OF PRELIMINARY DESIGN SERVICES FOR THE TACHE BOOSTER PUMPING STATION AND SURGE TOWER UPGRADES

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon. Winnipeg time, Friday April 1, 2016.

B2.2 Proposals 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 Project Manager 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 The Project Manager or an authorized representative will conduct a Site Investigation tour of the facility located at 866 Tache Avenue (at the south east corner of the intersection of Tache Avenue and Messenger Street) on:

(a) Wednesday March 16, 2016 at 10:00am;

B3.1.1 Proponents are requested to register for the Site Investigation by contacting the Project Manager identified in D2.

B3.1.2 Proponents registered for the site visit must provide the Contract Administrator identified in D2 with a Public Safety Verification search obtained not earlier than one (1) year prior to the Site Investigation

(a) The Public Safety Verification check may be obtained from BackCheck. Proponents will need to setup a BackCheck account prior to requesting individual background checks. This process should be done 72 hours prior to requesting the first check. The account can be setup using the following link.

<https://forms.sterlingbackcheck.com/partners/platform2-en.php?&partner=winnipegcity>

Note that the check will take up to 48 hours to complete. Refer to Part E – Security Clearance for further information.

(b) The results of the Public Safety Verification Check must be received by the City directly through BackCheck. Proponents must set up an account with BackCheck under their company name and grant BackCheck permission to share the results of the Public Safety Verification Check with the City of Winnipeg.

B3.2 Although attendance at the Site Investigations is not mandatory, the City strongly suggests that Proponents attend.

B3.3 The Proponent shall not be entitled to rely on any information or interpretation received at the Site Investigation unless that information or interpretation is the Proponent's direct observation, or is provided by the Project Manager in writing.

B3.4 Proponents are responsible to provide their own personal protective equipment for the Site Investigation. CSA approved safety footwear is required for all personnel attending the Site Investigation.

B3.5 Proponents will not be allowed to take pictures at the Site Investigation. The proponent may request pictures of specific areas from the Contract Administrator. The pictures will then be issued to all the Proponents registered for the Site Investigation.

- B3.6 Proponents are advised that site access is restricted and access to view the site can only be made under supervision of the City.
- B3.7 Proponents are advised that access to the interior of the surge tower will not be available during the Site Investigation due to operational constraints. Access to the interior of the east tunnel shaft will also be limited during the Site Investigation due to confined entry constraints.

B4. ENQUIRIES

- B4.1 All enquiries shall be directed to the Project Manager identified in D2.
- B4.2 If the Proponent finds errors, discrepancies or omissions in the Request for Proposal (RFP), or is unsure of the meaning or intent of any provision therein, the Proponent shall promptly notify the Project Manager of the error, discrepancy or omission at least five (5) Business Days prior to the Submission Deadline.
- B4.3 If the Proponent is unsure of the meaning or intent of any provision therein, the Proponent should request clarification as to the meaning or intent prior to the Submission Deadline.
- B4.4 Responses to enquiries which, in the sole judgment of the Project Manager, require a correction to or a clarification of the RFP will be provided by the Project Manager to all Proponents by issuing an addendum.
- B4.5 Responses to enquiries which, in the sole judgment of the Project Manager, do not require a correction to or a clarification of the RFP will be provided by the Project Manager only to the Proponent who made the enquiry.
- B4.6 All correspondence or contact by Proponents with the City in respect of this RFP must be directly and only with the City's Project Manager. Failure to restrict correspondence and contact to the Project Manager may result in the rejection of the Proponents Proposal Submission.
- B4.7 The Proponent shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Project Manager in writing.

B5. CONFIDENTIALITY

- B5.1 Information provided to a Proponent by the City or acquired by a Proponent 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 Project Manager. The use and disclosure of the confidential information shall not apply to information which:
- (a) was known to the Proponent before receipt hereof; or
 - (b) becomes publicly known other than through the Proponent; or
 - (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.
- B5.2 The Proponent shall not make any statement of fact or opinion regarding any aspect of the Request for Proposals to the media or any member of the public without the prior written authorization of the Project Manager.

B6. ADDENDA

- B6.1 The Project Manager may, at any time prior to the Submission Deadline, issue Addenda correcting errors, discrepancies or omissions in the Request for Proposal, or clarifying the meaning or intent of any provision therein.
- B6.2 The Project Manager 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/bidopp.asp>
- B6.2.2 The Proponent is responsible for ensuring that it 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 Proponent shall acknowledge receipt of each addendum in Paragraph 9 of Form A: Proposal. Failure to acknowledge receipt of an addendum may render a Proposal non-responsive.

B7. PROPOSAL SUBMISSION

- B7.1 The Proposal shall consist of the following components:
- (a) Form A: Proposal (Section A) in accordance with B8;
 - (b) Fees (Section B) in accordance with B9;
- B7.2 The Proposal should also consist of the following components:
- (a) Experience of Proponent and Subconsultants (Section C) in accordance with B10;
 - (b) Experience of Key Personnel Assigned to the Project (Section D), in accordance with B11;
 - (c) Project Understanding and Methodology (Section E) in accordance with B12; and
 - (d) Project Schedule (Section F) in accordance with B13.
- B7.3 Further to B7.1, all components of the Proposal shall be fully completed or provided in the order indicated, and submitted by the Proponent no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Proposal.
- B7.4 Further to B7.2, all components of the Proposal should be fully completed or provided in the order indicated, and submitted by the Proponent no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Proposal.
- B7.5 Proponents should submit one (1) unbound 8.5" x 11" original (marked "original") including drawings and six (6) copies (copies can be in any size format) for sections identified in B7.1 and B7.2.
- B7.6 Proposal format, including type of binding, number of pages, size of pages and, font, etc., will not be regulated, except that the Proposal should contain a table of contents, page numbering and should be in the Sections identified above. Proponents are encouraged to use their creativity to submit a Proposal which provides the requested information for evaluation and other information which illustrates the strength of their team.
- B7.7 Proponents are advised that inclusion of terms and conditions inconsistent with the Request for Proposal, will be evaluated in accordance with B21.1(a).
- B7.8 The Proposal shall be submitted enclosed and sealed in an envelope/package clearly marked with the RFP number and the Proponent's name and address.
- B7.9 Proposals submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B7.10 Proposals shall be submitted to:
- The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg MB R3B 1J1

B7.11 Any cost or expense incurred by the Proponent that is associated with the preparation of the Proposal shall be borne solely by the Proponent.

B8. PROPOSAL (SECTION A)

B8.1 The Proponent shall complete Form A: Proposal, making all required entries.

B8.2 Paragraph 2 of Form A: Proposal shall be completed in accordance with the following requirements:

- (a) if the Proponent is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
- (b) if the Proponent is a partnership, the full name of the partnership shall be inserted;
- (c) if the Proponent is a corporation, the full name of the corporation shall be inserted;
- (d) if the Proponent 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.

B8.2.1 If a Proposal is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.

B8.3 In Paragraph 3 of Form A: Proposal, the Proponent shall identify a contact person who is authorized to represent the Proponent for purposes of the Proposal.

B8.4 Paragraph 11 of Form A: Proposal shall be signed in accordance with the following requirements:

- (a) if the Proponent is a sole proprietor carrying on business in his/her own name, it shall be signed by the Proponent;
- (b) if the Proponent is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
- (c) if the Proponent is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;
- (d) if the Proponent is carrying on business under a name other than its 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: Proposal should be printed below such signatures.

B8.5 If a Proposal is submitted jointly by two or more persons, the word "Proponent" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Proponents in the Proposal and the Contract, when awarded, shall be both joint and several.

B9. FEES (SECTION B)

B9.1 The Proposal shall include a Fixed Fee for all disciplines and/or phases identified in D5 Scope of Services and as listed in Form B: Fees.

B9.2 In addition to the Form B: Fees, proposals shall also include detailed breakdown of the Fixed Fees according to the Scope of Services, refer to Appendix D for a sample. Details shall include as a minimum:

- (a) the work activities and deliverables of the proposed Services;
- (b) name and role of proposed individuals;
- (c) the respective number of hours per work activity per task per each proposed individual;
- (d) applicable hourly rates of proposed individuals; and
- (e) the associated disbursements.

- B9.3 Adjustments to Fees will only be considered based on increases to the Scope of Services.
- B9.3.1 The City will not consider an adjustment to the Fees based on changes in the Project budget or the Final Total Construction Cost.
- B9.4 Notwithstanding C1.1(b), Fees shall include costs for out of town travel, related meals and accommodations for the duration of the Project and shall not be considered an Allowable Disbursement.
- B9.5 The Fee Proposal shall also include an allowance for Allowable Disbursements as defined in C1.1(b), but shall exclude the costs of any materials testing, soils and hazardous materials investigation during construction.
- B9.6 Notwithstanding C10.1, Fees submitted shall not include the Goods and Services Tax (GST) or Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.
- B9.7 Payments to Non-Resident Consultants are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B10. EXPERIENCE OF PROPONENT AND SUBCONSULTANTS (SECTION C)

- B10.1 Proposals should include:
- (a) details demonstrating the history and experience of the Project Team in providing design services on up to three projects of similar complexity, scope and value.
- B10.2 For each project listed in B10.1(a), the Proponent should submit:
- (a) description of the project;
 - (b) role of the Proponent or Subconsultant;
 - (c) project's original contracted construction cost and final construction cost;
 - (d) design and construction schedule (anticipated Project schedule and actual project delivery schedule, showing design and construction separately);
 - (e) project owner; and
 - (f) reference information (two current names with telephone numbers per project).
- B10.2.1 Where applicable, information should be separated into Proponent and Subconsultant project listings.
- B10.3 The Proposal should include general firm profile information, including years in business, average volume of work, number of employees and other pertinent information for the Proponent and all Subconsultants.

B11. EXPERIENCE OF KEY PERSONNEL ASSIGNED TO THE PROJECT (SECTION D)

- B11.1 Describe your approach to overall team formation and coordination of team members.
- B11.1.1 Include an organizational chart for the Project.
- B11.2 Submit the experience and qualifications of the key personnel assigned to the Project for projects of similar complexity, scope and value.
- (a) include the principals-in-charge, the Proponents Representative, managers of the key disciplines, lead designers and any other personnel with over 5% of total project hours;
 - (b) include educational background and degrees, professional recognition, job title, years of experience in current position, years of experience in design and construction, and years of experience with existing employer; and
 - (c) identify roles of each of the key personnel in the Project in the organizational chart referred to in B11.1.1.

- B11.3 For each person identified, list at least two comparable projects in which they have played a primary role. If a project selected for a key person is included in B10, provide only the project name and the role of the key person. For other projects provide the following:
- (a) Description of project;
 - (b) Role of the person;
 - (c) Project Owner; and
 - (d) Reference information (two current names with telephone numbers per project).
- B11.4 The Proponent shall not substitute key personnel without the written permission from the Project Manager identified in D2.

B12. PROJECT UNDERSTANDING AND METHODOLOGY (SECTION E)

- B12.1 Describe your firm's project management approach and team organization during the performance of Services, so that the evaluation committee has a clear understanding of the methods the Proponent will use in the delivery of this Project. Methodology should be presented in accordance with the Scope of Services identified in D5.
- B12.2 Describe the collaborative process/method to be used by the Key Personnel of the team in the various phases of the Project.
- B12.3 Proposals should address:
- (a) the team's understanding of the broad functional and technical requirements;
 - (b) the team's understanding of the urban design issues;
 - (c) the proposed Project construction budget;
 - (d) the City's Project methodology with respect to the information provided within this RFP; and
 - (e) any other issue that conveys your team's understanding of the Project requirements.
- B12.4 For each person identified in B11.2, list the percent of time to be dedicated to the Project in accordance with the Scope of Services identified in D5.

B13. PROJECT SCHEDULE (SECTION F)

- B13.1 Proponents should present a carefully considered Critical Path Method schedule using Microsoft Project or similar project management software, complete with resource assignments (key designers), durations (weekly timescale) and milestone dates or events. The schedule should address each requirement of the Scope of Services.
- B13.2 The Proponent's schedule should include:
- (a) work breakdown structure;
 - (b) resource assignments (key designers);
 - (c) durations (weekly timescale);
 - (d) milestone dates or events;
 - (e) critical dates for review;
 - (f) anticipated approval processes by the City during the design phase of the Project
 - (i) A minimum of three (3) weeks should be allowed for completion of these processes;
 - (g) project meetings;
 - (h) submission of monthly progress reports; and
 - (i) submission dates for required deliverables.
- B13.3 The schedule shall be based on the critical dates listed in D11.

B14. DISCLOSURE

B14.1 Various Persons provided information or services with respect to this Work. In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.

B14.2 The Persons are:

- (a) SNC-Lavalin Group Inc
- (b) AECOM Canada Ltd. and
- (c) CH2M Hill Canada Ltd.

B15. QUALIFICATION

B15.1 The Proponent 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, or if the Proponent does not carry on business in Manitoba, in the jurisdiction where the Proponent does carry on business; and
- (b) be financially capable of carrying out the terms of the Contract;
- (c) have all the necessary experience, capital, organization, and equipment to perform the Services in strict accordance with the terms and provisions of the Contract;
- (d) have or establish and staff an office in Winnipeg for the duration of the Project.

B15.2 The Proponent and any proposed Subconsultant (for the portion of the Services 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>

B15.3 The Proponent and/or any proposed Subconsultant (for the portion of the Services proposed to be subcontracted to them) shall:

- (a) have successfully carried out services for the programming; design, management of construction and contract administration for architectural and/or engineering projects of similar complexity, scope and value; and to those required for this Project; and
- (b) be fully capable of performing the Services 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);
- (d) have the knowledge and resources to administer the requirements of The Workplace Safety and Health Act (Manitoba) during the construction works associated with this Contract; and
- (e) undertake to meet all licensing and regulatory requirements of the appropriate governing authorities and associations in the Province of Manitoba; and
- (f) upon request of the Project Manager the Security Clearances as identified in PART E - SECURITY CLEARANCES.

B15.4 The Proponent shall submit, within three (3) Business Days of a request by the Project Manager, further proof satisfactory to the Project Manager of the qualifications of the Proponent and of any proposed Subconsultant.

B15.5 The Proponent shall provide, on the request of the Project Manager, full access to any of the Proponent's equipment and facilities to confirm, to the Project Manager's satisfaction, that the Proponent's equipment and facilities are adequate to perform the Services.

B16. OPENING OF PROPOSALS AND RELEASE OF INFORMATION

B16.1 Proposals will not be opened publicly.

B16.2 After award of Contract, the names of the Proponents and the Contract amount of the successful Proponent 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/>.

B16.3 To the extent permitted, the City shall treat all Proposal Submissions as confidential. However, the Proponent is advised that any information contained in any Proposal 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.

B16.4 Following the award of Contract, a Proponent will be provided with information related to the evaluation of its submission upon written request to the Project Manager.

B17. IRREVOCABLE OFFER

B17.1 The Proposal(s) submitted by the Proponent shall be irrevocable for the time period specified in Paragraph 10 of Form A: Proposal.

B17.2 The acceptance by the City of any Proposal shall not release the Proposals of the other responsive Proponents and these Proponents shall be bound by their offers on such Services until a Contract for the Services has been duly executed as herein provided, but any offer shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 10 of Form A: Proposal.

B18. WITHDRAWAL OF OFFERS

B18.1 A Proponent may withdraw its Proposal without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

B18.1.1 The time and date of receipt of any notice withdrawing a Proposal shall be the time and date of receipt as determined by the Manager of Materials.

B18.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Proposal or the Proponent's authorized representatives named in Paragraph 11 of Form A: Proposal, and only such person, has authority to give notice of withdrawal.

B18.1.3 If a Proponent gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:

- (a) retain the Proposal until after the Submission Deadline has elapsed;
- (b) open the Proposal to identify the contact person named in Paragraph 3 of Form A: Proposal and the Proponent's authorized representatives named in Paragraph 11 of Form A: Proposal; and
- (c) if the notice has been given by any one of the persons specified in B18.1.3(b), declare the Proposal withdrawn.

B18.2 A Proponent who withdraws its Proposal after the Submission Deadline but before its offer has been released or has lapsed as provided for in B17.2 shall be liable for such damages as are imposed upon the Proponent 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.

B19. INTERVIEWS

B19.1 The Project Manager may, in his/her sole discretion, interview Proponents during the evaluation process.

B20. NEGOTIATIONS

B20.1 The City reserves the right to negotiate details of the Contract with any Proponent. Proponents are advised to present their best offer, not a starting point for negotiations in their Proposal Submission.

B20.2 The City may negotiate with the Proponents submitting, in the City's opinion, the most advantageous Proposals. The City may enter into negotiations with one or more Proponents without being obligated to offer the same opportunity to any other Proponents. Negotiations may be concurrent and will involve each Proponent individually. The City shall incur no liability to any Proponent as a result of such negotiations.

B20.3 If, in the course of negotiations pursuant to B20.2 or otherwise, the Proponent amends or modifies a Proposal after the Submission Deadline, the City may consider the amended Proposal as an alternative to the Proposal already submitted without releasing the Proponent from the Proposal as originally submitted.

B21. EVALUATION OF PROPOSALS

B21.1 Award of the Contract shall be based on the following evaluation criteria:

- (a) compliance by the Proponent with the requirements of the Request for Proposal or acceptable deviation therefrom: (pass/fail)
- (b) qualifications of the Proponent and the Subconsultants, if any, pursuant to B15: (pass/fail)
- (c) Fees; (Section B) 40%
- (d) Experience of Proponent and Subconsultants; (Section C) 8%
- (e) Experience of Key Personnel Assigned to the Project; (Section D) 25%
- (f) Project Understanding and Methodology (Section E) 25%
- (g) Project Schedule. (Section F) 2%

B21.2 Further to B21.1(a), the Award Authority may reject a Proposal as being non-responsive if the Proposal Submission is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Proposal, or waive technical requirements or minor informalities or irregularities if the interests of the City so require.

B21.3 Further to B21.1(b), the Award Authority shall reject any Proposal submitted by a Proponent who does not demonstrate, in its Proposal or in other information required to be submitted, that it is responsible and qualified.

B21.4 Further to B21.1(c), Fees will be evaluated based on Fees submitted in accordance with B9.

B21.5 Further to B21.1(d), Experience of Proponent and Subconsultants will be evaluated considering the information provided in response to B10, including but not limited to the following criteria:

- (a) ability of proponent to complete the job;
- (b) similarity of the Proponent's past projects to this project; and
- (c) success of the Proponent on past projects.

B21.5.1 Proposals that receive less than half the available evaluation points for Experience of Proponent and Subconsultants will be rejected in accordance with B21.3.

- B21.6 Further to B21.1(e), Experience of Key Personnel Assigned to the Project will be evaluated considering the experience and qualifications of the Key Personnel and Subconsultant personnel on Projects of comparable size and complexity, considering the information provided in response to B11 including but not limited to the following criteria:
- (a) appropriateness of related years of experience of the Key Personnel
 - (b) relevancy of experience of the Key Personnel; and
 - (c) appropriateness of approach to overall team formation and coordination of team members.
- B21.6.1 Proposals that receive less than half the available evaluation points for Experience of Key Personnel Assigned to the Project will be rejected in accordance with B21.3.
- B21.7 Further to B21.1(f), Project Understanding and Methodology will be evaluated considering the information provided in response to B12 including, but not limited to the following criteria:
- (a) appropriateness of the Project Management Approach;
 - (b) appropriateness of hours assigned to individual tasks per person;
 - (c) consistency and completeness of the Methodology;
 - (d) understanding of the Project, including its deliverables and its constraints;
 - (e) demonstration of insight beyond the information that was presented in this Request for Proposal.
- B21.7.1 Proposals that receive less than half the available evaluation points Project Understanding and Methodology will be rejected in accordance with B21.3.
- B21.8 Further to B21.1(g), Project Schedule will be evaluated considering the information provided in response to B13 including considering the Proponent's ability to comply with the requirements of the Project.
- (a) completeness and consistency of the project schedule; and
 - (b) appropriateness of the timelines provided.
- B21.9 Notwithstanding B21.1(d) to B21.1(g), where Proponents fail to provide a response to B7.2(a) to B7.2(d), the score of zero may be assigned to the incomplete part of the response.
- B21.10 Proposals will be evaluated considering the information in the Proposal Submission and any interviews held in accordance with B19.

B22. AWARD OF CONTRACT

- B22.1 The City will give notice of the award of the Contract, or will give notice that no award will be made.
- B22.2 The City will have no obligation to award a Contract to a Proponent, even though one or all of the Proponents are determined to be responsible and qualified, and the Proposals are determined to be responsive.
- B22.2.1 Without limiting the generality of B22.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Services;
 - (b) the prices are materially in excess of the prices received for similar services in the past;
 - (c) the prices are materially in excess of the City's cost to perform the Services, or a significant portion thereof, with its own forces;
 - (d) only one Proposal 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.

- B22.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Proponent submitting the most advantageous offer.
- B22.4 The City may, at its discretion, award the Contract in phases.
- B22.5 Notwithstanding Paragraph 6 of Form A: Proposal and C4, the City will issue a Letter of Intent to the successful Proponent in lieu of execution of a Contract.
- B22.5.1 The Contract documents as defined in C1.1(n)(ii) in their entirety shall be deemed to be incorporated in and to form a part of the Letter of Intent notwithstanding that they are not necessarily attached to or accompany said Letter of Intent.
- B22.6 The form of Contract with the City of Winnipeg will be based on the Contract as defined in C1.1(n).
- B22.7 Following the award of Contract, a Proponent will be provided with information related to the evaluation of its Proposal upon written request to the Project Manager.
- B22.8 If, after the award of Contract, the Project is cancelled, the City reserves the right to terminate the Contract. The Consultant will be paid for all Services rendered up to time of termination.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Consultant Services* (Revision 2010-10-01) are applicable to the Services of the Contract.
- C0.1.1 The *General Conditions for Consultant Services* 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 Request for Proposal to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Consultant Services*.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. PROJECT MANAGER

D2.1 The Project Manager is:

Heather Buhler, P. Eng.

Email: HBuhler@winnipeg.ca

Telephone No. 204 986-6425

Cellular No. 204 806-4919

D2.2 At the pre-commencement meeting, the Project Manager will identify additional personnel representing the Project Manager and their respective roles and responsibilities for the Services.

D2.3 Proposal Submissions must be submitted to the address in B7.10

D3. DEFINITIONS

D3.1 When used in this Request for Proposal:

- (a) "City" means City of Winnipeg
- (b) "TBPS" means Tache Booster Pumping Station.
- (c) "HVAC" means Heating, Ventilation and Air Conditioning.
- (d) "I/O" means Input / Output
- (e) "MCC" means Motor Control Centre.
- (f) "NBC" means National Building Code
- (g) "P&ID" means Process and Instrumentation Diagram.
- (h) "PLC" means Programmable Logic Controller.
- (i) "SCADA" means Supervisory Control and Data Acquisition.
- (j) "UPS" means Uninterruptable Power Supply
- (k) "WBS" means Work Breakdown Structure.
- (l) "The Department" means the "Water and Waste Department".

D4. BACKGROUND

D4.1 The Tache Booster Pumping Station (TBPS), located on the north-east corner of Tache Avenue and Messenger Street, was constructed in 1950. All water supplied by the Branch I Aqueduct enters a surge tower located south of the TBPS. The existing surge tower is original and was commissioned in 1919 as part of the original Shoal Lake Aqueduct works. From the surge tower, water flows by gravity either to the TBPS or directly to the McPhillips Pumping Station via a bypass line. The TBPS is used to boost the flow of water in the Branch I Aqueduct to the McPhillips Reservoir during periods of high customer water demand or during special operating conditions such as when the Branch II Aqueduct is out of service. Currently, the TBPS operates periodically; however, it is essential for a reliable means to refill the McPhillips Reservoir on a daily basis for unique or emergency operating conditions. Due to its age, many of the mechanical,

electrical and structural components no longer provide reliable service. Upgrading these components is required to allow the TBPS to provide dependable operational service.

- D4.2 Refer to Appendix "B" for a listing of relevant reference documents which are available electronically by request to the Project Manager.
- D4.3 Historical record drawings for the TBPS are provided for reference and summarized in Appendix "C" of this document. Historical record drawings are available electronically by request to the Project Manager.
- (a) The record drawings provided are for informational purposes only and the City makes no claim or liability to the accuracy of the information provided.

D5. SCOPE OF SERVICES

D5.1 General

- D5.1.1 These Terms of Reference are supplemental to the Standard Terms and Conditions of Consultant Services and the "Definition of Standard Consulting Engineering Services" required by the City of Winnipeg. The "Definition of Standard Consulting Engineering Services is available for reference in Appendix A.
- D5.1.2 The consulting services described herein are to be provided for the Water and Waste Department (the Department).
- D5.1.3 The Department will provide assistance towards the following services:
- (i) site access to the TBPS; and
 - (ii) provision of any available information on operational records (i.e. maintenance records).
- D5.1.4 Preliminary design services will involve reviewing the background information available, completing a condition assessment of the existing TBPS, surge tower and east tunnel shaft, and developing a preliminary design for the continued use, upgrade, and / or replacement of the following components:
- (a) pumps and underground station piping;
 - (b) a new dechlorination system for water discharged to the Red River;
 - (c) operational strategy for the TBPS;
 - (d) structural / Architectural upgrades;
 - (e) mechanical upgrades;
 - (f) electrical upgrades; and
 - (g) instrumentation and control upgrades.
- D5.1.5 Note that the issue of riverbank stability at the overflow drain and Aqueduct under drain to the Red River will not be included in the scope of this Project. This will be addressed through the Shoal Lake Aqueduct Preservation Project.

D5.2 Project Management

- D5.2.1 Plan, organize, secure and manage resources to bring about the successful completion of specific project goals and objectives.
- D5.2.2 Structure the Project into manageable sub-entities and prepare and submit a Work Breakdown Structure (WBS).
- D5.2.3 Develop and regularly maintain a Project schedule identifying Project activities, milestones, responsibilities, and time lines for each activity.
- D5.2.4 Establish a protocol for all communication issued throughout the Project including change of management.
- D5.2.5 Establish appropriate levels of review and approvals for all Project deliverables.

- D5.2.6 Throughout the preliminary design meet with City's Advisory Committee for the Project to discuss findings, obtain input from City personnel, and discuss the design. Meeting minutes are to be provided within one week of the meeting date. A minimum of three (3) formal meetings will be required:
- (a) project initiation meeting (Departments Office);
 - (b) project update meeting (Consultant Office); and
 - (c) presentation and review of the draft Preliminary Design Report (Consultant Office)
- D5.2.7 Submit monthly project status reports of a maximum two pages, including the following:
- (a) summary of work completed in the previous month;
 - (b) work anticipated for the following month;
 - (c) percentage completion of the overall project and of the tasks defined in the WBS;
 - (d) budget and actual cost for completed tasks and projected cost for planned tasks; and
 - (e) any project issues.
- D5.2.8 Provide adequate notice (at least three weeks) prior to any site visit or work / shutdown that will require assistance from City personnel.
- D5.3 Preliminary Design Services:
- D5.3.1 General
- (a) The preliminary design report will provide a guide for the detailed design stage of the Project which will be issued as another Request for Proposal at a later date as determined by the Department.
 - (b) All work is to be completed in accordance with the current versions of the following City of Winnipeg Standards. Copies are noted for reference in Appendix B.
 - (i) The City of Winnipeg Water & Waste Department Electrical Design Guide;
 - (ii) The City of Winnipeg Water & Waste Department Identification Standard; and
 - (iii) The City of Winnipeg Water & Waste Department Water and Wastewater Treatment Process – Drawing Standard.
- D5.3.2 Review of Background Information
- (a) Collect and review all available existing information about the sites including files, reports, drawings, and condition assessments. City to provide all available documentation.
- D5.3.3 Condition Assessment of TBPS, surge tower and East Tunnel shaft.
- (a) Conduct field investigations to verify existing conditions and to supplement available existing information;
 - (i) Confined space requirements for access into the east tunnel shaft as per Manitoba Workplace Safety and Health.
 - (b) Examine site constraints for the recommended upgrades considering:
 - (i) required shutdown of facilities and impact to operations;
 - (ii) site access;
 - (iii) lead times for delivery of new equipment; and
 - (iv) a high level construction work plan addressing site constraints
- D5.3.4 Operational Review
- (a) Complete a review of the operational strategy for the TBPS, including:
 - (i) range of Aqueduct flows and operating conditions (i.e. number of pumps) for when the TBPS is needed to be in operation.
 - (b) Provide a recommendation with regards to exercising frequency and required maintenance for the upgraded TBPS.

D5.3.5 Landscaping / Aesthetics

- (a) Consider the aesthetic and landscaping upgrades to the site and facilities to coincide and assimilate with the proposed residential redevelopment of the surrounding area.
- (b) Review the area redevelopment theme in terms of the TBPS and surge tower building aesthetics with the City's Area Planner.

D5.3.6 Structural / Architectural

- (a) Provide an overall visual structural review of the existing surge tower, TBPS and east tunnel shaft superstructure and substructure to determine condition and identify the scope of repair work required.
- (b) Determine if the existing TBPS building and foot print are sufficient in size and layout to adequately accommodate the proposed mechanical and electrical upgrades required, or if additional space will be needed.
- (c) Advise of any interior substructure surface repairs that are required to floors, walls and ceilings in the TBPS and surge tower.
- (d) Review and identify required repairs and / or modifications to the TBPS building envelope including:
 - (i) roof;
 - (ii) windows (seals and sills);
 - (iii) doors; and
 - (iv) brick work.
- (e) Review and identify required repairs or upgrades to the surge tower including:
 - (i) roof and overflow containment structure;
 - (ii) access ladder; and
 - (iii) access to the top and bottom of surge tower.
- (f) Verify spill elevation at the surge tower.
- (g) Identify the cause and remedial measures for water damage that has occurred to the existing equipment within the TBPS from roof leaks and water entering the substructure during periods of high river level.
- (h) Review and provide recommendations for repairs to existing cracks located on the concrete wall at the invert of the 1050 mm inlet pipe penetration in the TBPS basement.
- (i) Assess the adequacy, condition and certification requirements of the existing overhead crane within the TBPS.
- (j) Provide a recommendation for the removal and replacement of any cork insulation from the TBPS building.
- (k) Review deterioration of bricks and mortar of the existing chimney or options for its abandonment / demolition.
- (l) Ensure that all building upgrades are in compliance with the National Building Code of Canada and amendments by the Manitoba Building Code (NBC).

D5.3.7 Underground Works

- (a) Review the addition, removal, replacement and / or reconfiguration of valving and piping between the TBPS and the surge tower, including:
 - (i) evaluate the need for an increase in size of the 400 mm interconnection between the 900 mm overflow pipe and the 1200 mm pipe leading to the east shaft from the surge tower, to shorten the dewatering time of the Branch I Aqueduct.
Note that the valves within the TBPS on the suction and discharge side of the pumps were replaced in 2001.
 - (ii) Assess the operational functionality of all the valves and recommend the optimum configuration to provide the City with the maximum operational flexibility.

- (b) Review condition of the piping and valves in the East Tunnel Shaft. Provide recommendations for any addition, removal or replacement required.
- (c) Note that the issue of riverbank stability at the overflow drain and Aqueduct under drain to the Red River will not be included in the scope of this Project. This is being addressed through the Shoal Lake Aqueduct Preservation Project.
- (d) Provide a preliminary site plan detailing all underground pipe modifications.

D5.3.8 Process Pumping and Piping

- (a) Assess through inspection the need for any pump refurbishment (seals, impellers etc.) to achieve design capacity and provide reliable service. Verify pump operation in accordance with the pump curve and design parameters, temperature, alignment, cavitation, and vibration.
- (b) Review the existing instrument air systems for possible upgrading, in particular for the spill valve system for the surge tower level.
- (c) Provide a preliminary design for a new dechlorination system for water discharged to the Red River from the Branch I Aqueduct.
- (d) Review sump pump level switch / measurement.
 - (i) note that flood sensors are being installed at the TBPS under a separate reliability upgrade project.
- (e) Review the effects of high water levels on the Red River with water backup in the basement of the TBPS.
- (f) Provide layout drawings of pumping and piping modifications and of the proposed dechlorination system.

D5.3.9 Mechanical – Plumbing System

- (a) Review existing plumbing system and make recommendations for new or upgraded system. Ensure all systems meet current applicable codes and standards.
- (b) Provide layout drawings of the proposed plumbing system modifications

D5.3.10 Mechanical – HVAC System

- (a) Review existing HVAC and make recommendations for new or upgraded system to manage air distribution, in particular to eliminate heat build-up in the summer months.
- (b) Provide layout drawings of the proposed mechanical system modifications
- (c) Provide a P&ID diagram of the proposed ventilation system and associated controls for the existing building. Airflow requirements for each room in the TBPS are to be included.

D5.3.11 Electrical

- (a) Assess condition of existing ungrounded 600 VAC delta service connection and recommend required upgrades or replacement to meet Arc Flash requirements, in accordance with CSA Z462.
- (b) Review adequacy of existing electrical supply cables from Manitoba Hydro and provide a recommendation for replacement if required.
- (c) Evaluate electrical load and equipment requirements.
- (d) Assess the following items within the TBPS, which may be original and past service life, for replacement or upgrading as deemed to be required:
 - (i) station transformer,
 - (ii) motors,
 - (iii) motor starters,
 - (iv) lighting,
 - (v) circuit breakers,
 - (vi) 600V distribution,

- (vii) panelboards,
 - (viii) receptacles,
 - (ix) Motor Control Centre (MCC),
 - (x) Cables and wiring.
- (e) Include provision for a standby generator connection to the TBPS with consideration of noise to neighbouring residences.
- (i) Provide a cost comparison and recommendations on the advantages of a permanent versus a portable standby generator.
 - (ii) Consider a portable unit that could be used in alternative locations within the City of Winnipeg distribution system.
- (f) Review the need for room modifications and electrical equipment relocation.
- (i) TBPS is required to remain in operation during the installation of new electrical equipment.
- (g) Identify Arc Flash safety requirements for all existing and new equipment.
- (h) Provide a design basis for the following, as required:
- (i) general and environmental requirements;
 - (ii) Power Factor Correction;
 - (iii) grounding;
 - (iv) Uninterruptible Power Supplies (UPS); and
 - (v) identification of specific implementation requirements.
- (i) All electrical code requirements are to be satisfied.
- (j) In addition to the preliminary design report, the deliverables will include:
- (i) single line diagram with preliminary arc flash values; and
 - (ii) plan layout drawings of electrical distribution within the existing building. Include major automation control panels and ensure that HVAC equipment interfaces are accommodated.

D5.3.12 Instrumentation and Control

- (a) Evaluate Instrumentation and Control requirements for new or upgraded systems.
- (i) include recommendations for newer pump vibration analysis technology to upgrade the existing Bently Nevada vibration monitoring system.
- (b) Identify I/O requirements for new or upgraded systems.
- (c) Provide P&ID drawings for new or upgraded systems.
- (i) note that P&ID drawings for the TBPS were completed in 2012 as part of a preliminary design for PLC upgrades to the regional water supply system. Detailed design for the PLC upgrades is ongoing in 2016. Replacement of three (3) existing PLC units at the TBPS is planned for 2017.
- (d) Note that the Department is currently beginning a major upgrade to the existing Regional SCADA system under separate budget. Alteration to the instrumentation and controls are to be coordinated with the SCADA upgrades.
- (e) Investigate and test the operation of the existing orifice plate for accurately measuring flow.
- (f) Investigate and test the operation of the differential pressure measurement to accurately measure the full range of water depth in the Surge Tower.

D5.3.13 Safety and Security

- (a) Review the need for, and scope of, any required upgrades to fire protection equipment. Include all upgrades and modifications to the fire protection equipment in the preliminary design.

- (b) Note that the addition of security fencing for the facility will not be included within the scope of this project.

D5.3.14 Operation and Maintenance

- (a) Identify maintenance requirements and estimated operating costs for upgraded systems and new equipment.

D5.3.15 Cost Estimate

- (a) Provide an AACE Class 4 cost estimate for the proposed work; and
- (b) Provide a breakdown of the fees for the work identified in this section.

D5.3.16 Draft Preliminary Design Report and Drawings

- (a) The preliminary design report must summarize the background information, condition assessments performed, present all relevant design criteria and provide recommendations on the upgrade requirements for the TBPS, surge tower and east tunnel shaft, including:
 - (i) rehabilitation requirements to obtain another 50 years of operational life;
 - (ii) construction methodologies for recommended upgrades;
 - (iii) proposed construction schedule, including anticipated time and duration of all required shutdowns;
 - (iv) cost estimates for recommended upgrades;
 - (v) operational considerations; and
 - (vi) an economic analysis, including life cycle costing, of all options presented.
- (b) Preliminary design drawings for the TBPS, surge tower, and east tunnel shaft shall include at minimum:
 - (i) site plan including access and utility requirements;
 - (ii) preliminary elevation drawings;
 - (iii) preliminary layouts of TBPS, surge tower and east tunnel shaft including the location of all pumps and process equipment, dechlorination system, ventilation systems, electrical equipment, instrumentation and controls;
 - (iv) preliminary P&ID diagrams; and
 - (v) Single Line Diagram with preliminary arc flash values.
- (c) Include all considerations that led to the recommendations in the preliminary design report;
- (d) Identify all permits necessary for construction;
- (e) Submit four (4) hard copies and one (1) electronic PDF copy of the "Draft Preliminary Design Report";
- (f) Submit four (4) 11x17 hard copies and one (1) electronic PDF copy of the draft Preliminary drawings; and
- (g) Allow a minimum three (3) weeks for City review of the Draft Preliminary Design Report.

D5.3.17 Final Preliminary Design Report

- (a) Upon receipt of City review comments on the draft report, prepare a final report to present the results of the preliminary design;
- (b) Include the following as appendices to the report:
 - (i) All data collected during the project;
 - (ii) Procedures used to collect the data;
 - (iii) Condition assessment reports;
- (c) Submit six (6) hard copies and two (2) electronic PDF copy of the 'Final Preliminary Design Report'.

- (d) Submit six (6) 11x17 hard copies and one (1) electronic PDF copies of the final drawings. In addition, submit an AutoCAD file for each drawing, formatted as per the City's standards.

D5.4 The following shall apply to the Services:

- (a) City of Winnipeg Green Building Policy: New City-Owned Buildings and Major Additions
<http://clkapps.winnipeg.ca/DMIS/DocExt/ViewDoc.asp?DocumentTypeld=2&DocId=5989>
- (b) Universal Design Policy
<http://clkapps.winnipeg.ca/DMIS/DocExt/ViewDoc.asp?DocumentTypeld=2&DocId=3604>

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 Consultant are the property of the City and shall not be appropriated for the Consultants own use, or for the use of any third party.
- D6.2 The Consultant shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Project Manager.
- D6.3 The following shall be confidential and shall not be disclosed by the Consultant to the media or any member of the public without the prior written authorization of the Project Manager;
 - (a) information provided to the Consultant by the City or acquired by the Consultant 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 Consultant who violates any provision of D6 may be determined to be in breach of Contract.

D7. PHOTOGRAPHS

- D7.1 All photos submitted to the City as part of the Project shall include captions with the following information:
 - (a) date photo was taken;
 - (b) location photo was taken; and
 - (c) a brief description of what is depicted by the photo.
- D7.2 Pursuant to D6, all photographs taken as part of the Project are the property of the City and shall not be appropriated for the Consultants own use.

SUBMISSIONS PRIOR TO START OF SERVICES

D8. AUTHORITY TO CARRY ON BUSINESS

- D8.1 The Consultant 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 Consultant does not carry on business in Manitoba, in the jurisdiction where the Consultant does carry on business, throughout the term of the Contract, and shall provide the Project Manager with evidence thereof upon request.

D9. INSURANCE

- D9.1 The Consultant shall procure and maintain, at its own expense and cost, insurance policies with limits no less than those shown below.

- D9.2 As a minimum, the Consultant shall, without limiting its obligations or liabilities under any other contract with the City, procure and maintain, at its own expense and cost, the following insurance policies:
- (a) Comprehensive or Commercial General Liability Insurance including:
 - (i) an inclusive limit of not less than \$2,000,000 for each occurrence or accident with a minimum \$2,000,000 Products and Completed Operations aggregate and \$5,000,000 general aggregate;
 - (ii) all sums which the Consultant shall become legally obligated to pay for damages because of bodily injury (including death at any time resulting therefrom) sustained by any person or persons or because of damage to or destruction of property caused by an occurrence or accident arising out of or related to the Services or any operations carried on in connection with this Contract;
 - (iii) coverage for Products/Completed Operations, Blanket Contractual, Consultant's Protective, Personal Injury, Contingent Employer's Liability, Broad Form Property Damage, Employees as Additional Insureds, and Non-Owned Automobile Liability;
 - (iv) a Cross Liability clause and/or Severability of Interest Clause providing that the inclusion of more than one Insured shall not in any way affect the rights of any other Insured hereunder in respect to any claim, demand, suit or judgment made against any other Insured;
 - (b) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Consultant directly or indirectly in the performance of the Service. 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) Professional Errors and Omissions Liability Insurance including:
 - (i) an amount not less than \$2,000,000 per claim and \$2,000,000 in the aggregate.
- D9.2.1 The Consultant's Professional Errors and Omissions Liability Insurance shall remain in force for the duration of the Project and for twelve (12) months after total performance.
- D9.3 The policies required in D9.2(a) shall provide that the City is named as an Additional Insured thereunder and that said policies are primary without any right of contribution from any insurance otherwise maintained by the City.
- D9.4 The Consultant shall require each of its Subconsultants to provide comparable insurance to that set forth under D9.2(a) and D9.2(c).
- D9.5 The Consultant shall provide the Project Manager with a certificate(s) of insurance for itself and for all of its Subconsultants, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Services, but in no event later than the date specified in C4.1 for the return of the executed Contract. Such Certificates shall state the exact description of the Services and provide for written notice in accordance with D9.8.
- D9.6 The Consultant may take out such additional insurance as it may consider necessary and desirable. All such additional insurance shall be at no expense to the City.
- D9.7 All insurance, which the Consultant is required to obtain with respect to this Contract, shall be with insurance companies registered in and licensed to underwrite such insurance in the Province of Manitoba.
- D9.8 The Consultant shall not cancel, materially alter, or cause any policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the City.

SCHEDULE OF SERVICES

D10. COMMENCEMENT

- D10.1 The Consultant shall not commence any Services until it is in receipt of a notice of award from the City authorizing the commencement of the Services.
- D10.2 The Consultant shall not commence any Services until:
- (a) the Project Manager has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D8;
 - (ii) evidence of the insurance specified in D9;
 - (b) the Consultant has attended a meeting with the Project Manager, or the Project Manager has waived the requirement for a meeting.
- D10.3 The City intends to award this Contract by June 6, 2016.

D11. CRITICAL STAGES

- D11.1 The Consultant shall achieve critical stages of the Services for this Contract in accordance with the following requirements:
- (a) submission of the draft preliminary design report as described in D5.3.16 shall be no later than February 1, 2017 respectively
 - (b) submission of the final preliminary design report as described in D5.3.17 shall be no later than April 1, 2017 respectively

D12. FUTURE WORK

- D12.1 It is anticipated that this preliminary design project will lead to a future detailed design and construction project at the Tache Booster Pumping Station, surge tower and east tunnel shaft.
- D12.2 Any future engineering work resulting from recommendations made as part of this project will be posted as a separate request for proposal for engineering services.
- D12.3 The future engineering work will not be posted until the Final Preliminary Design Report is completed and accepted by the Department.

PART E - SECURITY CLEARANCE

E1. SECURITY CLEARANCE

- E1.1 Each individual proposed to perform Work under the Contract shall be required to obtain a Criminal Record Search Certificate from the police service having jurisdiction at his place of residence and Public Safety Verification Checks.
- (a) Any cost or expense incurred by the Proponent that is associated with obtaining the required security clearances shall be borne solely by the Proponent.
- E1.2 A Criminal Record Search Certificate can be obtained from one of the following;
- (a) a police service having jurisdiction at his/her place of residence.
- (i) the original Criminal Record Search Certificate (Form P-253) will be provided by the Winnipeg Police Service to the individual applicant. The original has a validation sticker from the Winnipeg Police Service in the top right hand corner.
- (ii) The applicant shall provide the original Criminal Record Search Certificate (Form P-253) to the Project Manager, or
- (b) using BackCheck, proponents will need to setup a BackCheck account prior to requesting individual background checks. This process should be done 72 hours prior to requesting the first check. The account can be setup using the following link. <https://forms.sterlingbackcheck.com/partners/platform2-en.php?&partner=winnipegcity>. The Criminal Record Search Certificate must be received by the City directly through BackCheck;
- (i) proponents must set up an account with BackCheck under their company name and grant BackCheck permission to share the Criminal Record Search Certificate with the City of Winnipeg;
- (ii) proponents will then be contacted by BackCheck with instructions on how to complete the Criminal Record Search Certificate; and
- (iii) if additional assistance is required to obtain the Criminal Record Search Certificate, the Bidder may contact the following BackCheck representative:
- Linda Ferens;
email: linda.ferens@sterlingbackcheck.ca
phone: (204) 999-0912; or
- (c) filling out the Core of Commissionaires (Manitoba Division) form which can be obtained by visiting: <https://www.commissionaires.ca/en/manitoba/home> .
- E1.3 Public Safety Verification Checks may be obtained from BackCheck as follows:
- (a) the Public Safety Verification Checks can be obtained from BackCheck, proponents will need to setup a BackCheck account prior to requesting individual background checks. This process should be done 72hrs prior to requesting the first check. The account can be setup using the following link. <https://forms.sterlingbackcheck.com/partners/platform2-en.php?&partner=winnipegcity>. The results of the Public Safety Verification Check must be received by the City directly through BackCheck.
- (i) proponents must set up an account with BackCheck under their company name and grant BackCheck permission to share the Criminal Record Search Certificate with the City of Winnipeg;
- (ii) proponents will then be contacted by BackCheck with instructions on how to complete the Public Safety Verification Check; and
- (iii) if additional assistance is required to obtain the Public Safety Verification Check, the Bidder may contact the following BackCheck representative:
- Linda Ferens;
email: linda.ferens@sterlingbackcheck.ca;
phone: (204) 999-0912

- E1.4 Prior to the award of Contract, and during the term of the Contract if additional or replacement individuals are proposed to perform Work, the Consultant shall supply the Project Manager with a Criminal Record Search Certificate and a Public Safety Verification Check obtained not earlier than one (1) year prior to the Submission Deadline, or a certified true copy thereof, for each individual proposed to perform the Work.
- E1.5 Any individual for whom a Criminal Record Search Certificate is not provided, or for whom a Criminal Record Search Certificate or a Public Safety Verification Check indicates any convictions or pending charges related to property offences or crimes against another person will not be permitted to perform any Work.
- E1.6 Any Criminal Record Search Certificate and Public Safety Verification Check obtained thereby will be deemed valid for the duration of the Contract subject to a repeated records search as hereinafter specified.
- E1.7 Notwithstanding the foregoing, at any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require an updated Criminal Records Search Certificate or Public Safety Verification Check. Any individual who fails to provide a satisfactory Criminal Record Search Certificate or Public Safety Verification Check as a result of a repeated criminal records search will not be permitted to continue to perform any Work.

APPENDIX A – DEFINITION OF PROFESSIONAL CONSULTANT SERVICES

DEFINITION OF PROFESSIONAL CONSULTANT SERVICES (CONSULTING ENGINEERING SERVICES)

1 INTRODUCTION

- 1.1 It is the intent of the City of Winnipeg, in defining Professional Consultant Services (Consulting Engineering Services), to clarify the role required of consulting Engineers; to more fully identify the services to be rendered by consulting Engineers to the City and to other parties on behalf of the City; and to provide a more clearly determined basis of obligation in respect thereof by consulting Engineers to the City and to third parties in the provision of such services.
- 1.2 The services shall be performed in the City of Winnipeg, unless otherwise authorized by the City, under direct supervision of a professional Engineer. All drawings, reports, recommendations and other documents, originating therefrom involving the practice of professional engineering, shall bear the stamp or seal and signature of a qualified Engineer as required by the Engineering and Geoscientific Professions Act of the Province of Manitoba and By-laws of the Association of Professional Engineers and Geoscientists of the Province of Manitoba. Other reports and documents not involving the "practice of professional engineering", such as letters of information, minutes of meetings, construction progress reports, may be originated and signed by other responsible personnel engaged by the consulting Engineer and accepted by the City. Progress estimates, completion certificates and other reports related to the technical aspects of a project, must be endorsed by the Engineer in a manner acceptable to the City.

2 ADVISORY SERVICES

- 2.1 Advisory services are normally not associated with or followed by preliminary design and/or design services, and include, but are not limited to:
- (a) Expert Testimony;
 - (b) Appraisals;
 - (c) Valuations;
 - (d) Rate structure and tariff studies;
 - (e) Management services other than construction management;
 - (f) Feasibility studies;
 - (g) Planning studies;
 - (h) Surveying and mapping;
 - (i) Soil mechanics and foundation engineering;
 - (j) Inspection, testing, research, studies, or reports concerning the collection, analysis, evaluation; and
 - (k) Interpretation of data and information leading to conclusions and recommendations based upon specialized engineering experience and knowledge.

3 PRELIMINARY DESIGN

- 3.1 Preliminary design services are normally a prelude to the detailed design of a project and include, but are not limited to:
- (a) Preliminary engineering studies;
 - (b) Engineering investigation;
 - (c) Surface and subsurface site explorations, measurements, investigations, and surveys;
 - (d) Operations studies including drainage studies, traffic studies, etc.;
 - (e) Functional planning;
 - (f) Physical, economical (capital and operating) and environmental studies including evaluation, comparison, and recommendation regarding alternative preliminary designs;

- (g) Preparation and submission of a report and appropriate drawings to the City, fully documenting data gathered, explaining adequately the assessment made, stating with clarity the resulting conclusions, and containing all recommendations which are relevant to this stage of project implementation;
- (h) Special applications to public agencies for necessary authorizations, preparation and submission of reports and drawings thereto and appearance before same in support of the application.

4 DETAILED DESIGN

4.1 Detailed design services normally involve preparation of detailed designs, tender specifications and drawings, and analysis of bids and recommendations for contract award, and include, but are not limited to:

- (a) Addressing alternative methods of accommodating; relocating; avoiding, and/or avoiding injury to Utilities and railways; proposing alternative methods of solution, reviewing same with the appropriate Regulatory approval agencies and stakeholders;
- (b) Application to public agencies for necessary authorizations, preparation and submission of reports and drawings thereto, and appearance before same in support of the application;
- (c) Preparation and submission of detailed engineering calculations, drawings, and criteria employed in the design(s), securing review of and an acceptance by the City;
- (d) Preparation of detailed engineering drawings, specifications and tender documents consistent with the standards and guidelines of the City, securing review of acceptance by the City;
- (e) Preparation and provision to the City in written form, a fully detailed formal construction contract estimate;
- (f) Provision of appropriate response to bidders and advice to the City during the bid period and, subject to acceptance by the City, issuing addenda to the tender documents;
- (g) Submission of a review, analysis, comparison, tabulation, calculation, and evaluation of the bids received, to the City;
- (h) Preparation of a report including revised contract estimate, identifying and explaining variations from the earlier formal estimate, and containing recommendation regarding contract award identifying the reasons therefore.

5 CONTRACT ADMINISTRATION SERVICES

5.1 Contract administration services are associated with the construction of a project and include the office and field services required to ensure the conduct of the project in accordance with the intent of the City and in conformance with the particulars of the drawings and specifications; and include but are not limited to:

NON-RESIDENT SERVICES

- (a) Consultation with and advice to the City during the course of construction;
- (b) Review and acceptance of shop drawings supplied by the contractor or supplier to ensure that the drawings are in conformance with the drawings and specifications, without relieving the contractor of his contractual and other legal obligations in respect thereof;
- (c) Review and report to the City upon laboratory, shop and other tests conducted upon materials and/or equipment placed or installed by the contractor to ensure to the City conformance with the drawings and specifications, without relieving the contractor of his contractual and other legal obligations in respect thereof;
- (d) Acceptance of alternate materials and methods, subject to prior acceptance by the City, without relieving the contractor of his contractual and other legal obligations in respect thereof;
- (e) Provision to the City of a complete current report on the project status on a monthly basis;
- (f) Provision to the City a current update of revised contract-end cost estimate on a monthly basis, or more frequently if found necessary, with explanation and justification of any significant variation from the preceding contract-end cost estimate;

- (g) Definition and justification of and estimate of cost for additions to or deletions from the contract for authorization by the City;
- (h) Furnishing the City with a copy of all significant correspondence relating directly or indirectly to the project, originating from or distributed to, parties external to the consulting Engineer, immediately following receipt or dispatch of same by the consulting Engineer;
- (i) Provision of adequate and timely direction of field personnel by senior officers of the Consultant;
- (j) Establishment prior to construction and submission to the City of written and photographic records of, and assessment of the physical condition of adjacent buildings, facilities, and structures sufficient to equip the consulting Engineer to provide valid evidence and relevant testimony in settlement of any claim involving the City by any court of law, or by any other party for damages thereto arising from the project;
- (k) Arranging and attending pre-construction meetings and on-site or off-site review meetings, which meetings shall include representatives of the contractor and the City;
- (l) The preparation and submission of:
 - i. a detailed design notes package including items such as structural geotechnical, hydraulic and heating, air-conditioning and ventilation design calculations; mechanical and electrical design calculations related to process equipment and building services; process design calculations; and instrumentation and process control design calculations;
 - ii. approved related shop drawings and equipment process manuals all within one (1) month of completion of each separate installation contract required to complete the Works.

RESIDENT SERVICES

- (a) Provision of qualified resident personnel acceptable to the City present at the project site to carry out the services as specified immediately below, without relieving the contractor of his contractual and other legal obligations in respect thereof:
 - i. inspection of all pipe prior to installation;
 - ii. inspection and acceptance of excavation for, and full time inspection at the time of bedding placement, pipe laying and backfilling in respect of installation of watermains, land drainage sewers, and wastewater sewers;
 - iii. inspection of installation of all connections to watermains, sewers, manholes, valves, hydrants or house services, and excavation and/or exposing of all underground services, structures, or facilities;
 - iv. "full time inspection" and/or testing of watermains and sewers;
 - v. inspection of all excavations to determine soil adequacy prior to installation of base and subbase courses for sidewalks, public back lanes, and street pavements. It is to be understood that "full time inspection" will require assignment of a qualified person to each specific location when the referenced work is being undertaken by the contractor.
- (b) Without relieving the contractor of his contractual and other legal obligations in respect thereof, conduct detailed inspection of construction sufficient to ensure that the construction carried out by the contractor is in conformance with the drawings and specifications;
- (c) Co-ordination and staging of all other works on the project site including traffic signal installations, hydro, telephone, and gas utility work, railway work forces and City or developer work;
- (d) In conjunction with the City, provision of notice to adjacent residents and businesses of those stages of construction of the project that will interrupt public services or access thereto, sufficiently in advance of same to permit preparation therefore;
- (e) Enforcement of contractor conformance with the City of Winnipeg Manual of Temporary Traffic Control in Work Areas on City Streets and with reasonable standards of safety for motorists and pedestrians, without relieving the contractor of his contractual and other legal obligations in respect thereof;

- (f) Provision of reference line and elevation to the contractor and checking upon the contractor's adherence thereto, without relieving the contractor of his contractual and other legal obligations in respect thereof;
- (g) Responsible, sensitive, and prompt reaction to the reasonable requests and complaints of citizens regarding the conduct of the project, acting in the interest of the City;
- (h) Arranging for and carrying out of testing of materials utilized by the contractor to ensure conformance with the drawings and specifications, without relieving the contractor of his contractual and other legal obligations in respect thereof;
- (i) Preparation, certification, and prompt submission of progress estimates to the City for payment to the contractor for construction performed in accordance with the drawings and specifications;
- (j) Arrange, attend and prepare and distribute records of and minutes for, regularly held on-site or offsite project review meetings including representatives of the contractor and the City;
- (k) Promptly reporting to the City upon any significant and unusual circumstances;
- (l) Promptly arranging for and taking part in a detailed final inspection of the project with the contractor and the City prior to commencement of the period of contractor maintenance guarantee specified in the contract for the project and providing to the City in written form an appropriate recommendation of acceptance of the constructed or partially constructed project;
- (m) Act as Payment Certifier and administer all contracts as required under the Builder's Liens Act of Manitoba;
- (n) Prepare a Certificate of Substantial Performance;
- (o) Preparation and submission to the City of "as-constructed" drawings for the project within 1 month of project completion;
- (p) Prepare a Certificate of Total Performance;
- (q) Provision of inspection services during the maintenance guarantee period of the contract;
- (r) Undertake a detailed inspection of the project with the contractor and the City prior to the end of the period of contractor maintenance guarantee specified in the contract for the project;
- (s) Keep a continuous record of working days and days lost due to inclement weather during the course of contract works;
- (t) Prepare a Certificate of Acceptance.

6 ADDITIONAL SERVICES

6.1 Additional services are in addition to those specified in other Types of Services and may or may not be associated with a construction project, but are not in place of or in substitution for those services elsewhere specified in the Definition of Standard Consulting Engineering Services in respect of other Types or Categories of Services.

- (a) Revision of completed, or substantially completed, drawings and/or specifications that were in conformance with the original intent of the City or had been accepted by the City;
- (b) Preparation of operating manuals and/or training of operating personnel;
- (c) Startup and/or operation of operating plants;
- (d) Procurement of materials and equipment for the City;
- (e) Preparation for and appearance in litigation on behalf of the City;
- (f) Preparation of environmental studies and reports and presentation thereof in public hearings.

APPENDIX B – RELEVANT DOCUMENTS

The following documents are available electronically by request to the Project Manager:

1	Assessment and Rehabilitation of the Shoal Lake Aqueduct – Branch 1 Capacity Upgrading Study – Tache Booster Station – Working Paper	
	Author: CH2M HILL, UMA	This report contains a collection of flow test data, description of conditions, and recommendations for process, ventilation, and structural improvements. This work was never completed. Significant changes since the assessment report include pumped flow in the Branch I Aqueduct from the Deacon Booster Pumping Station, as well as a decrease in per capita water demand such that an increase in pumping capacity at the TBPS is no longer required.
	Published: 2002	
Library Call Number: TD 398 .C372 NO.3		
2	Water Main Criticality Study Technical Memorandum 2.3 – Treatment of Chloraminated Overflow to the Red River – Tache Surge Tower	
	Author: AECOM	Note that the Department is no longer pursuing the use of chloramine for disinfection in the water supply system.
	Published: 2003	
Library Call Number: TD 491 .A336 2011 V.2.3		
3	Shoal Lake Aqueduct Assessment and Rehabilitation Work Area 3.3 – Pressure Pipe Repairs – Tache Surge Tower Roof Repairs	
	Author: CH2M HILL	Record of recommendations and summary specifications for repair work to primarily the roof slab and adjacent appurtenances of the Tache surge tower structure. Note that this work was never completed.
	Published: 2003	
Library Call Number: n / a		
4	Tache Surge Tower Visual Examination (Memorandum)	
	Author: CH2M HILL	Record with photos of 1998 site visit to carry our visual examination of the roof slab and exterior masonry wythe of the Tache surge tower structure.
	Published: 1998	
Library Call Number: n / a		
5	Regional Water Supply PLC Replacement & Power Reliability Upgrades Preliminary Design Report	
	Author: SNC Lavalin	Preliminary Design to upgrade control systems at the pumping stations and at the SLA Intake.
	Published: 2013	
Library Call Number: n / a		
6	City of Winnipeg Regional Water Supply Conceptual Planning Study Update	
	Author: AECOM	Evaluation of water consumption and future demand, capacity assessment and evaluation of water quality issues.
	Published: 2011	
Library Call Number: REPO TD 227 .W5 A336 2011		

7	Asbestos Building Materials Survey of City of Winnipeg, Water and Waste Department, Tache Booster Pumping Station	
	Author: Pinchin Environmental	Results of an asbestos-containing building material survey of the Tache Booster Pumping Station.
	Published: 2007	
	Library Call Number: TD 888 .A8 P563 2007-11	
8	2015 Asbestos Survey Update – Tache Booster Pumping Station	
	Author: Pinchin Environmental	Letter updating the original 2007 survey report.
	Published: November 2, 2015	
	Library Call Number: n/a	
9	City of Winnipeg Tache Pumping Station Arc Flash Study	
	Author: SNC Lavalin	Identify and quantify potential arc flash hazards associated with electrical distribution equipment, and establish safe working guidelines for personnel. Phase 1 recommendations have been implemented.
	Published: July, 2011	
	Library Call Number: MRDF TK 152.A7 2011-02A	
10	City of Winnipeg Water and Waste Department – Uninterruptible Power Supply Upgrades	
	Author: SNC Lavalin	Specification and drawings for the installation of uninterruptible power supply units.
	Published: 2008	
	Library Call Number: SPEC TA 180.S658 2008	
11	Operation and Maintenance Manuals For Butterfly Valves at Tache Booster Pumping Station and Wilkes Reservoir	
	Author: Mueller Canada	
	Published: 2001	
	Library Call Number: REPO TD 395.M85	
12	Product Service Report Valmet Automation – City of Winnipeg Tache Booster Pumping Station	
	Author: Bently Nevada	Field data, installation and calibration of the Bently Nevada 3300 series monitoring system.
	Published: 1995	
	Library Call Number: REPO TD481.SCADA	
13	City of Winnipeg Regional Water Supply SCADA System – Tache Booster Station PLC Manual	
	Author: Kenonic Controls	SCADA Manual for the Tache Booster Pumping Station
	Published: 1995	
	Library Call Number: REPO TD481.SCADA	
14	Tache Pumping Station Electrical Maintenance Manual- SCADA System	
	Author: McCaine Electric	SCADA Manual for the Tache Booster Pumping Station
	Published: 1994	
	Library Call Number: REPO TD481.SCADA	

15	Greater Winnipeg Water District – Specifications for Pumping Units and Switching Equipment	
	Author:	Specifications for Pumping Units and Switching Equipment for pumping station on surge tank grounds, St Boniface, MB.
	Published:1948	
	Library Call Number:	
SPEC TA 180.S658		
16	Surge, Surge Tank and Water Hammer Tache Booster Station	
	Author:	
	Published:1958	
	Library Call Number:	
REPO TD 491.S876		
17	Greater Winnipeg Water District – Construction of Tunnel, Shafts and Well and the Red River Crossing	
	Author:	Specifications for the construction of Tunnel, Shafts and Well and the Red River Crossing
	Published:1917	
	Library Call Number:	
SPEC TA 180.S658		
18	Specifications of General Contract for a Booster Pumping Station – Corner Tache Avenue and Messenger St. St Boniface, MB for Greater Winnipeg Water District	
	Author:	Specifications for Tache Booster Pumping Station.
	Published:1949	
	Library Call Number:	
SPEC TA 180.S658		
19	Greater Winnipeg Water District – Specifications for the Supply of Flow Meter & Appurtenances	
	Author:	Specifications for the supply of a flow meter to the Tache Booster Pumping Station.
	Published:1949	
	Library Call Number:	
SPEC TA 180.S658		
20	Greater Winnipeg Water District – Specifications for the Supply of Valves	
	Author:	Specifications for the supply of valves to the Tache Booster Pumping Station.
	Published:1949	
	Library Call Number:	
SPEC TA 180.S658		
21	Greater Winnipeg Water District – Specifications for the Supply & Installation of Steel & cast Iron Pipe	
	Author:	Specifications for the supply and installation of steel and cast iron pipe to the Tache Booster Pumping Station.
	Published:1949	
	Library Call Number:	
SPEC TA 180.S658		
22	Greater Winnipeg Water District – Specifications for the Supply & Installation of Switchboard, Control and Motor Starting Equipment	
	Author:	Specifications for the supply and installation of Switchboard, Control and Motor Starting Equipment to the Tache Booster Pumping Station.
	Published:1949	
	Library Call Number:	
SPEC TA 180.S658		

23	Greater Winnipeg Water District – Specifications for the Supply & Installation of Pumping Units and the supply, delivery and installation of Switchboard, Control and Motor Starting Equipment	
	Author:	Specifications for the supply and installation of pumping units to the Tache Booster Pumping Station.
	Published: 1949	
	Library Call Number: SPEC TA 180.S658	
24	The City of Winnipeg Water & Waste Department Electrical Design Guide	
25	The City of Winnipeg Water & Waste Department Identification Standard	
26	The City of Winnipeg Water & Waste Department Water and Wastewater Treatment Process – Drawing Standard	
27	The City of Winnipeg Water & Waste Department Corporate Numbering Standard – Drawing Number System	

APPENDIX C – TACHE BOOSTER PUMPING STATION AND SURGE TOWER HISTORICAL RECORD DRAWINGS

The following drawings are included for reference:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
A-481	GWWD Floor and Manhole Frame and Cover
B-357	GWWD Steel Ladder for Pump Well
B-622	Tache Booster Pumping Station
C-245	GWWD Red River Tunnel – Details of Floor Slabs for Pump Well
C-285	GWWD Red River Tunnel – Electric Test Station – East & West Shafts
C-295	GWWD – Detail of 60” Cast Iron Elbow as Supplied to Thos Kelly & Sons for Red River Tunnel
C-333	GWWD – Section of Soil Material Pacific Av. Shaft Red River Tunnel also Record of Core Drill Copied from Drawing D-446
C-518	Tache Booster Pumping Station Plot Plan
C-519	Tache Booster Pumping Station Ground Floor Plan
C-543	Schematic of Tache Booster Pumping Station
D-366	GWWD Plan and Section Red River Crossing 40’1” Tache Ave and Pacific St
D-434	GWWD – Red River Crossing – Tunnel Details
D-435	GWWD Red River Tunnel East Shaft
D-437	GWWD Red River Tunnel General Details of Pump Well
D-438	GWWD Red River Tunnel Pump Well Overflow Discharge
D-439	GWWD Red River Tunnel General Layout Piping & Well at East Shaft
D-444	GWWD Red River Tunnel Outside Masonry Shell for Pump Well
D-462	GWWD Red River Tunnel Roof Plan for Pump Well
D-456	GWWD – Red River Tunnel East Shaft
D-458	GWWD – Red River Tunnel – Details of Piers & Foundation Ring for Pump Well
D-459	GWWD Red River Tunnel – Foundation Ring for Pump Well
D-460	GWWD – Shell Details for Pump Well
D-461	GWWD Red River Tunnel – Details of Floor – Pump Well
D-462	GWWD Red River Tunnel – Roof Plan for Pump Well

D-464	GWWD Red River Tunnel Pump Well Overflow Discharge
D-466	GWWD Red River Tunnel General Details of Pump Well
D-467	GWWD Red River Tunnel – Iron & Steel Details for East & West Shafts & Pump Well
D-610	Tache Booster Pumping Station General Piping Layout
D-627	GWWD – Overflow Piping at Booster Pumping Station – St. Boniface
D-1908	Tache Booster Pumping Station Instrumentation Location Layout and Electrical Power Layout
D-1952	GWWD – East Shaft
D-1953	GWWD – West Shaft
D-1954	GWWD – East & West Shaft
D-6302	Plan and Profile of Branch 1 Aqueduct From Joint J108-009 to Joint J110-006 from Mile 3.34 to Mile 3.55
D-6303	Plan Profile of Branch 1 Aquaduct
1-0660A-P0001-001	Tache Booster Pumping Station Process & Instrumentation Diagram Legend and Details Sheet 1 of 3
1-0660A-P0001-002	Tache Booster Pumping Station Process & Instrumentation Diagram Legend and Details Sheet 2 of 3
1-0660A-P0001-003	Tache Booster Pumping Station Process & Instrumentation Diagram Legend and Details Sheet 3 of 3
1-0660M-P0001	Tache Booster Pumping Station Process & Instrumentation Diagram Pump P-M041
1-0660M-P0002	Tache Booster Pumping Station Process & Instrumentation Diagram Pump P-M042
1-0660M-P0003	Tache Booster Pumping Station Process & Instrumentation Diagram Pump P-M043
1-0660M-P0004	Tache Booster Pumping Station Process & Instrumentation Diagram Miscellaneous
1-0660M-P0005	Tache Booster Pumping Station Process & Instrumentation Diagram HVAC
1-0660Y-P0001	Tache Booster Pumping Station Process & Instrumentation Diagram Surge Tank & Yard Piping

APPENDIX D – SAMPLE PERSON-HOURS & ENGINEER FEES TABLE