

TERMS OF REFERENCE

to provide

PROFESSIONAL PROJECT MANAGEMENT SERVICES

for the

DESIGN AND CONSTRUCTION

of the

WATER TREATMENT AND SUPPLY SYSTEM

on behalf of the

CURVE LAKE FIRST NATION

FIRST NATION:	Curve Lake First Nation
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1.0 Introduction

1.1 General

This Project Management Terms of Reference (TOR) defines the scope of services that the Professional Project Manager (PPM, Project Manager, or PM) shall perform for the Curve Lake First Nation. These services will be carried out during the design, tendering, construction, commissioning, and warranty periods of the water treatment and distribution system project within Curve Lake First Nation.

Curve Lake, along with Indigenous Services Canada (ISC), have accepted the findings from First Nation Engineering Services Limited's (FNESL's) 2020 Curve Lake First Nation Water Treatment System Feasibility Study. The work for this TOR will be to retain a Project Manager for the design and construction of a new water treatment facility and distribution system for the community of Curve Lake First Nation.

Selection of the PM will be by a competitive Request for Proposal (RFP) process in response to this Terms of Reference. Proposals are requested at this time, followed by the selection and award of the contract.

The "Client" or "Owner" refers to Curve Lake First Nation Chief and Council.

The "Project Team" herein refers to the parties as identified under **Section 4.0 – Project Team** of this Terms of Reference.

1.2 Objectives

A PPM is defined as a professional individual or firm contracted by the Client to manage the development and implementation of a project on their behalf, in accordance with this Terms of Reference. Project Managers must be licensed professional engineers and be experienced in the practice of engineering in Ontario. Project Managers must also maintain professional liability insurance (also known as errors and omissions insurance) and have experience in the practice of project management. Project management accreditation is an asset.

The objective of the Professional Project Management assignment is to successfully develop and implement this project as per the approved scope, schedule, and cost parameters as well as to provide the Client with the appropriate cost control and fiscal accountability. The Project Manager must be insured and shall be engaged to implement the project for the Client while complying with Indigenous Services Canada (ISC)'s, as well as any other applicable funding agencies, policies and requirements in the Curve Lake First Nation community.

It is understood that the PM will act in the capacity of independent Project Manager for the duration of the project. The Design Consultant and the General Contractor will prepare the monthly progress payment reports that the Project Manager will incorporate into his/her monthly reports. The Project Manager will need to provide financial reporting that can be consolidated with the Client's audit.

The Project Manager must:

1. Become completely familiar with the scope and funding requirements of the First Nation and the respective funding agencies (ISC).
2. Define and confirm criteria in the areas of scheduling, budgeting, cost control, and quality control.
3. Keep the Project Team, and others as appropriate, informed of the project status through the implementation of a program of monthly physical/financial reporting.
4. Oversee all phases and aspects of the project and ensure strict conformity to the objectives of the project to meet Curve Lake First Nation requirements under direction of the Project Team.
5. Prepare the Terms of Reference to retain a Design Consultant for the design, tendering, contract administration, and site inspection services and procure the Design Consultant.
6. Overall management and implementation of the project as per the approved funding documents (ISC's Project Approval Request (PAR)).
7. Develop Terms of Reference to select of Value Engineering (VE) consultant as noted in section 3.2.4
8. Develop Terms of Reference to secure a Professional Quantity Surveyor (PQS) as noted in section 3.2.5

2.0 Community Background

Curve Lake First Nation is located in the heart of the Trent Severn River waterway on the peninsula between Buckhorn Lake and Upper Chemong Lake, approximately 25 km northeast of Peterborough, Ontario. Figure 1 within *Appendix 1* illustrates the community location within the province of Ontario.

Curve Lake is a Mississauga Ojibway First Nation, consisting of a mainland peninsula and a large island (Fox Island) between Buckhorn Lake and Upper Chemong Lake. Curve Lake First Nation also co-owns various smaller islands located throughout the Trent Severn waterway system. The Curve Lake First Nation occupies three reserves: Curve Lake First Nation 35, Curve Lake 35A, and Islands in the Trent Waters Indian Reserve 36A. Reserve 36A is shared with Hiawatha First Nation as well as Mississauga's of Scugog Island First Nation. The First Nation is classified as a Geographic Zone 1, meaning that it is located less than 50 km away from the nearest service center with year-round access. The total land base of Curve Lake First Nation is approximately 900 hectares (2,224 acres).

Some of the main existing infrastructure within Curve Lake First Nation include: administrative buildings, community buildings, a small business center, rental properties (the leased cottages), a church, a cemetery, a cenotaph, Pow Wow grounds, baseball diamonds, parks, beaches, roads, water systems, and wastewater systems.

The Water Treatment System Report, May 2020, a Feasibility Study completed by First Nations Engineering Service Ltd (FNESL), determined the total on-reserve population of Curve Lake First Nation is currently about 1,057 persons. There are 372 band member owned homes and 208 leased cottages within this First Nation. Using only the band-owned homes, the housing density can be calculated as 2.84 people per home. The feasibility study used an average annual growth rate (AAGR) of 1.9% to calculate the projected 20-year on-reserve population of approximately 1,540 persons. Based on a desired housing density of about 2.5 people per home, an additional 244 residential housing units will be required by the year 2040 in order to accommodate the future on-reserve population projections.

The issue of water quality and quantity have been longstanding issue for Curve Lake. Historically, most residential and non-residential buildings have relied on groundwater wells as their raw water supply. Through the course of investigation of options to address water supply and quality concerns, continued reliance on groundwater proved problematic. The limestone nature of underlying bedrock combined with infiltration from surface water over time has generated sub-surface karst formations. It took a few studies and several years to determine this as a major contributor to Curve Lake's water quality and water supply issues. With the groundwater eliminated as a reliable raw water source, attention focused on surface water as Curve Lake's raw water source.

The Water Treatment System Report represents a methodical study of all available options for Curve Lake to secure a stable and cost-effective water source.

2.1 Existing Water System Conditions

The existing raw water supply for Curve Lake First Nation comes from groundwater wells. These wells supply water to the lower peninsula area of the community for all residential, commercial, institutional, and industrial buildings. The total number of wells throughout the First Nation is unknown; however, only one of the wells within the area has been identified as a groundwater under the direct influence of surface water (GUDI) well.

The current water source cannot meet for the community's water demands, and the water produced has tested for a number of water quality exceedances. Many previous studies were undertaken that identified groundwater as the source for the community's raw water supply. Unfortunately, the karst-based aquifers cannot supply water to meet the current or future water demands of the Curve Lake First Nation. The groundwater well water samples have also demonstrated high levels of turbidity, iron, nitrate, and sodium. In addition to this, cross contamination from surrounding septic systems has been detected within a number of groundwater wells.

FNESL's feasibility study determined that the current (2018) total average day water demand is about 4.55 L/s (393,120 L/day) while the maximum day water demand is approximately 10.46 L/s (903,744 L/day).

2.2 Previous Studies

Previous background information related to the Curve Lake First Nation water treatment and supply system and other relevant studies are available upon request and include the following:

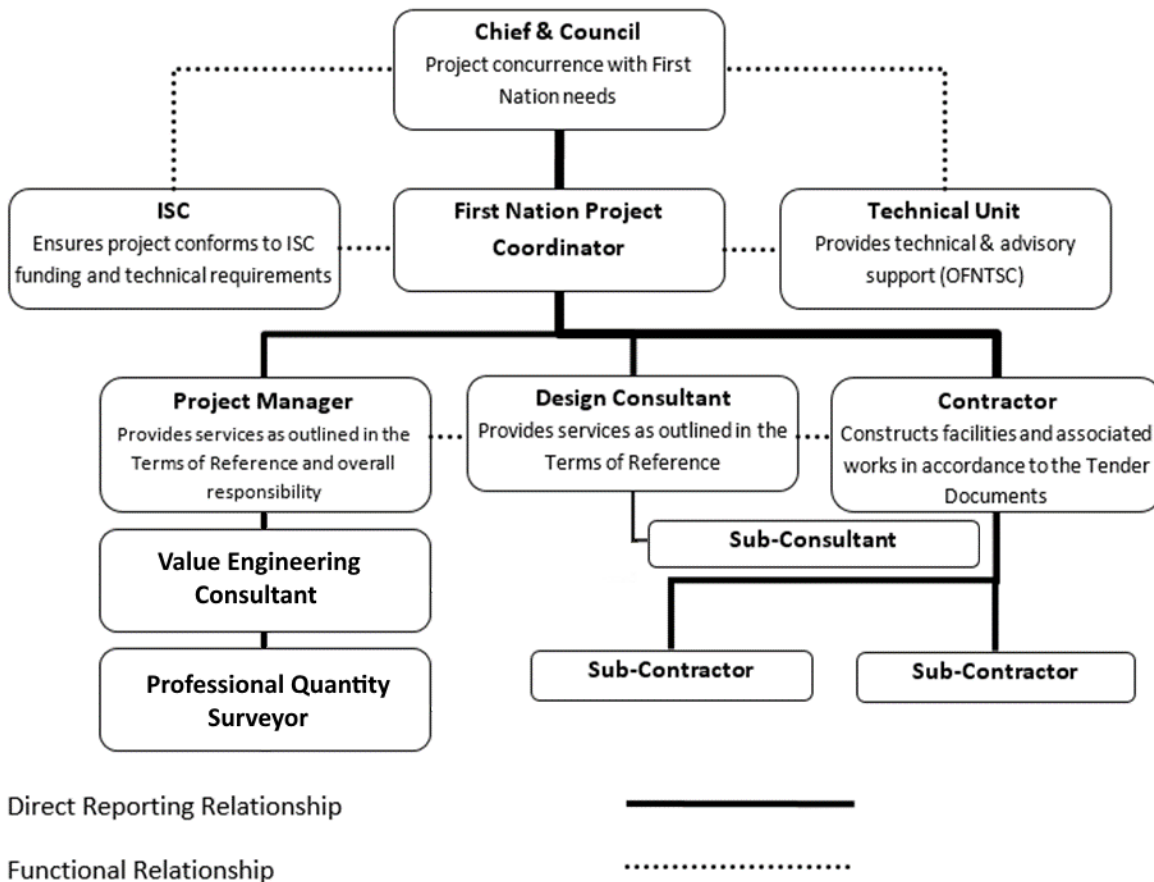
- Curve Lake First Nation Capital Planning Study (Neegan Burnside Engineering & Environmental Ltd., 2009)
- Engineering Assessment – Curve Lake Nishnawbeke Subdivision Water System (Henderson Paddon & Associates Ltd., April 2004)
- Aquifer Evaluation Report – Potential Communal Water Supply Well #'s 1 to 10 – Curve Lake First Nation (Henderson Paddon & Associates Ltd., August 2006)
- Assessment of Water from Near Shore (Buckhorn Lake) Wells at McIlmoy Point, Curve Lake First Nation (GENIVAR Consultants LP, December 2009)
- Curve Lake Comprehensive Community Plan (Crane Aboriginal Management Services, 2009)
- Private Well Survey, Two New Monitoring Wells, and Additional Hydrogeological Assessment of Well Field, Curve Lake First Nation Communal Water System (GENIVAR Consultants LP, October 2010)
- Pilot Testing of Water Treatment Systems for Slow Sand Filtration and Macrolite Pressure Filtration, Well #10 (GENIVAR Consultants LP, October 2010)
- Final Water Feasibility Study (GENIVAR Consultants LP, December 2010)
- National Assessment of First Nation Water and Wastewater Systems – Curve Lake First Nation (Neegan Burnside Ltd., December 2012)
- Curve Lake First Nation New Water Treatment Plant and Water Supply Project Value Engineering Report (Faithful + Gould, January 2017)

- Hydrogeological Investigation: Proposed Communal Well System – Well Performance Testing and Water Quality Analysis (Oakridge Environmental Ltd., January 2018)
- Curve Lake First Nation Water Treatment System Feasibility Study Final Report (First Nations Engineering Services Ltd., May 2020)

2.3 Project Approval Request (PAR)

The Project Approval Request (PAR) has been submitted and approved by Indigenous Services Canada (ISC) for the design portion of this project. Further funding approvals will be required before this project begins construction.

2.4 Project Stakeholders Relationship Chart



3.0 Scope of Work

The scope of work for this project is to provide Professional Project Management services for the design, tendering, construction, commissioning, and warranty phases of the Curve Lake First Nation water treatment and supply system project as identified below.

3.1 Recommended Water System Project for Curve Lake

This section is intended to be a general overview of the anticipated scope of work. The scope of work may be adjusted during the detailed design stage based on input from the Design Consultant and approval from the funding agency (ISC) as well as the Project Team, where applicable.

The Design Engineer will review all background information, identify the need for any further testing, coordinate and complete such work, provide a clear design solution in the preliminary design submission, and complete the detailed design for the water treatment and supply system. It is anticipated that the proposed solution for the Curve Lake First Nation will include, but not be limited to, the following:

- Construction of an access road into the new water treatment facilities from Mississauga Road
- Construction of a raw water surface intake from Buckhorn Lake, located off McIlmoy Point
- Construction of a low lift station
- Construction of a communal water treatment plant facility on the Dashwood property near McIlmoy Point. This water treatment plant is expected to include:
 - A packaged membrane filtration system
 - Dissolved air floatation (DAF) pre-treatment
 - Granular activated carbon (GAC) filtration
 - Ultraviolet (UV) radiation for primary disinfection
 - Chlorination for secondary disinfection throughout the distribution system
- Construction of an above-grade fused glass-lined steel tank reservoir
- Construction of a high lift station
- Installation of a water distribution system
- Installation of a fire distribution system, including an electric fire pump and fire hydrants
- A backup diesel electrification system (i.e. generator)
- Decommissioning the existing individual groundwater wells

The proposed water system from FNESL's feasibility study can be seen in *Appendix 1 – Figure 2*.

3.2 General Responsibilities

The PM will be involved in all phases of the project as outlined below.

1. Design Consultant Request for Proposals (RFP): The Terms of Reference shall be developed by the Project Manager with the assistance of the Project Team. The PM shall administer the call for

proposals, participate in the evaluation process, and arrange and attend an evaluation meeting (to be held in Curve Lake First Nation, pending on the current COVID-19 global pandemic).

2. Pre-Design: The PPM will ensure that the Design Consultant completes a design brief in their 33% design that confirms the appropriate parameters in accordance with ISC protocols and guidelines, industry best practices, and provincial and federal regulations, standards, and guidelines – as they may become applicable to the water treatment facilities during the design/service life.
3. Detailed Design: The PPM will oversee the design phase of the project as detailed in **Section 3.5 – Management of Consultants & Section 3.12 – Management of Design**.
4. As a condition of funding; the PPM will develop and issue TOR to hire Value Engineering review to be completed by a third-party consultant for the 33% and 66% design stages. The PPM shall participate in both Value Engineering workshop sessions and a total of six days shall be spent in the Value Engineering workshop sessions. An allowance for the cost of the Value Engineering third-party is included in the Cost of Services form; this allowance is for the third-party cost of the Value Engineering coordinator and third-parties to review and attend the workshops and shall not include any fees or mark-up from the PPM.
5. The PPM to develop TOR for a Professional Quantity Surveyor (PQS) to provide a Class A, pre-tender cost estimate based on the 99% detailed design tender documents. An allowance for the cost of the PQS is included in the Cost of Services form; this allowance is for the third-party cost of the PQS and shall not include any fees or mark-up from the PPM.
6. The PPM to develop a TOR and retain a third-party to complete an Operational Functionality Review at the 66% Design stage. An allowance for the cost of the third-party is included in the Cost of Services form; this allowance is for the third-party costs and shall not include any fees or mark-up from the PPM.
7. Tender (Provisional): The PPM will provide oversight throughout the construction tender process, which will be administered by the Design Engineer. The PM shall participate in the evaluation process for the construction tender and award the contract to the successful bidder.
8. Construction, Commissioning, and Warranty (Provisional): The Project Manager will oversee all components during construction, commissioning, and warranty phases as outlined in **Sections 3.13 – Management of Construction & 3.14 – Management During Commissioning**.
9. Operator Training Plan (Provisional): The PPM will ensure the Engineer includes sufficient operator training, such that the operators can confidently operate and maintain the newly built water treatment and supply facilities. The PPM will develop an Operator Training Action Plan (OTAP) to ensure that Curve Lake First Nation will have operators trained and confident in operating the new water system.
10. Business Case (Provisional): The PPM will develop a business case for the First Nation on what the operation and maintenance (O&M) costs are expected to be, and what the operation requirements are, for the new water treatment facilities once they are commissioned.

3.3 Policies and Procedures

The PPM shall establish and confirm clearly defined and properly documented policies and procedures. This shall include, but is not limited to, the following:

1. Meet with officials from the First Nation, ISC, Technical Advisors, as well as the Design Engineer and General Contractor to develop a financial plan that correlates with the design and construction phases.
2. Ensure that the First Nation sets up a separate account for the project funds. Develop an accounting control system whereby only authorized and approved expenditures related to the design and construction phases are disbursed from the account.
3. Review, verify, and recommend change orders and claims for extras for approval. The PPM must obtain approval for each change order from the First Nation Project Coordinator and allow ISC to review each change order prior to directing the Consultant to perform the work.
4. Documentation standards and record keeping.
5. Define professional liability and stamping of drawings. This includes the implications of Curve Lake First Nation and/or Project Manager overriding the advice of Consultants, or Curve Lake First Nation overriding advice of the Project Manager.
6. Ensure that all applicable land laws, land codes, building codes, standards, regulations, by-laws, approval processes, permits, zoning, easements, statutory requirements, and applicable construction lien legislation are identified.
7. Develop and submit to the Client for approval (within one month of the assignment award) a policy and procedures manual.

3.4 Scheduling

The PPM shall:

1. Plan: establish and confirm the logical sequence of activities including restraints and interfaces.
2. Schedule: add resources and durations (if appropriate) to activities and adjust the timing for optimum results.
3. Monitor: regularly evaluate progress against the approved schedule, for which a draft schedule has been identified in **Section 3.16 – Project Schedule** for reference.
4. Control: take positive action to correct schedule variances in order to achieve schedule objectives.

3.5 Management of Consultants

The Professional Project Manager, under the Project Team's direction, will be responsible for the management of the Consultant for design and construction and shall monitor their work to ensure the project is being executed within the project's scope, schedule and budget, as well as initiate any corrective actions required.

The Professional Project Manager's responsibilities include, but are not limited to, the following:

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1. Familiarize themselves with all available background information to ensure that the data collected and the recommendations made are valid and accurate.
2. The Project Manager shall acknowledge in writing and agree to be bound by the terms and conditions of the Project Approval Request (PAR) and be responsible to the First Nation to meet the terms and conditions of the funding agreement. The PAR is the formal document that describes the scope of work, cash flow, design requirements, construction procedures, and methods of implementation, and it delegates responsibility to the various agencies and departments who are members of the Project Team. The funding arrangement is the formal document which describes the responsibilities of the Minister and the Recipients.
3. The Project Manager shall represent the Client on overall management of the project. This is a key role, whereby both the interests of the First Nation and the funding agency (ISC) are equally protected.
4. Under the oversight of the Curve Lake First Nation, the PM will prepare a Consultant Terms of Reference for the design, tendering, construction administration, site inspection and warranty phases of this project. This is to be in line with the First Nation and funding/regulatory agency requirements. The Project Manager will be responsible for developing the Terms of Reference to conduct an open publically advertised proposal call for an Engineering Consultant. The PM shall obtain written approval of the Terms of Reference from the Curve Lake First Nation and any other applicable parties prior to advertising. The PM shall respond to questions during the Request for Proposal (RFP) stage. The Project Manger shall issue the RFP, administer the evaluation processes, and arrange and attend the evaluation meeting. The PPM shall assist with the evaluation of the Consultant's proposals to ensure conformance to the Terms of Reference prior to recommending the First Nation's acceptance of the proposal and signing of the contracts.
5. Develop and clarify the project organizational structure and methods of the Design Engineer's operation.
6. Manage the design to ensure that time, cost, and quality objectives are met in accordance with the approved funding arrangement (the PAR).
7. The PPM shall also ensure that the 33% design phase includes the preparation of a design brief as per the minimum essential project information requirements set forth in *Appendix 2* of these Terms of Reference. The final design shall not commence until this conceptual design brief is approved by the Project Team.
8. Implement a system of quality assurance to ensure that the Design Engineer is performing in accordance with good engineering practice and project requirements.
9. Ensure that the project conforms to the latest version of ISC's Project Implementation Procedures Manual (PIPM) and conforms to all acts, codes, standards, and regulations for water and wastewater projects, as outlined in the Protocol for ISC-Funded Infrastructure (latest revision) as found in *Appendix 2*.
10. Ensure that all required reviews are carried out by the relevant government agencies. Ensure that all requirements of reviewing agencies (i.e. approvals, permits, etc.) are incorporated into the contract documents.

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11. Oversee the Design Consultant's production of the design brief (at the 33% design stage), 33% design, 66% design, 99% design, and the tender package. The tender call shall not be initiated until the tender package is reviewed and approved by all relevant parties of the Project Team.
12. Complete the Terms of Reference and coordinate a third-party company to complete Value Engineering of the water treatment facilities, the treatment process, water supply options, and costs at the 33% and 66% design stages of the project, and participate in both Value Engineering sessions.
13. Retain a Professional Quantity Surveyor (PQS) to review the final construction cost estimate at the 99% design stage and provide a pre-tender project Class A estimate.
14. Review, in detail, the tender documents prior to tendering and advise the Design Engineer of any required changes with the understanding that ISC must approve of any change.
15. Ensure that commissioning instructions are incorporated into the tender documents.
16. Ensure that the Environment Project Description (EPD) and mitigation plan, if required, is included by the Consultant as part of their concept design brief. Ensure that it is updated by the Design Engineer as part of the Project Approval Request (PAR) funding submission for construction phase approval. Ensure that the Impact Assessment Act (IAA) requirements are met.
17. In the event that a cost overrun is required, and amendment to the maximum approved budget of the Project Approval Request (PAR) or applicable funding agreement is made, the PM will ensure that the funding submission is prepared by the Design Engineer with input from the Project Team and the cost overrun request is complete and accurate in its contents and is submitted in a timely manner.
18. Confirm that the First Nation has opened project account(s) as prescribed in **Section 3.7 – Cost Control**.
19. Ensure that an Environmental Assessment is prepared for the project and that it is approved by all regulating authorities, including ISC, and that the Impact Assessment Act (IAA) requirements are met.
20. Participate in the construction tender evaluation process and ensure that the Design Engineer completes a proper evaluation of all tenders received.
21. Ensure that the proposal received from the Design Engineer includes separate pricing for design, tendering, contract administration, site inspection and warranty period services. The PM shall negotiate a contract with the Design Engineer for these construction services. Review the contract and make recommendations to the Client for signing.
22. Develop an Operator Training Action Plan (OTAP) and implementation thereof during design and construction phases (see *Appendix 3*). Take other steps to maximize economic benefits from the project (i.e. purchase of goods or services within the First Nation and maximize use of the local labour force). The OTAP is to be developed with input from the Client as well as the Project Team. The Client shall identify potential operations staff. The PM will then meet with the staff identified and develop the OTAP. The OTAP will include courses required to have the operator(s) become licenced (including service providers and costs) and include a schedule for the operator(s) to become fully trained. The PM will communicate with the identified operators throughout the project to follow up on whether the OTAP is being followed, and the PM will continue to update the OTAP throughout the project. The PM will continue this work throughout the commissioning and warranty phases of the project. The PM will touch base with the operators a minimum of every two weeks for the first two months after commissioning, and then monthly throughout the warranty

phase of the project in order to ensure that the operators are supported and confident in operating the water treatment facilities.

23. Develop a business case on operation and maintenance (O&M) costs. The PPM will develop a detailed business case on what the forecasted O&M annual costs will be. This business case will include operator salaries, hydro, heating, chemicals, and routine scheduled maintenance of all equipment for both the water treatment plant as well as the distribution system. The business case will be approved by the Project Team.
24. Identify opportunities for employment of the First Nation members and utilization of First Nation resources during the construction phase of this project. Tender documents will contain clauses instructing bidders as to the availability of local resources complete with unit rates; however, no minimum quantities shall be specified. The PM will be responsible for ensuring that First Nations resources and labour costs are discussed as early as possible in the project. Experience has shown that leaving this item to just before the tendering phase results in delays, which can jeopardize the award of contract. The PM will ensure that the First Nation Project Coordinator is advised and is in concurrence prior to any site visits, fieldwork, or construction activities.
25. It is anticipated that the Contractor will be pre-qualified, to be confirmed with the Project Team. Ensure that the Design Consultant administers all works in the tender call to pre-qualified Contractors, including printing and distribution of documents, replying or arranging for reply to all queries, and arranging a site visit by interested bidders, if deemed necessary. Provide a complete set of full size construction drawings, a set of half size construction drawings, and one copy of the specifications for each set of drawings to the First Nation, ISC, and Technical Advisors. Additionally, all Project Team members will be provided with an electronic version of all tender documents issued, including all issued addenda.
26. Witness the opening of tenders, evaluate the proposals, and recommend for award to the most qualified bidder. Administer and supervise contracts necessary for the construction component of the project. Arrange for the presence of the applicable parties of the Project Team at the opening of the tenders.
27. Provide appropriate resources for the management and administration of the project.
28. Keep full records of all project details, meetings, correspondence, contracts, insurance, bonding, warranties, change orders, certificates, schedules, testing, certification, and verification. Provide copies as required to members of the Project Team, if requested.
29. Monitor the physical/financial progress of the work to ensure that the project is completed in accordance with the schedule and budget. Provide the Project Team with monthly status physical and financial reports as per **Section 3.10 – Reporting**.
30. Review, verify, and recommend any change orders and claims for extras for approval. Ensure that all change orders are approved from the First Nation Project Coordinator and appropriate Project Team members as well as the Consulting Engineer prior to the Contractor performing the work. Obtain a written breakdown of the costs from the Contractor complete with description of the work to support the request for change(s). In the case of an emergency, the Project Manager shall be permitted to approve work as deemed necessary to ensure the immediate safety of the project or persons involved. However, the change order for such work must include a description of the emergency and clear justification for the work proceeding without prior approval. Provide copies of all the above information to the First Nation Project Coordinator, Technical Advisors, and ISC Capital Management Officer (CMO). This process will conclude with issuance by the PM of a change order to

the construction contract, completion of the extra work, and inclusion of it in claims for payment. Note that approval of change orders greater than \$10,000 will require ISC concurrence prior to approval.

31. The Project Manager will manage the project contingency (within the limit established in the ISC approved project submission), track expenditures, identify potential change orders, and include details in regular reporting in accordance with these Terms of Reference.
32. Provide the Project Team with correspondence of a technical nature regarding the project. In addition, ensure that reports and bi-weekly summaries are provided to the Project Team within five (5) working days of completion. The PM shall produce a communication plan, which will be reviewed at the initial site meeting. The communication plan will outline what form of communication is required (i.e. verbal (phone) or written (e-mail/post/courier)), the frequency required for routine communication on various issues, and who needs to receive the communication in question (distribution list). The communication plan will be revised based on Project Team input and then followed to the most practical extent possible.
33. At any time during the progress of the work, if the Project Manager considers that the costs outlined in any contract for services, including in the project management and/or engineering services will be exceeded, either by some unforeseen event or change in the scope of the work or the schedule of the work, the Project Manager shall inform the Client and the ISC CMO immediately and provide complete details. At no time shall the costs for project management, design engineering services, or construction be exceeded without prior written authorization of both the First Nation Project Coordinator and the respective funding agency (ISC).
34. An outline of some, not necessarily all, the tasks required to complete this project are provided in the schedule outlined in **Section 3.16 – Project Schedule** of this Terms of Reference. It is of the utmost importance that PM appreciates that they are to ensure the requirements of the applicable documents as prescribed in the protocol provided in *Appendix 2*.
35. This Terms of Reference and the PM's proposal shall be a component of the contract between Curve Lake First Nation and the successful Professional Project Manager. This Terms of Reference shall govern in the event of discrepancies or conflicts between the two documents.
36. The Government of Canada has implemented a new Impact Assessment Act (IAA) as of August 28, 2019 and, if applicable, the Engineer must take the timeline of public review into consideration as described below.
 1. Respectful of fairness and transparency, the new IAA is intended to provide the public with an opportunity to attain information on projects implemented on federal lands and their impact from the environmental perspective;
 2. The IAA affects the whole-of-federally-supported projects for new infrastructure and/or upgrades/repairs to existing assets. While no changes are currently anticipated in the approach to feasibility studies, assessments, and/or design phases, projects entering their construction phase require that a description of the intended work be made available to the general public;
 3. A "Notice of Intent" providing the generic project's description is posted in both official languages to the Canadian Impact Assessment Registry (CIAR). This notice will remain open to the public for a period of thirty (30) calendar days;
 4. During this time, the public will have the opportunity to forward questions and/or comments to be addressed by the Department's Environmental Unit;
 5. At the closing of the open period, a "Notice of Determination" will be posted identifying

requirements to mitigate potential for environmental issues (i.e. completion of a simple form or escalation to full impact assessment). The construction phase may commence once results of the notice support advancing of the project;

6. To mitigate potential for delays, it is recommended that an Environmental Project Description (EDP) is submitted to the department at the 66% design milestone;
7. The need to post all projects scheduled for construction to the CIAR is required until a Ministerial Order defining the eligible project is issued.

3.6 Project Team Meetings

The PM is responsible for organizing all Project Team meetings as follows:

1. Co-ordinate, attend, act as chairperson, and take meeting minutes for all Project Team meetings and teleconferences throughout the project including technical meetings. The lead Project Manager must attend all Project Team meetings.
2. Prepare and submit a meeting agenda to the Project Team members one week prior to all meetings.
3. Distribute meeting minutes to all Project Team members within five (5) working days of each meeting.
4. The Project Team meetings to be held in the community of Curve Lake First Nation are outlined in **Section 3.16 – Project Schedule** for both the design and construction phases.

Given the current global pandemic, travel into the community may be restricted. The PPM, Consultant, Sub-Consultants, Contractors, Sub-Contractors, members of the Project Team, and any other entities will require permission from Curve Lake First Nation prior to entering the community. It is expected that the Project Manager and any other entities requesting permission to enter the First Nation will need to submit a pandemic plan to the Project Team for review and acceptance, which will outline the measures to be followed in order to mitigate the risk to the First Nation members. Safety of the community members is of utmost importance and a failure to follow the agreed upon pandemic plan may result in termination of contract. Proponents are to provide a credit in the cost of services form (found in *Appendix 4*) for each meeting, when the meetings that are anticipated to occur in the community, are held via teleconference or video call instead, due to COVID-19 restrictions.

3.7 Cost Control

The PM has the prime responsibility for cost control, including the following specific tasks:

1. Analysis of commitments prior to award and comparison with budget and cash flow allocations.
2. Establishment and monitoring of commitment authorization limits and procedures, including commitments against budgeted contingencies.
3. Initiation of the action necessary to determine whether future costs will be kept within budget allocations.
4. Progressive monitoring of changes in scope, schedule, and cost and the timely processing of applications for Client and regulatory agency approval.

5. Regular progressive assessment of future commitments and/or costs required in completing the project together with the determination of commitments and/or costs to date and their relationship to the approved budget. This would include the assessment of adequate provision for current and future variations to contracts as well as required contingencies.
6. Monthly updating of cash flow forecasts.
7. Establishment and implementation of appropriate cost reporting systems which will provide the First Nation and the Project Team with monthly information on the cost status of the project, including variations against the approved budget, and satisfying regulatory agency requirements. A financial report shall be submitted on a monthly basis from the time of award of the project management contract to the end of the construction warranty period.
8. The PM shall work closely with the Project Team for the duration of the project.

The PM shall establish and implement an appropriate cost reporting system to provide Curve Lake First Nation and the rest of the Project Team with timely information on the cost status of the project, including variations against the approved budget.

The PM shall work within the Curve Lake First Nation internal policies and with their manager of financial services for financial management. This will include ensuring that the First Nation opens a separate bank account or a separate project number for financial tracking for the project in the name of the project upon commencing the construction phase and until the end of the warranty period. One of these accounts shall be established specifically to receive all ISC funding releases and another to hold the 10% holdback from the Contractor during the construction phase.

The PM shall ensure that expenditures and commitments for recommended payments are within the approved budget amounts and do not exceed each line item in the approved funding submission for each fiscal year.

The PM will review and provide a copy of the project monthly financial statements to the First Nation Project Coordinator as well as the other applicable parties of the Project Team. The cost status of the project, including variations against approved budget, will be provided on a monthly basis from the time of award of the project management contract to the end of the construction warranty period.

3.8 Financial Management and Payment Certification

The process by which the budget for the design and construction phases of the project shall be managed by the PM is as follows:

1. Development of a financial reporting system that will produce interim financial reports outlining funding received and expenditures disbursed with a comparison to budgeted amounts.
2. The Design Engineer will present monthly progress payment certificates that will recommend payments to the Contractor based on the work completed. These certificates should be reviewed by the PM and other applicable parties of the Project Team, and, if acceptable, recommended for co-signing with the Client, so payments may be issued.

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3. Review, verify, and recommend change orders and claims for extras for approval. Obtain approval for each change order from the First Nation Project Coordinator, the Consulting Engineer, ISC, and any other applicable parties from the Project Team prior to directing the Contractor to perform the work.
4. Invoices for First Nation involvement must be reviewed and approved by the PM and, if acceptable, recommended for co-signing with the Client, so payments may be issued.
5. Invoices for the PM's activities should be reviewed by the First Nation Chief and Council or the First Nation's authorized representative, as well as the Technical Advisors and, if acceptable, recommend for co-signing with the Client, so payments may be issued.
6. The Design Engineer will present monthly invoices of their work in contract administration and site inspection services. The PM should review and, if acceptable, recommend for co-signing with the Client, so that payments may be issued.
7. Monthly releases for the Client and administration and establish the schedule of releases with the Project Team.
8. Monthly releases for the PM should be negotiated between the Project Team.
9. Issuing cheques and delivery of all disbursements from the construction project bank account, whenever they are required.
10. The Design Engineer and the PM shall ensure that the expenditures for each line item in the Project Approval Request (PAR) submission for each fiscal year is not exceeded in their recommendation for payment, inclusive of contingency budget where applicable.
11. All members of the Project Team, including the PM, the Consulting Design Engineer, the General Contractor, the Client, the Technical Advisors, and the funding agency (ISC) must take into consideration the special funding conditions relating to the cash flow, including the requirements set out in the Letter of Intent, when making their recommendations for the release of funding. The Client will be given a copy of that contract.
12. Any concerns that may arise about the budget or recommendation for payment by the PM should be resolved with a meeting of the Project Team, including a representative from ISC.
13. At any time during the progress of the work, if the PM considers that the costs outlined in the construction contract or the fees for services indicated in the proposals for project management and/or design engineering services will be exceeded, either by some unforeseen event or change in the scope of the work, he shall inform the Client, Technical Advisors, and ISC CMO immediately and provide complete details. **AT NO TIME SHALL THE COSTS FOR PROJECT MANAGEMENT, DESIGN ENGINEERING SERVICES, OR CONSTRUCTION BE EXCEEDED WITHOUT PRIOR WRITTEN AUTHORIZATION OF BOTH THE FIRST NATION PROJECT COORDINATOR AND THE FUNDING AGENCY REPRESENTATIVE(S).**
14. The PM shall provide monthly financial and physical reports to the Project Team based on information provided by the Consultant, Contractor, and the Client.

3.9 Project Accounting

The PM is responsible for project accounting, with specific duties as follows:

1. Establish accounting procedures and/or systems, which will fully satisfy the Client and regulatory agency requirements and, at the same time, meet the needs of an effective project accounting system.
2. Establishing an accounting procedures and/or systems in accordance with the International Financial Reporting Standards (IFRS) as prescribed by the Canadian Accounting Standards Board.
3. Identify, record, and control actual payments of the Consultant, Sub-Consultants, General Contractor, Sub-Contractors, suppliers, and others for services provided to the project.
4. The actual method of payment, such as payment from a project trust account, must be established early on in the project.

3.10 Reporting

The PPM is responsible for reporting as follows:

1. Implement a program of regular monthly reporting to the Project Team.
2. Prepare reports on a monthly basis and provide timely, up-to-date information on all critical aspects of the project, such that all necessary decisions or actions can be taken promptly.
3. Compare actual progress with the approved schedule (including variances), explanations, and possible schedule adjustments.
4. Compare costs and commitments with the approved budget, including estimated cost at completion, variances, explanations, and possible corrective actions where required.
5. Status of activities of the Design Engineer.
6. Status reviews and approvals by regulatory agencies.
7. Permit agreements and contract status.
8. Construction status.
9. Commissioning status.
10. Status of deficiencies.
11. Assist with and ensure that the Design Engineer prepares the post-project completion report in accordance with regulatory agency requirements and is deemed satisfactory to the Client. The completion report requirements are outlined in *Appendix 5*.

The Project Team will keep strict control of the budget. Hence, an efficient and comprehensive reporting system is paramount to the success of the project.

Bi-Weekly Reports

Bi-weekly reports may be informal and verbal by way of phone from the Consultant's Project Manager and supplemented by fax or e-mail portions as determined by the Client and Consultant's respective

Project Managers. The primary purpose is for the progress tracking and possible reporting by the First Nation Project Coordinator to the Chief and Council.

Monthly Reports

The monthly physical and financial reports shall be completed by the PPM with input from the Consultant in accordance with ISC's reporting requirements and submitted to the Project Team by the 15th of the following month in electronic copy, followed by hard copy.

The monthly report shall, as a minimum, include the following:

- Project name, date, and author of the report.
- Updated schedule showing the proposed schedule and the current schedule. The Project Manager shall use Microsoft Project or an approved equivalent software to provide a schedule of suggested milestones, work durations, and dates for the implementation of this project.
- The schedule must identify the following:
 - Activities/tasks
 - Resources
 - Duration in days
 - Expected start date
 - Expected completion date
 - Dependencies
 - Milestones
 - Audits
 - Constraints
- From developing the schedule, the following will become apparent:
 - Resource levelling
 - Critical path
 - Any early or late start and finish dates
 - Timeline (Gantt chart)
 - Description of milestones (include details in milestone section)
 - Release cycle, if appropriate (include details in release cycle section)
- Financial report showing the original budget breakdown, current costs, committed costs, and projected costs. The report shall also include a cash flow forecast update as required for ISC funding release schedules.
- Copies of invoices, financial signoff, and proof of payment.
- A list of contemplated change orders, including projected costs.
- A list of approved change orders, including approved costs.

- Table of workforce (occupations and number of jobs) and equipment usage.
- Select progress photographs.
- Written commentary on each of the above items.
- Description of local resources being used.
- Training being provided and progress of trainees.
- Outstanding deficiencies, when appropriate.
- Key risk management.
- Key issues summary.
- Executive summary for presentation to Chief and Council.
- The report will be certified by the PM.

The monthly report will be submitted by the 15th day of the following month. Submissions shall be arranged with consideration of the Project Team meeting dates. A digital PDF copy of each report shall be submitted to the First Nation Project Coordinator and Technical Advisors (i.e. ISC, OFNTSC, etc.).

Within one month of project completion, the next to last report will be issued providing reference to the operation and maintenance (O&M) manuals and record (“as-built”) drawings. This report will also reference the proposed date of the one-year warranty inspection. The monthly reports shall be bound and punched for inclusion in a project binder at the end of the project.

Within one month of the warranty inspection, the final report shall be issued. It will provide final summaries of the project, including any recommendations for the facility as a result of the warranty inspection.

Completion Reporting

The PM must submit a final completion report in accordance with **Section 3.15 – Project Closeout Requirements**.

3.11 Expediting

A critical part of the Project Manager’s role is expediting the project. This should be done specifically in the following areas: approval, decisions, shop drawings, technical reviews, question answering, problem solving, operation and maintenance (O&M) manuals, and completion reports.

3.12 Management of Design

Under the oversight of the Curve Lake First Nation Project Coordinator, the PPM is responsible for managing the Design Engineer during the design, tendering, construction, commissioning, and warranty phases of the project. The PPM has the prime responsibility in the following areas:

1. Complete the Terms of Reference for to hire a Design Consultant. As time is of the essence, the PPM will provide the Terms of Reference within three weeks of the project award.

2. Issue the Terms of Reference for design and facilitate the proposal review meeting with the Project Team.
3. Provide technical and management support to the First Nation Project Coordinator.
4. Review all submissions by the Design Consultant and provide input to the project schedule regarding construction activities.
5. Oversee the hiring of a third-party value engineering firm to review the 33% and 66% design submissions, as well as a professional quantity surveyor to review the 99% design submission for the final pre-tender construction cost estimate, as indicated in the funding approval letter from ISC.
6. Monitor project progress and cost, take reasonable measures to control progress and cost, and report to ISC and the Project Coordinator.
7. Arrange for the Project Team to receive sufficient copies of all submissions. Ensure that all changes/additions requested are incorporated and resubmit as required. Expected submissions are:
 - a. Design Brief (at the 33% design submission), including design parameters, discussion of energy efficiency for the building, funding incentives for energy, fire safety, landscaping, air quality consideration, cost estimates, etc.
 - b. 33%, 66%, and 99% Design Submissions, which include engineering specifications and drawings for civil, architectural, structural, instrumentation, process, electrical, mechanical (HVAC), etc.
 - c. Ensure a Letter of Conformance and Classification for the WTP be secured from the MECC prior to design completion.
8. Ensure that the design considers safety parameters, skills transfer, and economic development opportunities for the First Nation.
9. Ensure the Design Consultant's design considers:
 - a. Access of the facilities
 - b. Capacity of hydro to service the new water treatment facilities
 - c. Operator training and certification requirements
 - d. Commissioning and testing

3.13 Management of Construction (Provisional)

The PM and the Design Engineer have joint responsibilities for management of construction and demolition activities. The PM has the prime responsibility in the following areas:

1. Arrange for a pre-construction site meeting (if permitted) between the Project Team and the Contractor to discuss the construction schedule, receive a copy of the Contractor's safety plan, and other related matters of the project.
2. Provide technical and management support to the First Nation Project Coordinator.
3. Ensure the review and approval of all shop drawings by the Design Consultant.

4. All progress claims as well as interim and final completion certificates shall be signed by the resident inspector and certified by the seals of the Design Engineer and the PM, who must both be registered to practice professional engineering in Ontario.
5. The PM shall ensure implementation of the mitigation measures identified in the Environmental Project Description (EPD) and remedial measures plan. The PM shall also prepare the report detailing their implementation.
6. Provide input to the project schedule regarding construction activities.
7. Review the Contractor's schedules, proposed personnel, equipment selection, and methodology.
8. Take reasonable measures to control situations that could lead to claims, maintain sufficient records to protect the Client from unjustified claims, and permit recovery on Client claims against others.
9. Promote satisfactory labour relations and work to resolve issues that may arise between parties during construction, including minor changes required to facilitate construction.
10. Monitor progress and cost, take reasonable measures to control progress and cost, and report to ISC and the Client.
11. Call for inspection(s) and ensure that correction of defective work is complete.
12. Ensure that the Contractor's deficiencies identified by the Design Engineer are addressed.
13. Arrange for the Project Team to receive items such as "as-built" drawings, operation and maintenance (O&M) manuals, operating instructions, and completion reports (found in *Appendix 5*) as specified, as well as legal surveys of the completed project within one month of project completion.
14. Submit copies of the operation and maintenance (O&M) manuals prepared by the Contractor, in accordance with the specifications, to the Project Team for review. Ensure that all requested changes/additions are incorporated and resubmit as required. The PM shall also ensure that the manuals are available prior to the start-up, performance testing, and commissioning, which is to be executed exactly as prescribed in the latest version of ISC's Project Implementation and Procedures Manual (PIPM).
15. Ensure that all workplace health and safety regulations are met.

3.14 Management During Commissioning (Provisional)

The PM and the Design Engineer have joint responsibilities for management during commissioning activities. The PM has the prime responsibility in the following areas:

1. Ensuring that the Design Engineer includes specific requirements in the tender specifications and subsequent contracts that detail the commissioning, closeout, and demonstration and training requirements. Include requirements for the Contractor to submit commissioning plans and schedules with specific minimum lead times. Include requirements that operation and maintenance (O&M) manuals and standard operating procedures be provided with specific lead times. Include statements that missing documentation will delay the commissioning process and subsequent

substantial completion. Include requirements for the length of commissioning and performance trials, what constitutes success or failure, and what the consequences are of alarms or other problems during the commissioning period. Include requirements for manual start-up and automated commissioning inspections. Include requirements for Sub-Contractors and suppliers to be on site during the inspections.

2. Ensure commissioning is done properly, thoroughly, and in a timely manner. Refer to *Appendix 2* for acts, codes, guidelines, standards, and regulations identified in Section 2.7 for Water and Wastewater in the Protocol for ISC-Funded Infrastructure to be followed, where applicable.
3. Provide input to the project schedule regarding commissioning activities.
4. Ensure that operator training sessions during commissioning are video documented and that these video records are copied to the operators, technical advisors, and any other applicable parties.
5. Review Contractor's schedules, proposed personnel, equipment selection, and methodology.
6. Promote satisfactory labour relations and assist in resolving disputes.
7. Monitor progress and cost, take reasonable measures to control progress and cost, and report to ISC and the Client.
8. Call for inspections and ensure that correction of defective work is complete.
9. Administer and ensure the correction of faults during the commissioning.
10. Ensure commissioning reports are completed and submitted to the Project Team for their records.
11. Work with the Technical Advisors to complete a "Source Document – Change in Capital Assets" form for all as-built quantities for inclusion in the First Nation Capital Assets Inventory System when substantial completion is awarded. Updating the asset quantities is necessary to ensure proper operation and maintenance (O&M) funding is received from ISC for the upgraded facility.
12. Ensure that the warranty inspection is conducted and all warranty items are addressed during the warranty period, and that the Project Team is advised.

3.15 Project Closeout Requirements (Provisional)

The PM and the Design Engineer have joint responsibilities for management during the overall project closeout activities. The PM has the prime responsibility in the following areas:

1. Provide a completion report in accordance with *Appendix 5* and submit to the Project Team.
2. Submit interim and final completion certificates to the Project Team.
3. Ensure that all required documentation is obtained with regard to the construction (i.e. statutory declarations, etc.). Copies are to be attached to each monthly physical/financial report.
4. Submit copies of the operation and maintenance (O&M) manuals, reviewed by the Consultant, as prepared by the Contractor in accordance with the specifications, to the Project Team for review. Digital copies of the above mentioned information must also be supplied. Ensure that all changes/additions requested are incorporated and resubmit as required. The PPM shall also ensure

that the manuals are available prior to the water treatment facilities start-up, performance testing, and commissioning, which is to be executed exactly as outlined in the successful Consultant’s proposal.

5. Ensure that the Design Consultant provides prints of the record drawings and specifications for review and acceptance by the Project Team. Following approval, ensure that the Design Consultant provides a complete set of prints (paper and digital PDF copies) and record drawings in AutoCAD (latest version) format with approved layering structure.
6. Maintain a photographic history of the works. The photographic history shall be digital and include photographs of the site of the works before and after construction. Photographs shall be taken of all sections of the work, especially of deviations from the plans and specifications. Digital copies of all photos will be submitted to the Project Team as part of the completion report.

3.16 Project Schedule

The following schedule/listing of tasks is provided so that the Professional Project Management firms can appreciate the commitment required for this project.

Not all dates in the schedule/listing of tasks have been filled in, as the PPM shall provide a schedule with their proposal, developed using Microsoft Project (or equivalent alternative), which will have to be reported on and maintained throughout the project.

This major infrastructure project is a priority for the community. Construction is anticipated to take 24 months.

The following schedule lists most, but not necessarily all, tasks which will be required during the course of this project. The tasks identified with asterisks (*) represent meetings held on site in Curve Lake First Nation.

PROJECT MILESTONE	COMPLETION DATE	RESPONSIBILITY
Project Initiation & Consultant Selection Phase		
PPM Services Award	October 2, 2020	Project Team
*PPM Kick-Off Meeting & Contract Signing	October 7, 2020	Project Team
Develop Design Consultant TOR	3 weeks within award of contract	PPM
Project Team Review of Design Consultant TOR	TBD	Project Team
Finalize Design Consultant TOR	TBD	PPM
Consultant RFP (public advertised process or invited tender, as directed by Client)	TBD	PPM / First Nation
*Design Consultant Proposal Review & Selection Meeting	TBD	Project Team
Conceptual Design Phase		
Design Consultant Award	TBD	Project Team
*Design Kick-Off Meeting & Contract Signing	TBD	Project Team
Review of Existing Information	TBD	Consultant

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Conduct Site Investigations (hydrogeological, geotechnical, topographic survey, etc.)	TBD	Consultant
Draft Conceptual Design Brief & 33% Design Submission (Class C Cost Estimate)	TBD	Consultant
*Draft Conceptual Design Brief & 33% Design Review & Meeting	TBD	Project Team
Finalize Conceptual Design Brief & Issue to Project Team	TBD	Consultant
Detailed Design Phase		
66% Design & Specifications Submission (Class B Cost Estimate)	TBD	Consultant
Operator Training Action Plan Submission	TBD	PPM / Consultant / First Nation
*66% Design Review & Meeting	TBD	Project Team
99% Design & Specifications Submission (Class A Cost Estimate)	TBD	Consultant
Obtain Approvals from Regulatory Authorities (i.e. MECP, DFO, Hydro, etc.)	TBD	Consultant
Business Case Submission	TBD	PPM / Consultant / First Nation
*99% Design Review & Meeting	TBD	Project Team
100% Tender Drawings & Specifications	TBD	Consultant
Pre-Tender Cost Estimate	TBD	Consultant
Tender Package Approval	TBD	Project Team
Tender Phase		
Issue Request for Prequalification (if applicable)	TBD	Consultant
Issue Tender Documents	TBD	Consultant
*Tender Site Visit	TBD	Consultant
Tender Review & Recommendation for Award	TBD	PPM / Consultant
Construction Phase		
Construction Award	TBD	Project Team
*Construction Kick-Off Meeting & Contract Signing	TBD	Project Team
Construction / Contract Administration	TBD	PPM / Consultant / Contractor
Shop Drawing Reviews	TBD	Consultant
Site Inspections (24 months)	TBD	Consultant
*Monthly Project Team Meetings (x24)	TBD	Project Team
O&M Manuals & Record Drawings	TBD	PPM / Consultant
Start-Up & Training	TBD	Consultant
Two-Week Performance Testing	TBD	Consultant

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*Final Inspection & Formal Commissioning (Substantial Completion)	TBD	PPM / Consultant
Final Inspection Reports	TBD	PPM / Consultant
Completion Reporting Phase		
Submit Draft Completion Report	TBD	PPM / Consultant / First Nation
Review Completion Report	TBD	Project Team
Revise & Submit Final Completion Report	TBD	PPM / Consultant / First Nation
Warranty Phase		
One-Year Warranty Inspection	TBD	PPM / Consultant
One-Year Warranty Report	TBD	PPM / Consultant

* Denotes meetings held in Curve Lake First Nation, Ontario, depending on the community’s preference during the global pandemic of COVID-19.

3.17 Project Meetings

The Project Manager shall arrange and act as chairperson for all of the project meetings with the First Nation Chief and Council, the First Nation Project Coordinator, the Design Consultant, any Technical Advisors (ISC/OFNTSC), the General Contractor, the applicable funding agencies, and any other parties as required.

The Project Manager shall prepare and submit a proposed meeting agenda to the Project Team members one week prior to all meetings. A clear agenda is provided prior to the meeting in order to maintain focus and maximize effectiveness. The Project Manager shall also record the minutes of all project meetings and distribute them to the Project Team members within five (5) working days of the meeting. Succinct minutes in the form of action points are to be documented and distributed to attendees and for onward distribution to their own team members.

Note: No proxies or substitutes are typically allowed by the Project Manager’s staff for these meetings.

The purpose of these meetings is to:

1. Review and update outstanding action points.
2. Monitor overall progress against plans.
3. Resolve problems and issues.
4. Review current project status.
5. Report requested plan variations and change control items.

The Project Manager shall arrange their own travel costs to attend the identified on-site meetings in Curve Lake First Nation. The Project Manager’s proposal shall be inclusive of travel costs. The Project Manager shall also provide a separate cost for additional meetings, as projects sometimes require them to occur.

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Given the current global pandemic, travel into the community may be restricted. The PPM, Consultant, Sub-Consultants, Contractors, Sub-Contractors, members of the Project Team, and any other entities will require permission from Curve Lake First Nation prior to entering the community. It is expected that the Project Manager and any other entities requesting permission to enter the First Nation will need to submit a pandemic plan to the Project Team for review and acceptance, which will outline measures to be followed in order to mitigate the risk to the First Nation members. Safety of the community members is of utmost importance and a failure to follow the agreed upon pandemic plan may result in termination of contract. Proponents are to provide a credit in the cost of services form (found in *Appendix 4*) for each meeting, for when the meetings that are anticipated to occur in the community are held via teleconference or video call instead, due to COVID-19 restrictions.

4.0 Project Team

The following individuals make up the Project Team:

PROJECT TEAM	
PROJECT TEAM MEMBER	RESPONSIBILITIES
Curve Lake First Nation Chief and Council	Project concurrence with First Nation requirements.
First Nation Project Coordinator	Project responsibility and liaison on behalf of Chief and Council.
Ontario First Nations Technical Services Corporation (OFNTSC) Technical Advisor	Provides technical advice to the First Nation.
ISC Capital Management Officer	Primary ISC contact. Manages the funding arrangement.
ISC Engineer	Provides technical advice to ISC Capital Management Officer and the Project Team. Reviews project documents.
ISC Environment Officer	Reviews project documents and provides environmental advice to ISC Capital Management Officer and the Project Team.
ISC, FNIHB Environmental Health Officer	Provides advice to the Project Team from an Environmental Health perspective.
Professional Project Manager – TBD	Overall project responsibility on behalf of the First Nation.
Design Engineering Consultant – TBD	Carries out design, tendering, contract administration, and site inspections for the duration of the project.
General Contractor – TBD	Responsible for all construction works of the project.
Other Members – As Required	Contribute to the project in applicable ways.

The primary overall responsibilities of the Project Team are:

1. To keep the Chief and Council fully aware of the status and progress of the project.
2. To define, confirm, and recommend the scope of work to be performed by all parties.
3. To implement the project in accordance with the project schedule and budget.
4. To fully implement the project in accordance with project approval documents and in compliance with all applicable regulatory agents.

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5. To ensure compliance with approved budgets and to take whatever measures are deemed necessary to accomplish the project objectives within approved budgets and schedule.
6. To ensure qualified resources are utilized throughout the project, including local resources, so that local capacity is nurtured and the facilities can be successfully constructed and maintained.
7. To ensure the best interests of the First Nation are paramount in this project.
8. To ensure, where reasonable and within the budget constraints, there is a quantifiable transfer of knowledge to the First Nation.

5.0 Project Manager Contract Agreement

5.1 Professional Project Management Responsibilities

As well as the terms set out in **Section 3.0 – Scope of Work**, the general responsibilities of the PPM shall be:

1. To represent the First Nation on overall management of the project. This is a key role whereby both the interests of the First Nation and funding agency (ISC) are equally protected.
2. To agree to enter into a contract between the Client and the PPM for the work as outlined in these Terms of Reference and the PPM's proposal submission. The accepted upset limit of the PPM fees and disbursements, based on the lump sums provided as detailed in the proposal, will not be exceeded without written consent from ISC.
3. To provide complete and comprehensive Professional Project Management services in the specialty field required to carry out the work.
4. To provide technical and management support to the First Nation Project Coordinator.
5. To carry out the work, in accordance with an accepted schedule presented by the PM with his proposal, and to submit regular progress reporting to the First Nation and the Project Team describing progress and indicating milestones completed.
6. Maintaining and filing all books and records for the project in the PPM's offices.
7. Keep full records of all project details, meetings, correspondence, contracts, insurance, bonding, warranties, change orders, certificates, schedules, testing, certification, and verification. Provide copies as required to the Project Team.
8. Be available when required to meet with officials from the First Nation, the Design Consultant, the Contractor, the funding agency (ISC), and others as required by the Project Team.
9. Prepare and submit the project financial summary to be included in the project completion report.
10. Provide the First Nation and the Project Team with monthly activity reports, including current month and program-to-date financial reports.
11. Ensure timely completion to all reporting requirements, as outlined within the funding arrangement and amendments.
12. Proactively resolve issues to ensure that the project keeps on schedule.
13. Maintain confidentiality of all private or personal information coming into the PM's possession.
14. Act in a culturally sensitive manner at all times.

5.2 General Conditions

All materials developed and reports made in connection with this project shall become the property of the First Nation and must be turned over with full copyright to Curve Lake First Nation upon completion of the project.

The Project Manager shall not be entitled to additional fees or charges required to remedy errors or other problems attributable to shortcomings of the Project Manager, his Sub-Consultants, or their employees. Rectification of such errors/omissions will be the responsibility of the Project Manager.

The proposal shall be valid for 90 days.

5.3 Contract Responsibilities

The Project Manager agrees to enter into a contract with the Client for the work as outlined in this Terms of Reference and as submitted in the cost of services form, found in *Appendix 4*.

The Project Manager agrees to carry out the work in accordance with the schedule as outlined in these Terms of Reference.

The Project Manager agrees to make use of any existing data and reports to the maximum extent possible.

5.4 Invoicing Instructions

The Project Manager shall record and document the cost for each allowance item separately. The Project Manager invoice shall have a separate charge for each allowance item as per the cost of services form, as seen in *Appendix 4*.

The Project Manager shall submit copies of each invoice to the First Nation Project Coordinator and Technical Advisors on a monthly basis. Invoices shall include all time and charge out rates, expenses, and disbursements.

The Project Manager shall not be paid more than 90% of the agreed fees and disbursements until the record drawings and project completion information has been reviewed and approved and all documentation has been submitted as per the requirements of these Terms of Reference.

5.5 Payment

Payments to the Project Manager by the First Nation shall be based on the Project Manager's submission for fees and expenses, supported if requested by time sheets and invoices for actual expenses incurred up to the upset limit as stated in the Project Manager's proposal.

5.6 Changes

At any time during the progress of the work, if the Project Manager considers that the costs outlined in the contract for project management services will be exceeded, either by some unforeseen event or change in the scope of the work, the Project Manager shall inform the Client and the ISC representative(s) immediately and provide complete details.

In addition, no increase in the contract amount for either fees or disbursements will be permitted unless:

1. A request for additional payment is received in writing by Curve Lake First Nation and the Project Team with a full explanation for the reasons; and
2. A change order for such additional payment has been approved by the Project Team.

No changes in the Project Manager's team will be permitted without a written request for such changes and written approval by the First Nation Project Coordinator and other applicable parties of the Project Team.

5.7 Adequate Information

The Project Manager will acknowledge in their proposal that they have had adequate discussions and access to sufficient information to enable them to undertake the required works within the timeframes stipulated as detailed herein.

5.8 Contract for Fees

The Project Manager's proposal will include all fees and disbursements for all portions of the design and tender phases as detailed and described in this document. The Project Manager's proposal will include, as a separate item, fees and disbursements for construction services based on the estimated construction timing, duration, and activities. The Project Manager will provide specific details on their assumptions for construction services, including estimated construction scope and duration. The Project Manager will provide a separate cost for each additional month of construction duration. Additionally, the Project Manager will provide a separate cost for any additional meetings required in excess of the number included in the proposal.

Selection and acceptance of the successful Project Manager's proposal does not represent an obligation by the Client to automatically award work associated with the construction component to this Project Manager. The Client may choose to retain a different Project Manager for the construction phase of the project. The Client, with the approval of ISC, reserves the right to delay or terminate a contract or subsequent contracts with the Project Manager at any time.

Following completion of the design phase, the Project Manager will be asked to review their proposal for Project Manager fees and disbursements. Where significant changes in the project scope and/or schedule can be shown to impact the Project Manager's future involvement, the Project Manager may update their original proposal based on the anticipated changes in construction scope or schedule. Any updates must be based on the price provided in the original proposal and must be based on a change in the assumptions noted in the original proposal. Any changes in project duration must be based on the provisional cost for each additional month of construction duration as noted by the Project Manager. The Project Manager may not increase their price due to inflation.

If the Project Manager's updated fees and disbursements for the construction phase are accepted and approved by the Project Team, then the First Nation reserves the right to option to award the next phase of the work to this Project Manager. If the Project Manager's proposed fee and disbursement

estimates following negotiations are not accepted and approved by the Project Team, then the Client reserves the right to request and accept proposals from additional Project Managers for services related to the construction phase of work for this project.

5.9 Insurance

The successful Project Manager will be required to carry a minimum of \$1,000,000 per occurrence in professional liability insurance. The insurance coverage cannot be modified without written consent of the Client and the Project Team. Clauses that limit the liability of the Project Manager with this proposal are not acceptable.

6.0 Proposal Content

Each PPM proposal shall include a letter of transmittal, separate from the proposal, signed by an authorized officer.

The proposal shall be organized into two (2) distinct sections, including:

1. Management Section; and
2. Cost Section.

The proposal will be submitted using a “two envelope system”. The PM shall submit electronic copies of their proposal with all attachments and appendices. The management section and the cost section **must** be sent in separate emails. The management section shall be provided in one email and the cost section shall be provided in a separate, password-protected email. The cost section email shall remain unopened until the evaluation of the proposal is complete.

6.1 Management Section

The “Management Section” shall include, but not be limited to, the following information.

Introduction/Project Understanding

This will include the description of the specific project goals and requirements, which highlight those of particular significance to the project and the delivery of services. It may include:

1. The Client’s functional and technical requirements.
2. The Client’s philosophies and values.
3. The existing conditions.
4. Implementation strategies.
5. Other significant issues (i.e. environment, heritage, cultural, socio-economic, etc.).
6. Challenges and restraints.

It will have a description of the approach to the major issues to be dealt with during the closeout of this project (i.e. the objectives to be reached).

Project Manager and Supporting Team

The proposal must identify all key personnel, detail their responsibilities, and include an organizational chart. The Project Manager and supporting staff must provide information regarding their experiences in the last five (5) years that are relevant to the duties required herein.

This section must include the roles of key groups (i.e. Project Manager’s team of staff, Sub-Consultants, specialists, suppliers, third parties, etc.). The organizational chart must include names, role titles, reporting relationships, and profiles of the key positions.

The proposal will also identify assigned staff and any Sub-Consultants, along with their qualifications, registration, and the added value that they bring to the project.

Proposal must include confirmation that the person(s) assigned to the lead roles in the project are respectively registered or licensed to practice engineering in the province of Ontario as a P.Eng. They must also have relevant project management qualifications, proof of registration and/or licensing, and professional liability insurance coverage. In the event that this information is not provided in the proposal, the successful firm will have three (3) business days to supply the information to the Project Team following a request to do so. Failure to comply will render the proposal non-compliant and the next highest rated firm will be contacted.

The proposal shall include an appendix showing the curricula vitae of the proposed Project Team staff and any Sub-Consultants, if applicable.

If the Project Manager is employing a Sub-Consultant, then a copy of the Sub-Consultant's proposal to perform his portion of the work will be required. Proof of Sub-Consultant professional registration and insurance is also to be provided with the proposal.

Time Task Matrix

A time task matrix (in spreadsheet format) for each component of the project is to be provided in the management section. The time task matrix is to include project component, task description, and personnel names and hours. Financial information such as hourly rate will not be included in the management section.

References

The proposal must include a list of at least three (3) recent references of completed projects. The Project Manager being proposed must be the main Project Manager on these reference projects. The reference information must include the contact name, current phone number and email address, and a short description of the individual's role in the project.

Firm

A description of the company profile, relevant experience, comments on the proposed scope of work, and an overall approach to the work shall be provided.

A selected list and brief description of projects completed in the last ten (10) years by the firm as well as major Sub-Consultants will be included to indicate the range and depth of the firm's practice. If a project was undertaken by a consortium, identify the other firms in the consortium, the role of the firm on the project, the stages of the project completed by the firm, and the construction value.

Methodology

The Project Manager's proposal shall contain an outline of the proposed methodology that the Project Manager proposes to utilize in undertaking this project.

Proposal shall include a work plan demonstrating how the requirements of the scope of work will be met and showing the assignment of specific team members to tasks as well as the number of person-hours that each team member will spend on each task. The use of specialized services should also be shown. This information should be shown in detail on a chart, in matrix form, excluding costs. Availability of the assigned personnel is to be indicated in the proposal. The percent (%) utilization of the assigned personnel is to be shown and totaled.

Proposal shall include a management section that will include a description of the management methods that will be used to ensure that the work is done in a manner that meets these Terms of Reference. This section will also include initiatives by the Project Manager to further the First Nation's professional development and promote skills transfer to the First Nation. In addition to the utilization of First Nation labour and equipment during the construction phase, utilization of First Nation labour and resources during the design phase is also expected, inclusive of occupation and number of jobs.

Time Limits and Work Schedule

The PM's proposal will indicate the number of weeks required to complete the works and issue the Terms of Reference for the Design Consultant.

A schedule, which reflects the Project Manager's work plan and identifies milestones, should also be included. The Project Manager shall use Microsoft Project (or equivalent) to provide a schedule of suggested milestones, work durations, and dates for the implementation of this project.

The Project Manager shall review the design schedule and provide the construction start and end dates. The Project Manager will be responsible to provide an accurate schedule as part of the monthly reports sent to the Project Team.

6.2 Cost Section

The "Cost Section" is to include fees and disbursements for the specified project management services **and it must be submitted in a separate, password-protected email**. Fees and disbursements for the specified project management services must also be summarized on a cost of services form, as included in *Appendix 4* of this Terms of Reference. The cost of services form is to be submitted within the separate cost email marked as "cost of services". The Proponent is also to include a time task matrix with fees.

Fees and disbursements for the specified Project Manager services are to be expressed as a lump sum for fees and disbursements (both fixed) and shall include the following:

1. The Project Manager's proposal shall indicate the total time and the daily or hourly rate (charge-out rate) to be charged based on 7.5-hour day for each member of the project management team. Cost templates shall be produced in tabular format (tender/cost).
2. Fixed hourly rates for each member of the proposed project management team to an estimated maximum number of hours to complete the project set out herein. The hourly rate must include all payroll, overhead costs, and profits.

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3. Disbursements for the specified Professional Project Management services detailed and expressed as a fixed cost for miscellaneous administrative expenses, such as for printing, duplicating, telephone charges, fax charges; as well as travel costs, accommodations, and meal expenses.
4. Fees and disbursements for the specified Professional Project Management services must be summarized and submitted in a separate cost envelope from the textual submission. This information must be shown in a chart, in matrix form, preferably in the same one referred to in the aforementioned work plan but including costs. Only the fixed fee portion will be used in the calculation of points for cost.

The price(s) quoted shall include any and all applicable taxes; although the Project Manager should note that the Client (First Nation) is HST exempt. An HST exemption letter can be provided upon request from the Client.

An upset limit of project management fees, based on the above, will not be exceeded without written consent from the Project Team.

A provisional cost for each additional Project Team meeting, to be held in Curve Lake First Nation, is also to be identified on the cost of services form, found in *Appendix 4*.

The following costs, as applicable, shall be included in the fixed lump sum fee submitted by the Project Manager and shall not be reimbursed separately.

1. Reproduction and delivery costs of drawings, AutoCAD files, other electronic files, specifications, and other technical documentation specified in this Terms of Reference.
2. Standard office expenses such as photocopying, computer costs, Internet access and use, cellular phone costs, long distance telephone calls, faxes, etc.
3. Courier and delivery charges for project deliverables.
4. Plotting.
5. Presentation material.
6. Parking fees.
7. Taxi charges.
8. Travel time.
9. Travel expenses.
10. Bank fees.

The PM shall not introduce in their cost proposal, cost elements that are not requested in this proposal call. Any items in which the Project Manager feels should be considered by the Project Team as part of this project, can be identified in the Project Manager's proposal for further review by the Project Team.

As noted, the proposal shall include the fees for construction, and shall include all assumptions made for this component of work, including construction duration and frequency of meetings.

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The Project Manager's proposal and this Terms of Reference shall form a part of the contract. The Project Manager's fees and disbursements shall be disclosed including any or all notes on the method of calculation.

7.0 Proposal Evaluation

7.1 Proposal Evaluation Criteria

Project Managers are requested to submit proposals that conform exactly to the following section headings and requirements. Failure to conform will impair the proposal review process, possibly to the detriment of the PPM.

7.2 Evaluation Team

Members of the team evaluating the PPM’s qualifications and proposals shall consist of the following:

- Curve Lake First Nation Chief and Council
- Curve Lake First Nation Project Coordinator
- OFNTSC Technical Advisors
- ISC Team Member (CMO, EPHO, etc.)
- ISC Project Engineer

Evaluation forms will be completed by the above parties and a combined score will be reached by consensus used in the selection of a PPM. The technical management section evaluation will represent 80% of the total score and the financial cost section evaluation will represent 20% of the final score. Proposals will be evaluated according to the work identified in the Terms of Reference, and using the criteria and point system set out as follows.

Proposal Evaluation - Criteria & Point System		
Project Understanding	5	Proposal indicates an understanding of the project and likely priorities for the First Nations. Proposal indicates thought and is specific to Curve Lake First Nation.

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Project Manager & Supporting Team	20	<p>Project Manager/Lead Consultant has at least 10 years of relevant experience in the project management of design and construction of communal water treatment plants and distribution systems.</p> <p>The qualifications and relevant experience of the Project Manager and supporting team.</p> <p>The roles of each member of the team are to be well defined and adequate. Their respective qualifications should match their roles.</p> <p>Evaluation team will consider completeness of the team (are the roles and specialties covered off); sufficient technical resources (CADD, working facilities); commitment to provide qualified resources to the project; qualifications/experience of the designated individuals; sufficient resources to meet the time frames in the work plan.</p>
References	10	<p>Project Manager has experience managing at least three similar projects; references will be contacted. Project Team members must be key members on the references; references which are for the company but which the proposed team members were not key members will not qualify.</p>
Firm	15	<p>Experience in providing Professional Project Management services for water treatment facilities design and construction; required registration; and satisfactory performance on similar completed projects (First Nation, government and private sectors).</p> <p>Project Management companies with local experience will be scored more favourably.</p>

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Methodology	20	<p>The methodology proposed for the performance of the work in accordance with the Terms of Reference. This includes the management section and proposed skills transfer to the First Nation.</p> <p>The Project Manager should provide a narrative description of the proposed methodology to implement the mandate. The proposed methodology should clearly articulate the Consultant’s understanding of the mandate and should address the following:</p> <ul style="list-style-type: none"> • Understanding of First Nation context (in general, and more specifically of First Nations affected by this RFP); skills transfer • Plans/processes for conducting the work, including methods employed for collecting and analyzing information • Communications strategy/consultation with the First Nation • Project Management methodology, including QA/QC, schedule, and cost control <p>A demonstration that the Project Manager understands the goals of the project, the functional/technical requirements, the constraints and the issues that will shape the end product, the selection of resources, and the way the services are to be delivered.</p>
Time Limits & Work Schedule	10	The proposed schedule for the work: management of the work, delegation of responsibility, work plans, schedule and cost control, reporting, and quality control.
SUBTOTAL	/ 80	
Cost of Services	20	The Consultant's fee proposal as submitted on the cost of services form in a separate cost envelope.
TOTAL	/ 100	

7.3 Proposal Scoring

Each proposal will first be evaluated for meeting the mandatory requirements. Those meeting the mandatory requirements will be evaluated in accordance with the following procedure:

1. Each technical proposal will first be evaluated separately by each member of the evaluation team using the point system above, excluding the cost of services portion. A score out of the total assigned value for each criterion, excluding cost of services, will be assigned. These will be summed for a sub-total out of 80.
2. After all team members have completed step 1, a meeting is convened to discuss the proposals. A consensus is reached on each and every criterion for each technical proposal. Consultants may be contacted for clarification.
3. The cost envelopes are opened for all proposals attaining 60 points out of a total possible 80 (75%) of the technical evaluation portion. The proposals that fail to achieve the minimum technical score will be rejected. The Project Team reserves the right to reject the Proponent's proposal, and the cost portion email will remain unopened.
4. The total points awarded for cost will be awarded based on the ratio method. With this method, the proposal with the lowest cost receives the maximum points allowed. All other proposals receive a percentage of the points available based on their cost relationship to the lowest. This is determined by applying the following formula:

Awarded Points = (Lowest Cost) / (Cost Being Evaluated) x Maximum Points Available (20 Points)

Example: The cost for the lowest proposal is \$100,000.

The next lowest proposal has a cost of \$125,000.

The maximum points available for cost is 20 points.

$\$100,000 / \$125,000 \times 20 \text{ points} = 16 \text{ points}$.

5. The terms of the contract will be negotiated with the Consultant having the highest total score (combined technical and financial score). Should negotiations be unsuccessful, the Consultant with the second highest score will be contacted. This procedure will be continued until a contract is finalized.

The evaluation team will make the selection of the recommended Consultant, not necessarily using the lowest bid as their first consideration. Where the ratio method is deemed inappropriate for use in awarding points for cost by the evaluation team due to unique circumstances, an alternative cost evaluation process may be utilized.

The evaluation team will complete the evaluation and recommend to the First Nation Chief and Council a PPM who should be awarded the contract.

Selection and acceptance of the successful Project Manager’s proposal does not represent an obligation by the First Nation to automatically award work to this Project Manager for all phases of this project. See Section 5.0 – Project Manager Contract Agreement for further details.

8.0 Proposal Submission

8.1 Proponent Questions

The last day for questions or requests for background information is September 21,, 2020 at 4 PM EST. Questions or requests for background information per *Appendix 2* should be directed to:

Drew Hill
Ontario First Nations Technical Services Corporation (OFNTSC)
E-mail: drew@ofntsc.org

8.2 Proposal Submission

The proposals are to be emailed and must be received by September 25, 2020 at 4:00 pm EST to the attention of Drew Hill at drew@ofntsc.org.

This proposal is a “two envelope system”, to be titled as the "Management Section" and the "Cost Section". All information related to cost is to be contained in the cost section only and provided in a separate, password-protected email. The Consultant shall submit an electronic PDF copy of their “Management Section” and an electronic PDF copy of their “Cost Section” in separate emails. The cost section shall be password protected. If the Proponent’s proposal achieves the minimum technical scoring, the Proponent will then be asked for the password.

It is the Proponent’s responsibility to ensure that the proposal, along with any applicable attachments, have been submitted and received by the email date. For consistency, www.timeanddate.com will be used as the official clock for receipt of proposals. The Client/Owner will not accept submission of any proposals after the closing date and time. Failure to submit proposals by the date and time specified shall result in disqualification of the proposal. Late proposals will not be accepted and will be returned, unopened. Each Proponent alone bears the responsibility for delivery of the proposal by the stipulated date and time. No fax transmissions will be accepted.

No alteration to the Proponent’s proposal will be accepted after the proposal submission due date, except as provided for herein. A proposal may be withdrawn by a Proponent by means of a written request delivered to the issuing office prior to the proposal submission’s due date and time.

Each Proponent shall be solely responsible for examining all the RFP documents, including any addenda issued during the RFP period, and shall be deemed to have satisfied itself of the sufficiency of its lump sum price for the services.

Each Proponent shall review all the RFP documents, and shall promptly report and request for clarification of any discrepancy, deficiency, ambiguity, error, inconsistency, or omission contained therein. Where such a request results in a change to the requirements of this RFP, the Owner will prepare and issue an addendum to this RFP.

Proponents shall not make verbal inquiries to staff with respect to this RFP. Information given orally by staff will not be binding on the Owner, nor will it be construed as a factor in the evaluation of the proposals.

By submitting proposals, Proponents authorize the Owner to conduct reference checks.

Appendix 1 – Figures

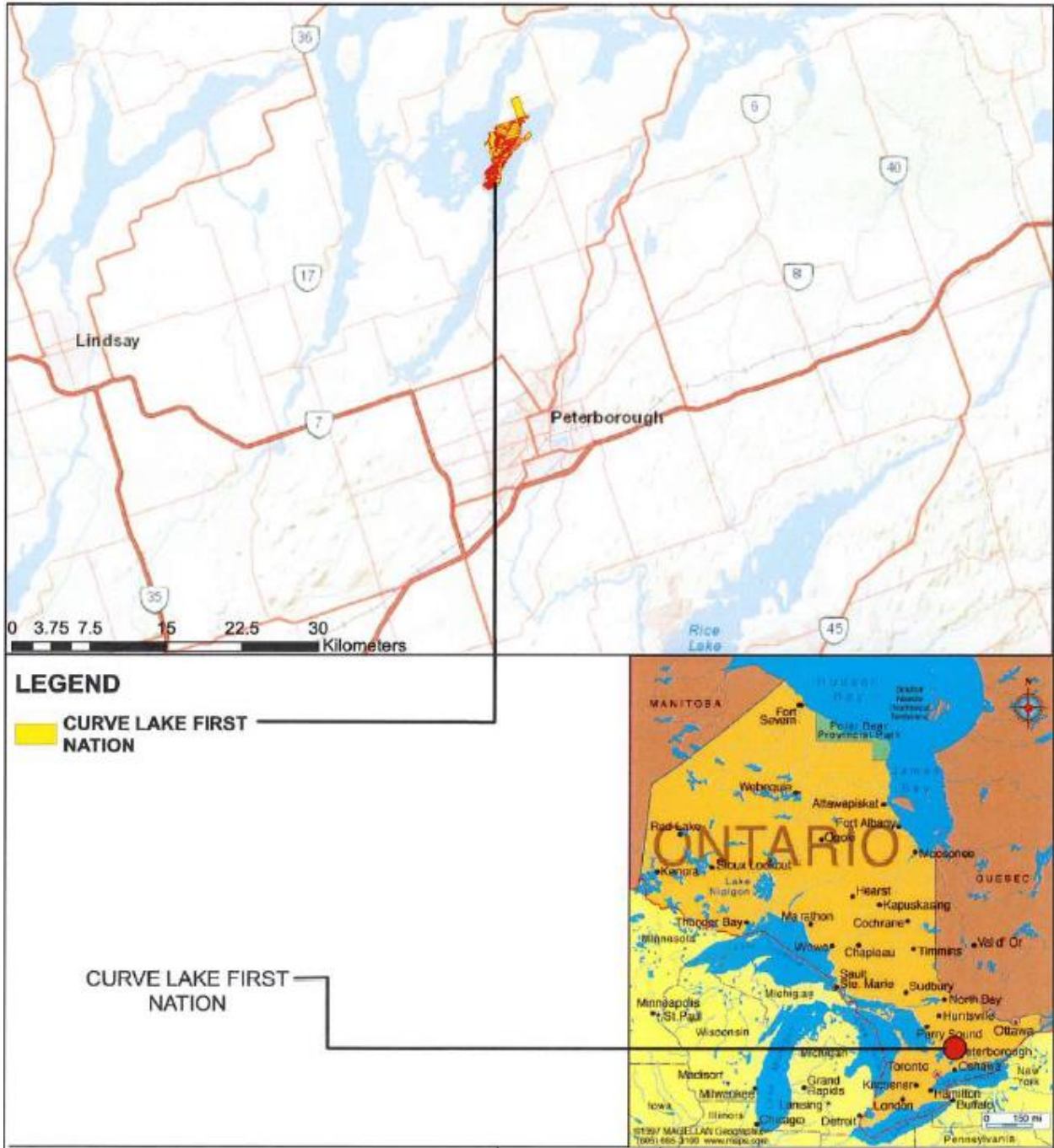


Figure 1 - Community Location Plan

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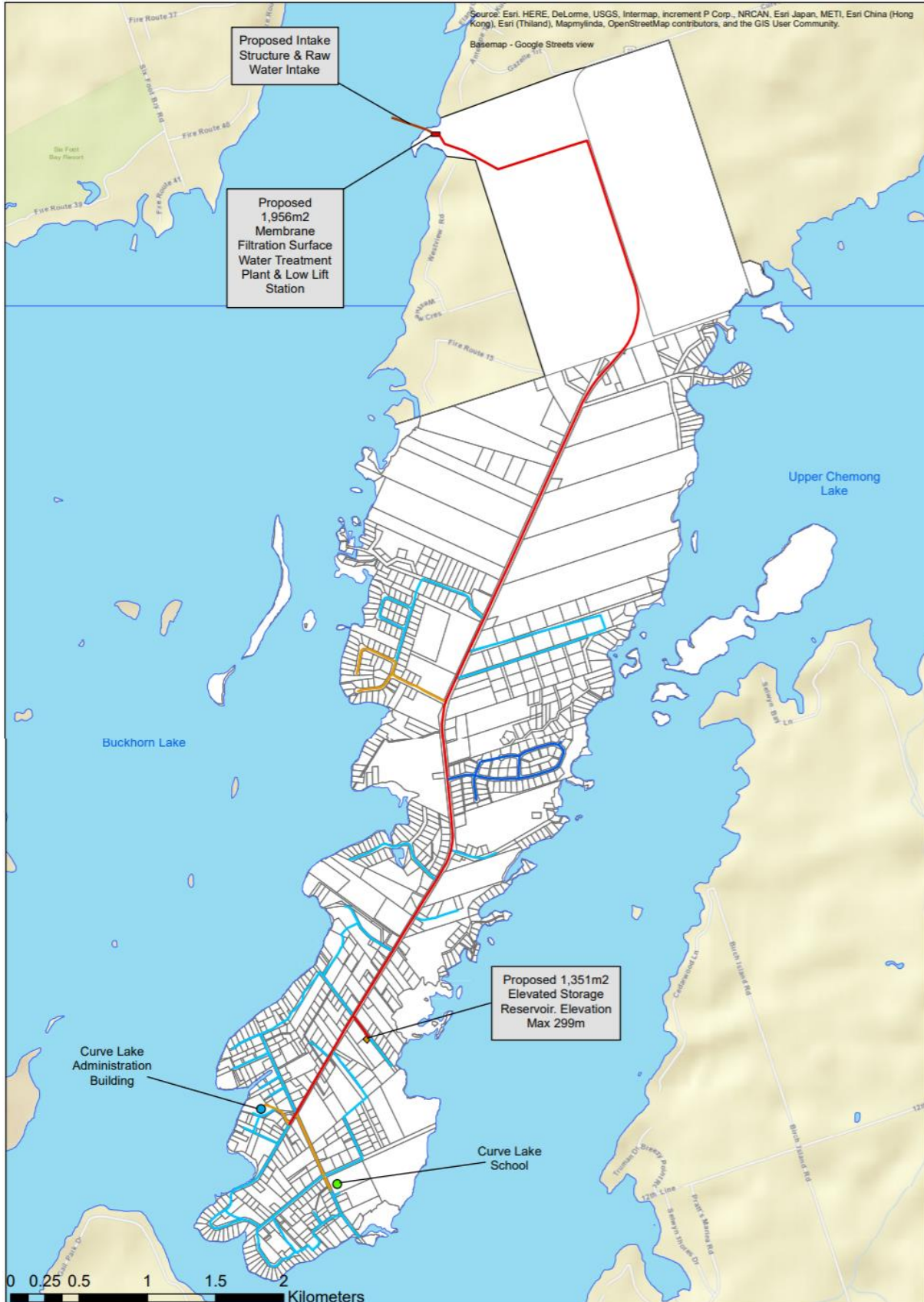


Figure 2 – Proposed Water Treatment Facilities

Appendix 2 – Relevant Documents

List of Previous Studies

The following documents were used as references in this preliminary TOR document. They can be accessed by request to drew@ofntsc.org.

- Curve Lake First Nation Capital Planning Study (Neegan Burnside Engineering & Environmental Ltd., 2009)
- Engineering Assessment – Curve Lake Nishnawbeke Subdivision Water System (Henderson Paddon & Associates Ltd., April 2004)
- Aquifer Evaluation Report – Potential Communal Water Supply Well #'s 1 to 10 – Curve Lake First Nation (Henderson Paddon & Associates Ltd., August 2006)
- Assessment of Water from Near Shore (Buckhorn Lake) Wells at McIlmoy Point, Curve Lake First Nation (GENIVAR Consultants LP, December 2009)
- Curve Lake Comprehensive Community Plan (Crane Aboriginal Management Services, 2009)
- Private Well Survey, Two New Monitoring Wells, and Additional Hydrogeological Assessment of Well Field, Curve Lake First Nation Communal Water System (GENIVAR Consultants LP, October 2010)
- Pilot Testing of Water Treatment Systems for Slow Sand Filtration and Macrolite Pressure Filtration, Well #10 (GENIVAR Consultants LP, October 2010)
- Final Water Feasibility Study (GENIVAR Consultants LP, December 2010)
- National Assessment of First Nation Water and Wastewater Systems – Curve Lake First Nation (Neegan Burnside Ltd., December 2010)
- Curve Lake First Nation New Water Treatment Plant and Water Supply Project Value Engineering Report (Faithful + Gould, January 2017)
- Hydrogeological Investigation: Proposed Communal Well System – Well Performance Testing and Water Quality Analysis (Oakridge Environmental Ltd., January 2018)
- Curve Lake First Nation Water Treatment System Feasibility Study Final Report (First Nations Engineering Services Ltd., May 2020)

List of Applicable Regulations, Standards, and Guidelines

The project must be developed and implemented in accordance with the more stringent of provincial and federal guidelines, standards, or regulations. Some, but not all, of which may include:

- Ontario Drinking Water Standards, Objectives, and Guidelines, Ministry of Environment, Conservation, and Parks (MECP)
- Procedure for Disinfection of Drinking Water in Ontario, Ministry of Environment, Conservation, and Parks (MECP)
- Ontario Regulation 169/03: Ontario Drinking Water Quality Standards
- Ontario Regulation 170/03: Drinking Water Systems
- NSF Standards:
 - NSF 60 - Drinking water treatment additives - Health effects
 - NSF 61 - Drinking water system components - Health effects

- NSF 53 - Drinking water treatment units - Health effects
- NSF 55 - Ultraviolet microbiological water treatment systems
- NSF 58 - Reverse osmosis drinking water treatment systems
- NSF 62 - Drinking water distillation systems
- Health Canada Guidelines for Canadian Drinking Water Quality
- Health Canada Turbidity Guideline
- Guidance for Providing Safe Drinking Water in Areas of Federal Jurisdiction
- INAC Design Guidelines for First Nation Water Works
- INAC Water and Wastewater Policy and Level of Service Standards (Corporate Manual System)
- INAC Protocol for Centralized Drinking Water Systems in First Nations Communities
- INAC Protocol for Decentralized Water and Wastewater Systems in First Nations Communities
- INAC Level of Service Standards (LOSS) Fire Protection
- Protocol for INAC Funded Infrastructure
- HC Procedure for Addressing Drinking Water Advisories in First Nation Communities South of 60°
- Ontario Drinking Water Standards
- Ten State Standards — Recommended Standards for Water Works. Great Lakes – Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers
- Ontario Drinking Water Protection Regulation
- Health Canada Regulations
- Environment Canada Regulations
- Design Guidelines for Drinking-Water Systems (MECP)
- Design Guidelines for Sewage Works (MECP)
- Project Implementation Procedures Manual (PWGSC— CST for INAC— PIPM)
- National Building Code of Canada
- Ontario Building Code
- National Energy Code of Canada
- Any other applicable federal, provincial, and other regulatory agency requirements

Appendix 3 – Operator Training Action Plan

Operator Training Action Plan (OTAP)

In a collaborative effort to ensure that water systems are operated and maintained by skilled and certified operators, the Project Manager will work with the Curve Lake First Nation, in consultation with ISC, to develop an Operator Training Action Plan (OTAP). The intent of this plan is to ensure that once a new or upgraded water treatment system is commissioned, the operator has sufficient education, knowledge, and skills to operate and maintain the facility in a sustainable manner and in accordance with applicable regulations, standards, and guidelines. The OTAP will support a sustainable approach for continued public safety by maintaining skilled and adequately certified operators.

The plan shall be developed in coordination with the design and construction of the new communal water treatment system. In developing the OTAP, the Project Manager shall ensure that water system training is completed in consort with the overall project activities. Training and education may include formal and informal training. In instances where potential risks to success are identified, the Project Manager is to identify such risks and a mitigation plan must be included in the OTAP. A section for continuing skills development (post-commissioning) should also be considered in consultation with the Curve Lake First Nation.

Proposed certification, skills, and training activities must support the operator(s) to attain specific knowledge of the new communal water treatment plant and water distribution system with reference to Indigenous Services Canada (ISC)'s Protocol for Centralized Drinking Water Systems in First Nation Communities as well as other applicable guidelines, standards, and regulations; including those of the Ontario Ministry of Environment, Conservation, and Parks (MECP). Training opportunities shall include, as a minimum:

- Certification requirements
- Water treatment facility design
- Water treatment processes
- Water distribution systems
- Water sampling
- Operation and maintenance procedures
- Maintenance management plans
- Emergency response plans

Training activities should specify how the operator(s) will be fully proficient and certified (where applicable) with the new water treatment facilities upon commissioning. Programs offered by the Government of Canada or Government of Ontario which may support the achievement of expected results in the OTAP should be considered where reasonable (i.e. grants and contribution funding). Modes of training may include, but are not limited to, the following:

- Skills enhancement through work experience;
- Participating in training courses provided by an accredited institution;
- Continuing education (high school diploma or equivalent) and exam preparation and/or certification examinations; and

- Participation in CRTP on-the-job training and/or regional training sessions.

Appendix 4 – Cost of Services Form

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COST OF SERVICES FORM (to be provided in a separate envelope)

Location of Work: Curve Lake First Nation, Ontario

Description of Work: Professional Project Management Services for Curve Lake First Nation
 Water Treatment and Distribution System Project

	PHASE	FEES	DISBURSEMENTS	TOTAL
1	Project Initiation / Engineering Consultant Selection	\$ _____	\$ _____	\$ _____
2	Conceptual Design	\$ _____	\$ _____	\$ _____
3	Detailed Design	\$ _____	\$ _____	\$ _____
4	Issue TOR, retain Value Engineer and participate in two Value Engineering Sessions	\$ _____	\$ _____	\$ _____
5	Third Party Value Engineering Workshop Costs (Allowance)			\$50,000
6	Third Party Operator Review (Allowance)			\$ 10,000
7	Third Party PQS to Complete a Class A Pre- Tender Estimate (Allowance)			\$ 70,000
8	Operator Training Action Plan (OTAP) (Provisional)	\$ _____	\$ _____	\$ _____

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9	Business Case (Provisional)	\$ _____	\$ _____	\$ _____
10	Tendering (Provisional)	\$ _____	\$ _____	\$ _____
11	Construction – based on 24 month construction schedule (Provisional)	\$ _____	\$ _____	\$ _____
12	Additional Month(s) of Construction Duration (Provisional)	\$ _____	\$ _____	\$ _____
13	Completion Reporting (Provisional)	\$ _____	\$ _____	\$ _____
14	Warranty (Provisional)	\$ _____	\$ _____	\$ _____
15	Additional Required Project Team Meetings (Provisional)	\$ _____	\$ _____	\$ _____
16	Credit for a meeting to be held via conference call instead of on-site meeting (Provisional)	\$ _____	\$ _____	\$ _____
TOTALS		\$ _____	\$ _____	\$ _____

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Name of Firm: _____

Address of Firm: _____

Signature of Consultant: _____

Position/Capacity: _____

Appendix 5 – ISC Completion Report

COMPLETION REPORT

The completion report shall be bound in either 220mm x 280mm or 220mm x 360mm sizes and shall contain at least the following:

1. Summary/Introduction

Provide a summary to introduce the project. It should contain:

- i) the project title, location and number, and the contract number;
- ii) a brief description of the purpose of the project;
- iii) a brief description of the existing facilities and history of the project;
- iv) a brief description of the project including the size and number of units constructed; and
- v) a brief description of the implementation method used on the project (contract, day labour, etc.).

2. Project Team

- i) the name and address of the project management agency;
- ii) the name and address of the design agency;
- iii) the name and address of the firm in charge of inspecting the construction;
- iv) the name and address of the contractor(s); and
- v) the name of the ISC Project Engineer, ISC Regional Senior Program Officer, and First Nation Project Coordinator.

3. Schedule, Cost, and Cash Flow

- i) the principal dates and project schedule (i.e. date of the contract award, construction start-up, completion, etc.);
- ii) a brief breakdown of the project costs including cost of planning, design, construction, project management, band co-ordination, change orders, inspections, as well as a total cost; and
- iii) a brief breakdown of the cash flow.

4. Design and Construction

- i) a brief description of the design methodology and process;
- ii) a brief description of the project construction highlighting areas of special interest; and
- iii) deficiencies, problems, or outstanding issues on the project, contractor performance, conditions, and items effecting schedule or completion.

5. Employment, Resources, and Training

- i) a summary of band member employment throughout the project, specifying the occupations, number of jobs created, level of experience of employees both before and after employment, effect on project, and difficulties;

- ii) a summary of band resources employed throughout the project, including the resources used, level of use, effect on project, and problems; and
- iii) a summary of the training programs provided for First Nations (including those under OTAP, if applicable) highlighting areas of training, level of training provided, effectiveness of training, numbers of persons trained in each area, cost of training, level of expertise attained, and future training requirements.

6. Conclusions/Recommendations

- i) a review of how the project proceeded, comments on sections that went good or poorly, and how things could be improved if project was to be repeated.

7. Appendices

The following appendices will be provided:

- i) as-built project site plan in 220mm x 280mm format;
- ii) the electrical inspection certificates;
- iii) copies of approvals or acceptance certificates from regulatory agencies;
- iv) copy of all warranties;
- v) copies of all testing, certification, and verification for the constructed facilities;
- vi) as-built drawings;
- vii) summary of all project costs;
- viii) final progress claim and articles of agreement;
- ix) completion certificates;
- x) project photos as they relate to the project; and
- xi) certificates and results from materials testing.

*** This is the last page in this Terms of Reference ***