

TERMS OF REFERENCE

DESIGN ENGINEERING SERVICES

FOR

THE WATER TREATMENT AND DISTRIBUTION SYSTEM PROJECT

FOR

CURVE LAKE FIRST NATION

ISC PROJECT: CRJYT

November 2020

First Nation: Curve Lake First Nation

Prepared By: Curve Lake First Nation

Proposal Due Dates: December 18, 2020 @ 4:00 EST (Digital E-Mail Submissions, Technical Section and Password Protected Cost Section)

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only):

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1. Terms and Conditions

1.1. Proponents' Terms and Conditions

1.1.1. Proponents' Responsibility

It is the responsibility of each Proponent to inquire about and clarify any requirements of this Request for Proposals (RFP), which are not understood prior to the closing date and time of the RFP to ensure that the Proponent has a comprehensive understanding of the project and that their Proposal includes all aspects as per the intent of the project.

Proponents must obtain their own information on all matters and things that may, in any way, influence them in making their Proposals and fixing prices.

Proponents must determine the sufficiency of the information presented and identify/obtain any additional information, as well as perform any studies, analysis, or investigations as deemed necessary in order to deliver the requirements of this assignment.

All requirements including designs, documentation, plans, and information viewed or provided to Proponents in connection with this RFP are the property of the Owner and must be treated as confidential and not used for any purposes other than replying to this RFP and the fulfillment of the contract. Upon request of the Owner, all original designs, documents, plans, and information shall be returned to the Owner.

Proponents must satisfy themselves in all respects as to the risks and obligations to be undertaken by them.

By submitting a Proposal, the Proponent accepts that they understand the scope of the project and their proposed work and cost submitted will fulfill the full intent of the project.

1.1.2. Non-Collusion

Proponents **shall not discuss or communicate** with any other Proponents about the preparation of their Proposals. Each Proponent shall participate in the RFP process fairly and without collusion or fraud.

1.1.3. No Liability for Expenses

All Proposals shall be prepared by and at the expense of the respective Proponent. The Owner will not be liable for any loss or damage suffered by any Proponent including, without limitation, any expenses incurred in the preparation and submission of the Proposal.

1.1.4. Irrevocable Offer

Proposals submitted to the Owner shall constitute a valid and irrevocable offer which is open for acceptance by the Owner from and after submission until the expiration of the 90th day following the Closing Date specified in Section 2.1.

The RFP does not create a tender process. This RFP is not an invitation for an offer to contract and is not an offer to contract made by the Owner. By this RFP, the Owner reserves to itself the right, in its sole and absolute discretion, to consider and analyze the Proposals, select a preferred Proponent and negotiate with all or any of the Proponents both before and after award and sign an agreement with the preferred Proponent or not sign an agreement at all.

Without limiting the generality of the foregoing, the Owner reserves the right to a) reject any Proposal whether or not complete and whether or not it contains all the required information; b) require clarification of the Proposal; c) request additional information on any Proposal; d) reject any and all Proposals without any obligation of compensation or reimbursement to the Proponents; e) re-advertise for new submissions or Call for Tenders for this work or the work of a similar nature; f) negotiate with any one or more of the Proponents with respect to any aspect of the RFP, this process, mandatory requirements, or otherwise with respect to the Proposal; g) the Owner may, in its sole and absolute discretion, independently verify any information in any submission.

Wherever the words “will”, “shall” or “must” are used in this RFP, the Owner will have the option of waiving this as a mandatory requirement as it is intended the Proposals be subject to review and negotiation and not all options may be known to the Owner at this time. Therefore, the Owner must have the ability to waive what otherwise appear to be mandatory requirements in the appropriate situation as determined by the Owner.

The lowest priced or any Proposal will not necessarily be accepted.

1.1.5. Clarification of Proposals/Verification of Information

The Owner, without liability, cost, or penalty, may, in its sole discretion at any time after Proposal submissions, seek clarification from any Proponent, either in writing or during any meetings or presentations or interviews with respect to its Proposal. Without limiting the generality of the foregoing, the Owner may, in its sole discretion, request a Proponent to confirm in writing any statement made by the Proponent during any presentation or demonstration, in which case the Proponent will promptly provide such written confirmation to the Owner within the time specified by the Owner. Any written information received by the Owner from a Proponent in response to a request for clarification from the Owner shall be considered an integral part of the Proponent's Proposal. Without prejudice to its right, the Owner may request clarification if any Proponent's intent is unclear or the Proposal is unclear or the Owner may waive or request amendments where, in the opinion of the Owner, there is an irregularity or an omission in the information submitted in the Proposal.

The Owner may verify any Proponent's statement or claim for whatever means the Owner deems appropriate, including contacting references other than those offered by the Proponent. The Owner may reject any Proponent's statement or claim if, in the judgment of the Owner, the statement or claim is unwarranted or not credible. The Proponent shall cooperate with the Owner in its attempt to verify any such statement or claim.

In the event that the Owner receives information at any stage of the evaluation process which results in earlier information provided by the Proponent being deemed by the Owner to be inaccurate, incomplete, or misleading, the Owner reserves the right to revisit the Proponent's compliance with the Mandatory Requirements and/or adjust the evaluation or scoring of the Proposal.

1.1.6. Selection Process

Because the Owner bases any decision to award a contract on the Proposals submitted, Proponents should include all requirements, terms, and conditions it may have in their Proposal, and should not assume that any opportunity will exist to add such matters after the Proposal is submitted.

The Owner reserves the right, at its sole discretion, to negotiate with any Proponent as it sees fit, or with another Proponent or Proponents concurrently. In no event will the Owner be required to offer any modified

terms to any other Proponent. The Owner shall incur no liability to any other Proponent as a result of such negotiations or modifications.

The Owner shall have the right to negotiate with each and every Proponent the terms and conditions of their Proposal, the details of the contract, and the inclusion or exclusion of all or any portion of the work called for under the proposed services in this RFP. Negotiations may take the form of adding, deleting, or modifying requirements to obtain the best possible price. There is no obligation to negotiate with only one Proponent to the exclusion of the other Proponents.

1.1.7. Execution of Agreement

The successful Proponent will be required to comply with the fully executed agreement with the Owner after acceptance by the Owner. Any subsequent changes to the contract will be made only in writing.

The placing in the mail to the address given in his/her submission or delivery of a notice of award to a Proponent shall constitute notice of acceptance of contract. This acceptance shall be conditional on the Proponent providing all documentation, insurance, bonding, security, and certifications as required by the RFP within ten (10) working days of the date that the notice of award is placed in the mail or delivered to the Proponent. The Proponent shall forthwith, within ten (10) working days of receipt thereof, execute the Agreement incorporating the terms and conditions of this RFP and such other terms and conditions as the Owner shall reasonably require.

1.1.8. Failure to Execute Agreement

In the event that a Preferred Proponent fails to enter into and duly execute the written Agreement within the prescribed time, the Owner reserves the right, at its sole discretion, exercising reasonably, to award this Assignment to another Proponent, not to accept any Proposal, or to call for new Proposals, and the defaulting Preferred Proponent shall be liable for all losses, damages, costs, and expenses (including consequential losses and damages, and legal fees on a solicitor and client basis) suffered or incurred by the Owner as a direct or indirect result thereof, including, but not limited to, any increase in the price of performance over the price submitted by the defaulting Preferred Proponent in its Proposal.

1.1.9. Limitation of Liability

In no event shall either party be liable to the other for indirect or consequential damages, damages for loss of profit, revenue, or reputation, or other indirect damages arising out of the breach or fault or negligence of either party under the terms of this RFP or any agreement arising therefrom. Clauses that limit the liability of the Proponent with the proposal are not acceptable.

Each Proponent, by submitting a Proposal, agrees that:

- 1) In the event that any or all of the Proposals are rejected or disqualified for any reason, proper or improper, or the Project or selection process is modified, suspended, or cancelled for any reason, neither the Owner or its members, employees, officers, directors, or representatives will be liable under any circumstance for any claim, damages, losses, cost, reimbursement, or compensation to any person or entity whatsoever arising out of this Proposal, including, but not limited to, the cost of preparation of the Proposal, loss of anticipated profits, loss of opportunity, and any other matter;
- 2) The Proponent hereby waives any claim for loss of profits or loss of opportunity if the Proposal is rejected or disqualified or the Proponent is not successful in the selection process for any reason whatsoever; and
- 3) The Proponent acknowledges that in evaluating the Proposals, the Owner and its advisors are

seeking a Proposal satisfactory to the Owner and under no obligation to the Proponent to do anything other than bona fide consider all Proposals.

In the event that the Owner shall be in default under this RFP or the Agreement, or shall be negligent in the performance of its duties under this RFP or the Agreement, or shall be in default of any legal, contractual, or statutory obligation to the Proponents, then in no event shall there be any liability to the Owner, its members, employees, officers, directors, advisors, or representatives in excess of the actual out-of-pocket costs incurred by the Proponent in preparing the Proposal of such Proponent and no claim shall be made if not made within six (6) months after the date of receipt of all of the Proposals and opening of the Proposals.

Award of this contract is subject to appropriate funding acceptable to the Owner being available and received by the Owner.

1.1.10. Non-Compliance

The Owner's determination of non-compliance will be based on the contents of the Proposal itself. A Proposal that is compliant is one that conforms to all the terms, conditions, TOR, addenda, and other requirements of the RFP without arithmetic errors, material deviation, irregularity, reservation, or omission.

The Owner reserves the right to waive a non-compliance with the requirements of the RFP where the non-compliance is minor or inconsequential. The determination of what is or is not a minor or inconsequential non-compliance, and the determination of whether to waive or not waive the non-compliance, shall be at the Owner's sole discretion.

The Owner may request the Proponent to submit the necessary information or documentation, within a reasonable period of time, to rectify non-compliances or omissions in the Proposal related to documentation requirements. Such omission shall not be related to any aspect of the price of the Proposal. Failure of the Proponent to comply with the request may result in the rejection of its Proposal.

1.1.11. Requirements from the Joint Venture

"Joint Venture" is a collaborative undertaking by two or more firms for which the participant firms are equally and fully (both jointly and individually) responsible. A Joint Venture is limited to one (1) Proposal. A firm in a Joint Venture may form a Joint Venture with another firm and can provide a Proposal under that Joint Venture. For a Joint Venture, the following information must be provided:

- 1) Undertaking that the Service Providers in a Joint Venture will be working as equal partners for the purposes of this Assignment.
- 2) Specialties/areas of work that each individual Service Provider will be responsible for.
- 3) Lead firm for the Owner contact for the purposes of this Assignment. The Owner will deal with the Lead firm on the contractual matters.
- 4) Name, title, and telephone number of the Principal of the Lead firm who will serve as the main contact for the project. The Principal must have been empowered to sign the Agreement with the Owner and make decisions on behalf of the Joint Venture for the Service Provider firm on contractual matters.
- 5) Each Service Provider firm in a Joint Venture is responsible for the delivery and quality of work for the purposes of this Assignment.
- 6) At the award of an Assignment, the Agreement Offer shall be signed by and shall be binding on all firms in a Joint Venture. All provisions and obligations of the Agreement shall apply equally to all Joint Venture Service Provider firms. In case of a breach of the Agreement, all the Service Providers may receive an infraction and related sanction.

- 7) Each firm in a Joint Venture are responsible for a completed and signed Declaration for No Conflict of Interest.

1.2. Service Provider's Terms and Conditions

1.2.1. General Conditions

The Owner shall be responsible for ascertaining the availability of all information prior to the start of the project and for determining the procedures to be followed during the project.

The Owner will provide as much information as possible; however, they cannot verify its accuracy or completeness. Information may include data and relevant reports. The Service Provider shall return, in good condition, all materials supplied by the Owner after completion of the project.

The Service Provider and the Owner's Project Team shall maintain regular direct contact during the course of the project.

1.2.2. Contract Responsibilities

The Service Provider agrees to enter into a contract with the Owner for the work as outlined in the Request for Proposal up to the accepted maximum limit as submitted by the Service Provider.

The Service Provider agrees to carry out the work in accordance with an accepted schedule presented in the Proposal and to submit monthly reports of physical and financial progress and milestones completed.

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

The Service Provider agrees to provide complete and comprehensive professional services in the specialty fields required to carry out the work, including any sub-consulting works.

1.2.3. Privileged Information

Any information made available to the Service Provider related to the project shall be treated as privileged and confidential by the Service Provider except where the nature of the project requires the release of such information or where such release is authorized by the Owner.

1.2.4. Property of Documents and Copyright

All materials developed and reports made in connection with the project shall become the property of the Owner and must be turned over with full copyright to the Owner upon completion of the project. This includes all digital files in their original format. The Service Provider shall not divulge or use such material other than in performing the services under the contract.

1.2.5. Terms and Schedule of Payments

As funding is provided primarily from the federal government, any funding and payments thereunder will be subject to the requirements of such program and contracts with the Owner.

Payment by the Owner shall be based on the Service Provider's submission for fees and expenses, supported by time sheets and invoices for actual expenses incurred. A format for invoicing will be agreed by the Owner's Project Team, based on past practices. In general, invoicing should identify staff, rate, and hours for the period. Actual sub-consultant invoices and receipts for disbursements should also be provided.

Payment of fees and reimbursable expenses for services performed by the Service Provider for which the fee is calculated on a percentage of the cost of the work completed, shall be made within 30 days upon receipt of his/her acceptable statement of account by the Owner. The monthly fee shall be based on the Service Provider's monthly progress estimate pro-rated on the basis of the amount of the study completed, applied against the Service Provider's upset limit, as well as the current amount of disbursements incurred.

1.2.6. Invoicing

The Service Provider shall submit two (2) copies of each invoice to the Owner's Project Coordinator on a monthly basis. Invoices shall also be provided in digital format to the Owner's Project Team including Indigenous Services Canada (ISC). Invoices shall include all time and charge-out rates, expenses, and disbursements, including any mark-up for sub-Service Providers.

The Service Provider shall record and document the cost for each allowance item separately. The Service Provider invoice shall have a separate charge for each allowance item. At no time shall the costs for the Consulting Services be exceeded without prior written authorization of the Owner's Project Team.

The Engineer shall record and document the cost for each cash allowance item separately. The Engineer's invoice shall have a separate charge for each allowance items as per the cost of services form.

1.2.7. Contract Cancellation

The Owner shall have the right, which may be exercised from time to time, to cancel any uncompleted or unperformed portion of the work or part thereof without cause or fault. In the event of such cancellation, the Owner shall pay to the Service Provider the cost and expenses by the Service Provider in performing that portion of the work completed up until the date of cancellation.

The Owner may:

- 1) If the Service Provider; commits any act of bankruptcy; or if a receiver is appointed on account of its insolvency or in respect of any of its property; or if the Service Provider makes a general assignment for the benefit of its creditors; then, in any such case, the Owner may, without notice, terminate the contract.
- 2) If the Service Provider; fails to comply with any request, instruction, or order of the Owner; or fails to pay its accounts; or fails to comply with/disregards statutes, regulations, by-laws, or directives of relevant authorities relating to the work; or fails to prosecute the work with the skill and diligence; or assigns or sublets the contract or any portion thereof without the Owner's written consent; or refuses to correct defective work; or is otherwise in default in carrying out its part of any of the terms, conditions and obligations of the contract, then, in any such case, the Owner may, upon expiration of ten (10) days from the date of written notice to the Service Provider, terminate the contract.
- 3) Any termination of the contract by the Owner, as aforesaid, shall be without prejudice to any other rights or remedies the Owner may have.
- 4) If the Owner terminates the contract, it is entitled to:
 - a) Take possession of all of the work in progress and finish the work by whatever means the Owner may deem appropriate under the circumstances;
 - b) Withhold any further payments to the Service Provider until its liability to the Owner is ascertained;
 - c) Recover from the Service Provider losses, damages, and expenses incurred by the Owner by reason of the Service Provider's default (which may be deducted from any monies due or becoming due to the Service Provider, any balance to be paid by the Service Provider to the Owner).

The Owner shall not be liable to the Service Provider for loss of anticipated profit on the cancelled portion or portions of the work.

1.2.8. Subcontracting Services by the Service Provider

Sub-contracting by the Service Provider shall not be construed to relieve the Service Provider from any obligation under this Assignment or impose any liability upon the Owner. Nothing contained in the assignment documents between the Service Provider and its sub-service provider, shall create a contractual relationship between a Sub-Service Provider and the Owner.

1.2.9. Indemnification

The Service Provider shall indemnify and save harmless the Owner, its employees, contractors, agents, and assigns (collectively, the "Indemnities") from and against any and all Claims of any nature whatsoever and howsoever caused resulting from or relating to:

- 1) any breach, violation or non-performance by or on behalf of the Service Provider of any covenant, obligation or agreement of the Service Provider contained in this Agreement, including any warranty (express or implied);
- 2) any negligent acts or omissions or willful misconduct by or on behalf of the Service Provider relating to the Services;
- 3) any acts performed or omitted to be performed (including, without limitation, any negligent acts or omissions) by or on behalf of the Service Provider beyond the authority of the Service Provider hereby conferred;
- 4) any inaccuracy in or breach of any of the representations or warranties of the Service Provider contained in this Agreement or any document or certificate prepared by or on behalf of the Service Provider given pursuant to this Agreement;
- 5) any claims for personal injury or property damage by third parties, caused by errors, omissions, negligence, willful misconduct, recklessness, or fraud of the Service Provider, its officers, directors, partners, affiliates, agents, or employees in connection with the services; and/or
- 6) all reasonable costs, expenses, and legal fees (on a solicitor and his own client basis) that may be incurred or paid by the Owner in enforcing the terms, covenants, and conditions of this agreement and/or that may be incurred or paid by the Owner in connection with any action, suit, or proceeding with respect to a matter for which the Service Provider is obligated to indemnify the Indemnities, provided that the indemnity obligations of the Service Provider hereunder shall not extend to claims attributable to the negligence or willful misconduct of the Owner.

1.2.10. Replacement of Specific Individuals

If specific individuals including those from Sub-Service Providers are identified in the Contract to perform the Work, the Service Provider must provide the services of those individuals unless the Service Provider is unable to do so for reasons beyond its control.

If the Service Provider is unable to provide the services of any specific individual identified in the Contract, it must provide a replacement with similar qualifications and experience. The replacement must meet the criteria used in the selection of the Service Provider and be approved by the Owner's Project Team. The Service Provider must, as soon as possible, give notice to the Owner of the reason for replacing the individual and provide the name, qualifications, and experience of the proposed replacement.

The Service Provider must not, in any event, allow performance of the Work by unauthorized replacement persons. The Owner may order that a replacement stop performing the Work. In such a case, the Service Provider must immediately comply with the order and secure a further replacement that is approved by

the Owner's Project Team. The fact that the Owner does not order that a replacement stop performing the Work does not relieve the Service Provider from its responsibility to meet the requirements of the Contract.

1.2.11. Workers' Compensation Boards Coverage

The Service Provider, and any Sub-Service Providers, shall provide a certificate of clearance from Workplace Safety and Insurance Board (WSIB) and on the certificate naming the Owner as Principal:

- 1) Prior to award
- 2) Prior to expiration of the contract Period; and
- 3) At any other time when requested by the Owner.

1.2.12. Insurance

The Contract shall be effective only upon approval by Owner of acceptable evidence of the insurance required below. Such insurance shall be in force on the date of execution of the Contract and shall remain continuously in force for the duration of the Contract.

- 1) Commercial General Liability Insurance
 - a) The policy limit shall be no less than two million dollars (\$2,000,000) per occurrence. The Owner and their representatives shall also be named as being covered by the policy. Such general liability insurance shall provide coverage in respect of property damage and/or bodily injury (including death) arising out of any and all services and shall include property damage if the damaged work or the work out of which the damage arises was performed on behalf of the Service Provider by a Sub-Contractor and shall include bodily injury (including death) if the bodily injury (or death) arises out of work performed on behalf of the Service Provider. Such insurance shall contain a cross-liability endorsement.
 - b) The coverage under the policy shall be maintained continuously with respect to the performance of any aspect of the services during the term.
- 2) Professional Liability (Errors and Omissions) Insurance
 - a) The policy shall be in an amount not less than two million dollars (\$2,000,000.00) per claim and in the aggregate insuring the Service Provider. The coverage under the policy shall be maintained continuously during the term and for two years after the termination or expiration of this agreement and shall cover insurable losses arising out of an error or omission in the rendering of or failure to render the services.
- 3) Change in Insurance Coverage
 - a) The insurance coverage cannot be modified without written consent of the Owner's Project Team. It is understood and agreed that the Service Provider shall not change or cancel the insurance coverage provided for this project until 60 days after written notice of such change or cancellation has been personally delivered to the Owner.

1.2.13. Assignment

The Service Provider cannot assign the contract in whole or in part without the prior written consent of the Owner and any assignment made without that consent is void and of no effect. All sub-Service Providers are to be identified.

1.2.14. Changes to the Contract

If requested in writing by the Owner, the Service Provider will make any required changes to the Contract. The Service Provider will advise the Owner's Project Team of any such effect on the time, schedule and budget or any other implications of the changes. Such changes will be incorporated into the Contract by formal change order. No changes required by the Service Provider to remedy errors or other problems attributable to shortcomings of the Service Provider, including persons employed or supervised by them, shall entitle them to additional fees or charges. Rectification of such errors/omissions will be the responsibility of the Service Provider. At no time shall the costs for construction, professional project management, or engineering services be exceeded without prior written authorization of both the Owner and Indigenous Services Canada (ISC).

1.2.15. Change Orders

The Service Provider shall complete the scope of work in the project as set out in this Request for Proposal and the accepted Service Provider's Proposal. The Service Provider shall have no authority to make changes without first obtaining approval from the Owner's Project Team.

In addition, no increase in the contract amount for either fees or disbursements will be permitted unless a request for such additional payment is received in writing by the Owner's Project Team with a full explanation for the reasons therefore, and, a Change Order for such additional payment has been approved by the Owner's Project Team.

1.2.16. Dispute Resolution

Should a dispute arise between the Owner and Service Provider, suggested guidelines for resolution are provided in Section 5 of ISC's CN-1, Construction Contracting Guidelines for First Nations, 2002.

1.2.17. Reserve Access

The Service Provider shall notify and obtain permission from the Owner's Project Coordinator and/or Chief and Council with respect to reserve access for activities relating to this project.

Service Providers shall not enter any private property for whatever reason without the First Nation approval and without first obtaining approval from the owner of the private property. The Consultant shall assume all responsibility for trespassing on private land.

1.2.18. Retention of Records

The Service Provider shall retain all records pertinent to expenditures incurred under the Contract in a legible form for a period of ten (10) years.

1.2.19. Inspection of Records

All Service Provider records with respect to any matters covered by the Contract shall be made available to the Owner or its designees at any time during normal business hours, as often as the Owner deems necessary.

2. Introduction

2.1. Purpose

This Design Engineer Terms of Reference (TOR) defines the scope of services that the Engineer shall perform for Curve Lake First Nation (CLFN) in the undertaking of the design engineering services required during the design, tendering, construction, commissioning, and warranty periods of the proposed Water Treatment And Distribution System Project. This TOR defines the conditions of the engagement. The term “Engineer” shall be used in this document.

Colliers Project Leaders (Colliers) has been retained by CLFN to provide Professional Project Management (PPM) services on behalf of CLFN. Colliers will provide PPM oversight of the Engineer and Contractor, as well as financial reporting on behalf of the CLFN.

Account Management services will be performed by CLFN or a third party representative, to be determined by CLFN. The Account Manager will provide financial services during the design, tendering, construction, commissioning, and warranty phases of the project.

Selection of the Engineer will be by a competitive proposal process, as per the tendering policy of Indigenous Services Canada (ISC), in response to this Terms of Reference. Proposals are requested at this time. The following schedule of activities is provided for planning purposes only. The Project Team reserves the right to cancel the activity or change the schedule. The successful Proponent must submit a digital submission by the specified due date shown below with a password protected cost component.

Request for Proposal:	November 30, 2020
Last Day for Engineer Questions:	December 9, 2020 @ 5:00 PM EST
Proposals Due:	December 18, 2020 @ 2:00 PM EST (Digital Submission – two (2) files; one (1) technical section and one (1) password protected cost section)

Engineer Award:	January 14, 2020
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The Project Team shall be the Evaluation Team involved in the review and selection of the Engineer. The Contract will be between the Engineer and CLFN.

2.2. Basic Community Profile

Curve Lake First Nation is a Mississauga Ojibway First Nation located in the Trent Severn River system, 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 community is approximately 25 km northeast of Peterborough, Ontario. 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). Figure 1 shows the approximate location of CLFN within the province of Ontario. It should be noted, the land where the Water Treatment Plant is proposed to be located is on fee simple lands held by the CLFN. These lands have not been officially been added to the CLFN 'reserve' land base. Portions of the access road, as well

as the distribution piping will cross those lands. These lands are held in fee simple by the CLFN, the project may need permitting from either the Province of Ontario and the Selwyn Township.

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.

According to the Water Treatment System Report, a water feasibility study published by First Nations Engineering Service Ltd (FNESL) in May 2020, the total on-reserve population of Curve Lake First Nation is about 1,057 persons, with 372 band member-owned homes and 208 leased cottages in the community. 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 to be 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 growth.

Adverse water quality and quantity has been a longstanding issue for Curve Lake, evidenced by the two long-term boil water advisories (BWAs) at a small semi-public water system and at the school semi-public water system currently posted within Curve Lake since September 20, 2018. 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.

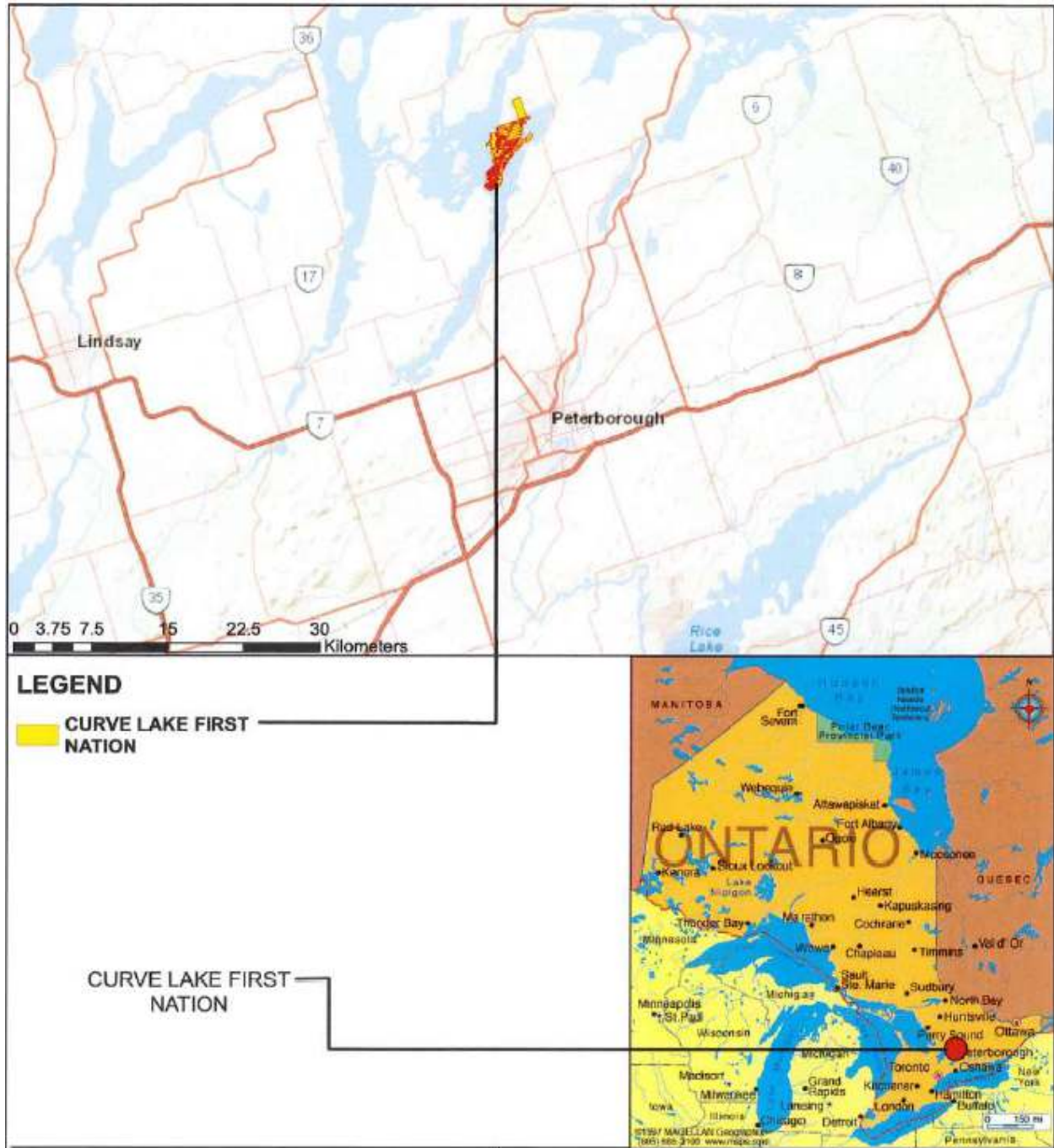


Figure 1 - Community Location Plan

2.3. Existing Water Supply

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).

2.4. 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)

2.5. Project Approval Request (PAR)

The Project Approval Request (PAR) has been submitted and approved by Indigenous Services Canada (ISC). Funding has been approved for the design portion of this project.

2.6. Project Team

The following individuals make up the Project Team:

Table 1.4: Project Team

PROJECT TEAM	
NAME & POSITION	RESPONSIBILITIES
Curve Lake First Nation, Owner Chief & Council	Project concurrence with CLFN requirements
Curve Lake First Nation, Project Coordinator	Project responsibility and liaison on behalf of Chief and Council
Professional Project Manager – Colliers Project Leaders Senior Project Manager – Alper Ozer Project Manager – Sean Petrus Assistant Project Manager – Mackenzie Brown	Overall project responsibility on behalf of CLFN
Design Engineer – TBD	Design, tendering, contract administration, and site inspection services
Account Manager – TBD	Manage project accounts and ensure co-signing requirements
Ontario First Nations Technical Services Corporation Technical Advisor – Drew Hill	Provides technical advice to the CLFN Project Coordinator
ISC, Capital Management Officer	Prime ISC contact; Manages the funding arrangement
ISC, Senior Engineer	Provides technical advice to ISC Regional Senior Program Officer; Reviews project documents
ISC, Environment Services Officer	Provides environmental advice to ISC Regional Senior Program Officer; Reviews project documents
ISC, FNIHB Environmental Health Officer	Provides advice to project team from an Environmental Health perspective
Value Engineering Firm – TBD	Review the water supply options, water treatment facilities, treatment processes, and costs at the 33% and 66% design stages on behalf of the First Nation.
Professional Quantity Surveyor – TBD	Review the final construction cost estimate at the 99% design stage and provide a pre-tender project estimate on behalf of the First Nation.
General Contractor – TBD	Responsible for all construction works of the project.
Other Members – as may be required	Contribute to the project in applicable ways

The primary overall responsibilities of the Project Team are:

- To keep the Chief and Council fully aware of the status and progress of the project.
- To define, confirm, and recommend the scope of work to be performed by all parties.
- To implement the project in accordance with the project schedule and budget.
- To fully implement the project in accordance with project approval documents and in compliance with all applicable regulatory agents.
- To ensure compliance with approved budgets and to take whatever measures are deemed necessary to accomplish the project objectives within approved budgets and schedule.
- 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.
- To ensure the best interests of CLFN are paramount in this project.
- To ensure, where reasonable and within the budget constraints, there is a quantifiable transfer of knowledge to CLFN.

3. Objectives

To provide Curve Lake First Nation with a cost effective design that meets all regulatory requirements including a complete and clear set of contract documents (contract, tender documents, plans, and specifications) in accordance with this Terms of Reference and within specified schedule milestones in this Terms of Reference. The design must adhere to the ISC Level of Service Standards (LOSS).

To provide Curve Lake with a cost effective design that meets or exceeds all Federal and Provincial (O.Reg. 169/03 and O.Reg. 170/03) requirements (whichever is more stringent), drinking water quality guidelines, standards, and regulations.

To provide design and engineering services as well as contract administration and site inspections for the complete development of the Water Treatment and Distribution System project.

To provide a design that is cost effective from an operational perspective. (i.e. operationally non-complex with relatively low O&M costs).

To prepare pre-qualification and tender documents and provide pre-qualification/tender administration services required for the selection of the Contractor. Coordinate and administer tenders for pre-purchased items as necessary. Coordinate and facilitate the delivery and storage of all pre-purchased items as necessary.

To assist the Project Team with administration and management services during the design, tendering, construction, commissioning, and warranty phases of the works.

To develop and prepare an Operator Training Action Plan (OTAP) in collaboration with CLFN, OFNTSC and the PPM to ensure a strategy is in place for the certification of identified water operators.

To provide full-time construction inspection. To perform construction inspection services necessary for quality control activities and to ensure that the project is carried out in accordance with the contract documents. To ensure health and safety (H&S) protocols and procedures are followed by the Contractor and work is completed in accordance with all Ontario Workplace and Construction H&S regulations.

To provide commissioning and reporting services in accordance with the Project Implementation Procedures Manual (PIPM) Water and Wastewater by Public Works and Government Services Canada for Indian and Northern Affairs Canada.

To ensure all deficiencies are corrected within the one (1) year warranty period.

3.1. Regulations, Standards, and Guidelines

The Engineer shall assume liability for all costs to remediate design errors due to failure to provide a competent design in compliance with all Federal and Provincial (Ontario) design standards and guidelines.

The design and construction of the water treatment plant are required to conform to applicable national and local building codes, CSA standards, and the treated water must meet the water quality standard requirements of federal and provincial regulations/guidelines.

The design must comply with Ontario Regulations 169/03; Ontario Regulations 170/03; the Ontario Drinking Water Quality Standards (ODWQS) and the Guidelines for Canadian Drinking Water Quality

(GCDWQ). The design must comply with the more stringent of federal and provincial guidelines, standards, and regulations.

Where applicable, the Engineer shall ensure that the latest edition of the following regulations, standards, and guidelines are adhered to. In addition, the Engineer is required to submit and obtain all regulatory approvals as required as per the Protocol for INAC-Funded Infrastructure document, available from ISC. Please note that the following list is not intended to be exhaustive and that the more stringent of the listed building codes shall always be followed.

- Ontario Drinking Water Standards, Objectives and Guidelines, Ministry of Environment Conservation and Parks
- Procedure for Disinfection of Drinking Water in Ontario, Ministry of Environment, Conservation and Parks
- 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 — Version 1 Part 2 - Application of The Federal Framework Section 5.3 Surface water intakes
- 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, latest Edition. 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
- Wastewater Systems Effluent Regulations, SOR/2012-139 (WSER) under the Fisheries Act
- Design Guidelines for Drinking-Water Systems (Ministry of the Environment Conservation and Parks - MECP)
- INAC Design Guidelines for First Nation Water Works
- Project Implementation Procedures Manual (PWGSC— CST for INAC— PIPM)
- *National Building Code of Canada (2015)
- *Ontario Building Code (2012)
- Fisheries Act

- The Navigable Waters Act
- National Energy Code of Canada (2015)
- Other Federal, Provincial and regulatory agency requirements

4. Scope of Work

The following sections broadly outline the scope of work and are not intended to provide every detail of the work performed by the Engineer during this contract. The actual work shall be developed through the preliminary design and detailed design processes with the concurrence of the Project Team.

4.1. Project Definition

The Engineer shall review the existing studies, reference materials, and project background to familiarize him/herself with the overall scope and intent of the project. Further, the Engineer shall meet with Curve Lake First Nation and Project Team representatives to review in detail the schedule, budget, site, and project requirements.

The proposed Water Treatment Plant shall be designed to service the community for a twenty (20) year design population in Curve Lake First Nation, generally described in the following section. The Engineer must confirm that the population projections from the final water system feasibility study align with current community housing projections.

4.1.1. Recommendations from the Feasibility Study

As noted in FNESL's feasibility study, 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. Subject to a pilot study, the 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

Figure 2 presents a schematic for the proposed water treatment plant as given in the feasibility study.

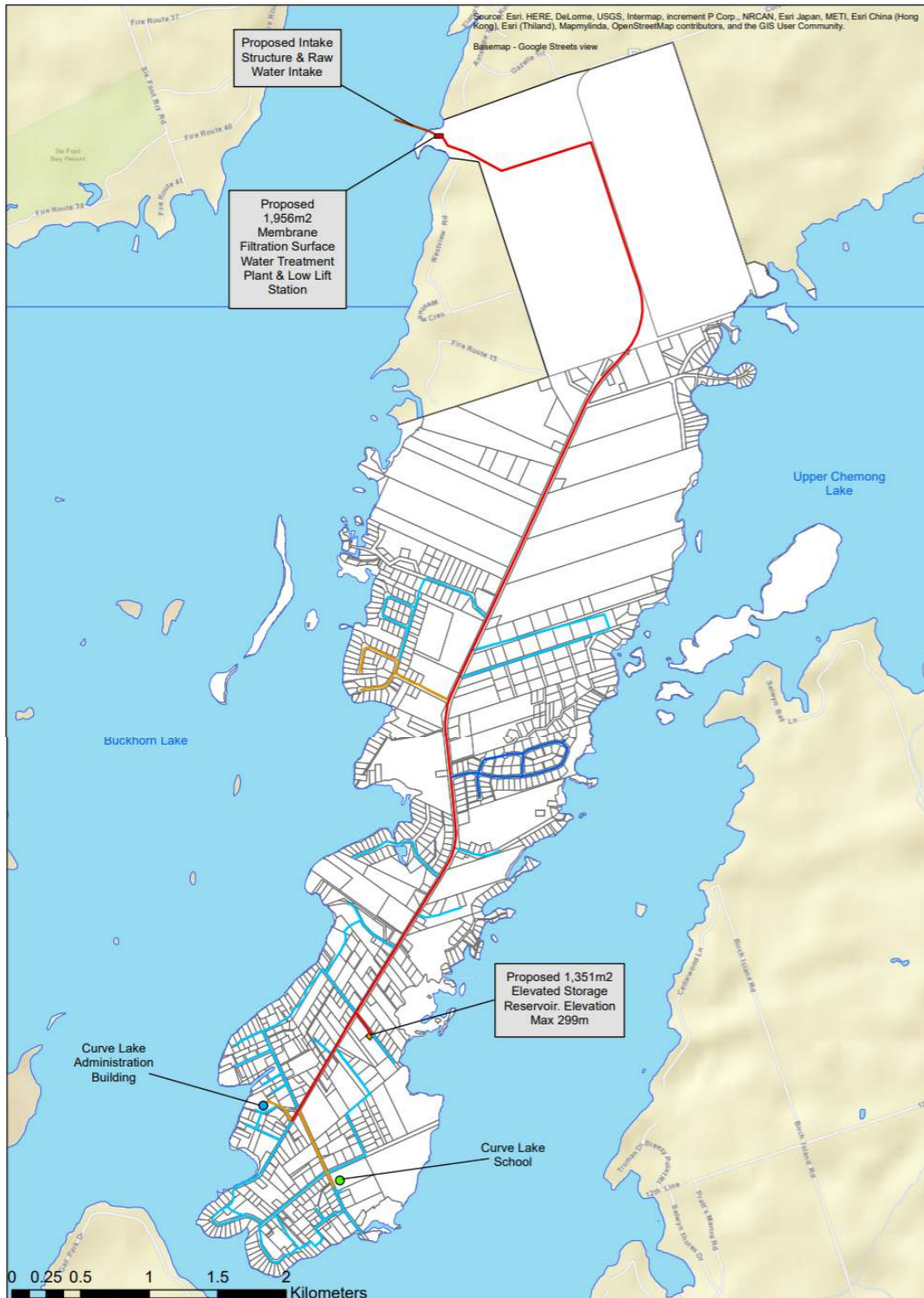


Figure 2 – Proposed Water Treatment Facilities

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 plant upgrades in order to resolve the current water treatment system issues.

If a significant change deviating from recommendations in the Water Feasibility Study is proposed during detailed design, a technical and economic analysis including a 20-year life cycle cost should be performed and approved by the Project Team in order to justify the change prior to proceeding further. Proponents are requested to submit a price for this work under the item “Technical and Economic Analysis of Design Changes” in the Cost of Services form.

Equipment preselection, if required, is also included in the scope of the design phase of this project. A cash allowance of \$30,000 has been included to procure shop drawings with the intent that the equipment supplier will develop and provide the shop drawings as part of the equipment preselection process. The \$30,000 cash allowance is for third-party supplier costs only to procure shop drawings with no mark-up from the Engineer. The Engineer costs for equipment preselection, equipment procurement, and shop drawing procurement, including shop drawings coordination are to be included in the Engineer’s base costs.

Note that the award and pre-purchase of preselected equipment is not included in the design phase, as it has not been approved, and is therefore provisional until ISC approves the construction phase. If pre-purchase is made during the construction phase upon ISC approval, the Contractor will be responsible to purchase, provide payment to the supplier(s), offload, accept and secure the preselected equipment on behalf of the owner in strict conformance to the preselected equipment supply contract without any markup on the supply contract sum.

4.2. Preliminary Design (33%)

At the project outset, the Engineer will be required to set up and administer a file transfer site for the purpose of storing and distributing project files. The file transfer site must be accessible by the Project Team full-time and set up in a secure format to protect the information.

Once the Project Team has reviewed the background material with the Engineer, the Engineer shall commence the preliminary design. All design work shall be conducted in conformance with the most recent Federal and Provincial (Ontario) regulations, standards, and guidelines, in accordance with ISC’s Project Implementation Procedures Manual (PIPM).

The Engineer shall identify any equipment and materials that would be beneficial to pre-purchase in order to mitigate any long lead time items.

The Engineer shall discuss the need for conducting a pilot or bench-scale test of the proposed solution, including sampling and monitoring of the source water, and provide recommendations to the Project Team. Proponents are encouraged to discuss their proposed pilot strategy within their proposal submissions, with comments on impacts to schedule if applicable. If the Project Team agrees with the plans for further testing, the Engineer shall submit a proposed work plan describing in detail the pilot/bench-scale testing process, location of water sampling and the sampling process. This review and work plan will be included in the Engineer’s base price. The cost to then carry out the pilot testing for the recommended duration and the bench-scale testing will be provided as provisional items. A cash allowance of \$150,000 has been provided for this work.

A cash allowance of \$160,000 will be included in the bid to complete additional site investigations as necessary (geotechnical, topographic, survey, soundings, etc.). Investigations are anticipated to be completed by a third-party, but in-house resources may be utilized if available. If in-house resources are

utilized by the Engineer for this cash allowance item, Engineer mark-up on this cost will not be entertained.

At the conclusion of the preliminary design phase, the Engineer will develop and submit to the Project Team the following, but not limited to, in the form of a design brief:

- *General design progress.*
- *Design/construction concerns that may affect costs.*
- *Comprehensive list of required approvals and reviews.*
- *Plant flow schematics indicating all treatment units and equipment for the primary treatment processes and waste handling systems.*
- *Complete Standard Operating procedures in accordance with Reg. 170/03 to update Operations Manual to ensure that all operators are trained and supported to ensure these requirements are met*
- *Conceptual plant layouts showing the arrangement of treatment process units and other related facilities (i.e. distribution systems, etc.)*
- *Plant hydraulic profile establishing operating water elevations through the plant at normal and peak flows.*
- *Design parameters establishing treatment unit/equipment sizes and specific design criteria for minimum, average, and maximum conditions of the major processes and waste handling systems.*
- *Requirements for ancillary facilities including space needs for plant administration, laboratory, maintenance, chemical handling and storage, low and high service pumping and water storage.*
- *Plant control concepts including plant control logic and key control parameters.*
- *Incorporation of a SCADA system in the final design. The Engineer shall outline the parameters which can be monitored on site and the parameters which can be monitored from a remote location and work closely with the operator to design the system in accordance with the operator requirements.*
- *Design criteria for sizing the reservoirs and pumps.*
- *Information on proposed reservoirs such as size, location, and type.*
- *Clearly articulate how workplace H&S concerns and issues identified by CLFN, the Engineer's Site Inspector, or any other Project Team member will be immediately addressed.*
- *Use of cost and schedule control measures to find efficiencies*
- *A hydraulic modelling test to ensure adequate pipe sizes and flow capacity.*
- *Hydraulic modelling to include pressure testing at hydrants to confirm theoretical pressures compared to actual.*
- *Electrical power supply requirements.*
- *Evaluation of potential construction risks and proposed mitigation measures to ensure avoidance of cost overrun.*
- *Confirmation that the treatment selected in the final water treatment plant feasibility study is recommended by the Design Engineer.*
- *Completion of all required testing and piloting recommended by the Design Engineer*
- *Detailed design schedule and preliminary construction schedule, as well as discussion of measures which can be taken to expedite schedule.*
- *Cost estimate (Class C format as defined by PIPM). All capital cost estimates are to be prepared by a licensed member of the CIQS/OIQS. The Engineer shall also provide a cost credit amount to provide all capital cost estimates without the use of licensed member of the CIQS/OIQS if the Project Team later decides that the designation will not be necessary for estimate preparation.*
- *Discussion of Operation and Maintenance (O&M) requirements and projected annual O&M costs for the projected 20-year life.*

The Design Brief shall take into consideration the following:

- *Discussion of design parameters for plant capacities.*
- *Discussion of design parameters for plant treatment processes.*
- *Discussion of design parameters for distribution piping.*
- *Discussion of the geotechnical report and recommendations with respect to foundation design and backfill.*
- *Discussion of design parameters for structural, mechanical, electrical, and other engineering and architectural works.*
- *Discussion of the generation of process wastewater (i.e. backwash, filter-to-waste or wastewater from residual management and instrumentation) quantity and disposal*
- *Discussion of the existing electrical distribution system's ability to handle the power requirements of the new water treatment plant. If the current system is unable to handle the additional electrical load, the Engineer shall generate a scope of work and cost estimate (all-inclusive including engineering costs).*
- *Discussion regarding any existing equipment which may be kept or re-used from the old water treatment system.*
- *Confirmation that sufficient electrical power is available at the site (include proof).*
- *Discussion of energy efficiency for the building and equipment.*
- *Fire safety.*
- *Landscaping.*
- *Air quality considerations.*
- *A preliminary schedule for the construction phase.*
- *Recommendations to the Project Team for all the above.*

A design brief shall be presented upon completion of the preliminary design. It will be submitted to the Project Team for review and approval prior to being finalized. The final design brief shall be stamped and sealed by a Professional Engineer in Ontario.

At each project milestone, the Engineer must obtain Project Team concurrence with all recommendations and decisions made prior to proceeding with subsequent phases of the design.

Environmental Review

The Engineer shall prepare an Environmental Project Description (EPD) in accordance with ISC policies and guidance. The EPD shall include details of the activities associated with the site preparation, construction, operation, maintenance and decommissioning of the project and the environmental setting. The EPD will be completed as early in the design stage as possible so that the Environment Unit can determine what level of Environmental Review will be required to determine whether or not this project is likely to cause significant adverse environmental effects.

Please note that compared to other similar projects, it is likely that this project will need further review under the Impact Assessment Act (IAA) and as a result, a Simple Environmental Review will need to be submitted prior to the completion of any construction/remediation activities. The Engineer is required to complete and submit the EPD and Simple Environmental Review.

It should be noted that some environmental permits can take considerable time to obtain. Proper planning is vital to ensure that the time required to obtain necessary permits does not negatively affect the project schedule. The EPD shall be submitted to the Project Team for review with the Design Brief.

Once the EPD has been submitted the environment unit will determine whether the project falls under the Impact Assessment Exclusion list or whether the project will be posted in the *IAA Public Registry*. Project under the Impact Assessment (IA) exclusion list, will follow ISCs Environmental Review Process. Projects not on the IA exclusion will be posted in the Registry, for these projects, a *Notice of Intent to make a Determination* will be posted in the *Registry* for public review for a minimum of 30 days, during which time

the public will have the opportunity to forward questions and/or comments to be addressed by the environmental unit. Following this 30-day period, ISC will post a *Notice of Determination* identifying requirements to mitigate potential for environmental issues. Funding for the construction phase of the project cannot be approved until the Environment Unit has made the determination.

In general, the planning and construction of any new facility provides an excellent opportunity to incorporate best available technologies in water and energy conservation as well as to adopt environmentally-preferred construction materials and practices. Accommodating these items should not result in significant delays or additional expense to a project if incorporated into the design at an early stage. Indeed, many conservation technologies result in significantly lower facility life-cycle costs.

Value Engineering Review

A third-party consultant will be retained by the Project Team to conduct a "Value Engineering Review" of the 33% and 66% design stages. The Engineer will cooperate fully and arrange to provide all information necessary to the Value Engineering reviewer chosen for this assignment, including design of the water treatment facilities, the treatment process, water supply options and cost estimates. The procurement of the Value Engineering consultant will be coordinated and facilitated by the Project Manager. This Review will be completed by a third-party and in-house resources may not be utilized to perform this work. The Review will be undertaken over the course of two three-day workshops following each of the 33% and 66% design stages. The Engineer is to review the results of the Value Engineering Review and incorporate improvements and recommendations into the design of the facilities.

4.3. Detailed Design (66% & 99%)

With the conclusion of the Preliminary Design Phase, identified by the Project Team approval of the Design Brief, the Detailed Design Phase will commence.

This work involves preparing detailed drawings and specifications within the framework established during the Preliminary Design Phase. Throughout this phase project control must be maintained by close communication with the Project Team. At a minimum, monthly updates via teleconference are required.

The Engineer shall design the water treatment plant, including all architectural, structural, electrical, instrumentation, HVAC, and mechanical components of the facilities.

At the 66% Design stage, the Engineer shall develop a draft operational control narrative that outlines how the water treatment plant will operate and indicate key operating parameters such as operating ranges for the equipment (i.e. operating parameters, flow rates for pumps, etc.) and include levels for alarming (i.e. high level, low level, etc.).

The Engineer is required to include a SCADA system into their designs to allow for complete remote monitoring and control of the water treatment plant. Chapter 9 of MECP's Design Guidelines for Drinking Water Systems (2008) includes important requirements for instrumentation and control which must be incorporated by the Engineer, particularly the operational control narrative section.

An independent Water Treatment Plant Operator will be retained by the Project Team to conduct an "Operational Functionality Review" of the 66% design stage. The Consultant will cooperate fully and arrange to provide all information necessary to the Water Treatment Plant Operator chosen for this assignment. The procurement of the Independent WTP Operator will be coordinated and facilitated by the Project Manager. The aforementioned reviews are anticipated to be completed by a third-party and in-house resources may not be utilized to perform this work. The review shall be completed by an operator holding Class III or greater level of certification under current applicable Ontario Regulations. The

Engineer is to review the results of the OFR and incorporate improvements and recommendations into the functionality of the facilities.

The Engineer shall ensure that adequate fire protection and ventilation is designed for in the water treatment plant.

The Engineer shall oversee the Contractor's preparation of a draft detailed O&M Manual for project team review and input at the 99% Design stage with an updated draft version of the O&M Manual due thirty (30) days before the start of commissioning, ensuring that it meets the requirements set out in this TOR. The final O&M Manual is due no later than thirty (30) days after successful commissioning is completed and will incorporate any changes realised during commissioning. The O&M Manual is not a product vendor manual, only related information on the operation and maintenance of the plant and equipment supplied are to be part of the manual (e.g. No information on toilets, sinks, mops, etc.) and remove all other languages. The O&M Manual shall also include asset data such as a list of all critical equipment and the number of spares kept onsite. All assets at the plant are to be given a tagged identifier and the nomenclature will be agreed upon by the Project Team and will be listed in the O&M Manual in a Master Asset List. During construction, the assets will require physical tagging with an identifiable label that corresponds to the agreed nomenclature noted in the O&M manual. As part of the O&M Manual, the Engineer shall also prepare SCADA information in a tabular format that will need to be reviewed and accepted by the Project Team. At a minimum, this table shall identify all SCADA points and separately identify data points that have historic points that are trackable and identify how long the historic data will be available (e.g. Life of the plant, 1 year, 2 years etc.). Note all items mentioned here shall be presented at 99% in a draft format.

The Engineer shall also develop an O&M business plan with input from the Project Team for CLFN on what the O&M costs are expected to be for the new water treatment plant, once commissioned, and what the operational requirements are for the projected 20-year life. A draft O&M business plan will be due with the 66% design submission followed by a final O&M business plan due with the 99% design submission. This will include a detailed list of necessary maintenance and associated costs for the operation of the water treatment plant for the 20-year life.

The Engineer shall identify opportunities for employment of CLFN members and utilization of CLFN resources during both the design phase and construction phase of this project. Tender documents will contain clauses instructing bidders as to availability of local resources, complete with unit rates. These clauses shall be included in the tender document front end, however, no minimum quantities shall be specified.

The Engineer shall inspect all available CLFN equipment and facilities which are included in the construction contract for the Contractor's use, including equipment such as loaders and rental housing, and confirm that they are in good working order.

The Engineer shall provide digital copies of the plans and specifications as required for review by all regulating and approval authorities (i.e. ISC, MECP, DFO, TC, TSSA, MNRF, etc.) at the 33%, 66%, and 99% stages, as required. The Project Manager is to be provided with copies of all correspondence/approvals from these authorities. The CEAA screening must also be updated by the Engineer as part of their Design Brief.

At the 66% design package, the Engineer shall prepare a Class B cost estimate for the construction of the project with a 10% contingency allowance. This cost estimate is prepared after site investigations and studies have been completed and the major systems defined. It is based on a project brief and preliminary design. The cost estimate must be updated and submitted with each submission of the drawings and specifications. All capital cost estimates are to be prepared by a licensed member of the CIQS/OIQS. The Engineer shall also provide a cost credit amount to provide all capital cost estimates

without the use of licensed member of the CIQS/OIQS if the Project Team later decides that the designation will not be necessary for estimate preparation.

As part of the 66% design package, the Engineer shall prepare a constructability plan outlining how water will be provided to the community during the construction sequencing.

It should be noted that approval to commence the Tender and Construction Phases will not be granted by CLFN until all required permits and funding approvals are obtained allowing construction to proceed. All work in the Tender, Construction and Warranty phases is considered provisional until funding approval is provided by Indigenous Services Canada (ISC).

All necessary permits, approvals, etc., relating to the project from authorities having jurisdiction and the submission to MECP for a WTP classification must be prepared by the Engineer in the name of CLFN. The Engineer is encouraged to satisfy these requirements as soon as possible in the design process in order to avoid delays in project approval. This includes, but is not limited to, the Letter of Conformance from the MECP and all other MECP requirements. The Engineer must perform sufficient research so as to be fully aware of all regulatory authorities involved and will submit this full list to the Project Manager at the earliest possible time in the process, but prior to making a submission to any agency.

Prior to the tendering process, the Engineer shall prepare and administer a pre-qualification process (using MERX) to identify and recommend to the Owner the eligible bidders who are experienced and qualified to complete the scope of work of the project.

The Engineer shall prepare the Project Manual including all tendering documents required for the tendering processes and provide to successfully pre-qualified bidders who will be invited to participate in the tenders. These documents shall include a full set of tender drawings, bid documents, bid forms, and technical specifications. The specifications will include a list of spare parts and emergency replacement parts that are to be provided by the Contractor during the construction phase. This list will be reviewed and approved by the Project Team. The specifications will also include all environment protection and mitigation measures to be followed by the successful Contractor. The Issued for Tender (IFT) drawings are to be stamped by a Professional Engineer(s) registered in Ontario.

As part of the Detailed Design Phase, the Engineer shall prepare a Decommissioning Plan for the components of the existing water treatment plant that are not required once the new plant is operational. This includes proper disposal of existing equipment and structures. All surplus or removed material must be completely removed from the community as the local landfill is not available for use.

At the end of 99% design, the Engineer shall finalize the Operational Control Narrative and incorporate all changes proposed by the Project Team during review of the draft Operational Control Narrative at 66% design and the OFR.

The Detailed Design Phase will conclude with CLFN's approval of the Project Manual, with input from the Project Team. This includes the receipt of all regulatory approvals from all authorities having jurisdiction.

Following the 99% design stage, the Project Team will retain an independent Professional Quantity Surveyor (PQS) to review the final construction cost estimate and provide a Class A (+/- 5%), pre-tender cost estimate. The procurement of the PQS services will be coordinated and facilitated by the Project Manager. The Engineer is expected to fully cooperate with the PQS and provide all necessary information associated with the 99% design documents.

The Engineer is to include all costs to provide a full set of Final Tender Documents, in full size to the Project Team. A total of two (2) full size copies is to be assumed for distribution to the Project Team. In

addition to paper copies, electronic copies are to be provided in a form acceptable to the Project Team. All drawings shall be stamped and sealed by a Professional Engineer(s) registered in Ontario.

4.4. Tender Phase (Provisional)

Upon approval by the Project Team and all necessary regulatory agencies, the Engineer shall, at the direction of the Project Manager, call tenders on the proposed works. The tender shall not proceed without approved capital funding for construction.

The Engineer shall include all costs associated with providing up to two (2) sets of hard copy tender documents for use by the Project Team.

The Engineer shall coordinate the publication of the call for pre-qualifications/tenders and the issuing of all pre-qualification/tender documents digitally. The Engineer shall require the completed pre-qualifications/tenders be submitted to the Engineer's office.

During the tendering period, the Engineer shall respond, in writing, to all questions and requests for information no later than three (3) working days from the time the question was received. If, as a result of questions or other circumstances, the Engineer realizes a need for changes to the tender package, they shall issue an addendum to all pre-qualified bidders with a copy sent to the Project Manager.

The Engineer shall arrange for a mandatory tender site visit to be attended by all interested bidders. Each individual attending the tender site visit, including the Engineer, will be responsible for their travel costs and meals. The Engineer shall administer the tender period. Immediately following the close of tenders, the Engineer shall attend at the tender close location and participate in the opening of all properly received tenders. The Engineer shall record the tenderers' names and submitted tender values in a form acceptable to the Project Team.

Within one (1) week of the tender opening date, the Engineer shall then review and evaluate all tenders and prepare a report for submission to the Project Team. The report shall include, as a minimum, the following components: name of each tenderer and the tender value, status of all required tender submittals (i.e. bonding), commentary on completeness of tenders, commentary on any irregularities in the bid or tender documents, and a recommendation regarding award.

A copy of all tenders shall be provided to the Project Manager in PDF format. Within one (1) week of the opening of the tenders, the Engineer shall call a Project Team meeting to evaluate the tenders. This meeting will conclude with a recommendation to CLFN, from the Project Team, on award of the contract. CLFN will then issue a Band Council Resolution (BCR) to the team documenting their decision.

The Engineer will then notify the successful tenderer of the award and further, notify the unsuccessful tenderers that they were not successful.

The Engineer is advised that approval to commence the construction phase will not be granted by ISC without an MECP Letter of Conformance. The Engineer is responsible for all work required to obtain this letter.

4.5. Contract Administration and Inspection Services (Provisional)

Upon award to a Contractor, the Engineer shall produce three (3) original contract documents for signature to be signed at the initial construction meeting, or before, as required.

During the performance of the Contract, the Engineer will provide the full contract administration services including full-time site inspection services.

These services shall include, but not limited to, the following:

- Assign a qualified and experienced Inspector to oversee the Administration and Inspection services during the construction and warranty phases of the project.
- Prior to the commencement of construction, the Engineer shall issue “Issued for Construction” (IFC) contract documents that incorporate all changes occurring during the tendering process, including all addenda and post tender addenda. These documents must be stamped, signed, and dated by a Professional Engineer.
- The Engineer shall facilitate the receipt of all pre-contract submittals, including, but not limited to: insurance, bonding, Workplace Safety and Insurance Board (WSIB) clearance, and others.
- The Engineer shall procure, from the Contractor, within ten (10) days of award, a detailed progress draw breakdown to be used as the basis for Payment Certification. The Engineer must review and accept this breakdown and provide a copy to the Project Manager.
- The Engineer will request from the Contractor all shop drawings for all components of the works. It is the responsibility of the Engineer to review and approve shop drawings prior to the Contractor's installation of each piece of equipment.
- The Engineer shall assign a qualified resident site inspector with minimum five (5) years of experience in a site inspector role who will oversee the administration and inspection services during the construction and warranty phases of the project.
- The Engineer's resident site inspector shall ensure all provincial (Ontario) H&S protocols and procedures are followed by the Contractor at all times. The Engineer will prepare a plan to ensure there is no gap in coverage while administering full-time site inspection services. The site inspector(s) shall have completed Ontario H&S training and provide proof of training to the project team prior to arriving on site. The site inspector(s) shall also have reviewed the Contractor's H&S plan prior to arriving on site. If work is observed failing to meet Ontario H&S standards or the Contractor's H&S plan, the site inspector shall inform the construction site supervisor immediately for action. The work shall then be documented and reported to the PPM.
- The Engineer's resident site inspector shall ensure all Ontario required personal protective equipment (PPE) is worn at all times by the Contractor and any Sub-Contractor on the work site. If improper PPE is observed, it is to be immediately actioned by notifying the supervisor in charge to rectify the issue.
- The Engineer shall respond to Contractor requests for information (RFIs) within five (5) business days after issuance of the RFI.
- The Engineer shall review each progress payment request from the Contractor and issue a Certificate of Payment. The Certificate of Payment will certify the value of the work performed to date, the value of the holdback to date, and the payment for the period. The Certificate, with all required submittals, must then be submitted to the Project Manager for review, processing, and payment.
- The Engineer shall review all requests for additional costs and all requests for contract time extension from the Contractor and recommend action in response to the request. If necessary, the Engineer shall issue a Contemplated Change Order for pricing by the Contractor and on acceptance recommend a relevant contract Change Order. Project Team approval is required for contract Change Orders. All Change Orders shall be processed in accordance with the Construction Protocol (see Protocol for INAC-Funded Infrastructure, August 2016).
- The Engineer shall ensure the availability of an experienced Construction Inspector (at least five (5) years field experience) who shall be available for inspections of all significant components of the works. Any replacement inspectors shall be identified in the Engineer's proposal.

- The Engineer shall provide monthly reports on the construction progress and activities no later than five (5) business days after the reporting period. This individual(s) must be familiar with all aspects of the work. The Engineer may, with knowledge and prior agreement of the Project Team, engage Sub-Consultants for certain inspections.
- *Resident inspection is estimated to be 5,200 person-hours for completion of the works (i.e. 24 month period of 520 working days at 10 hours per day for one inspector). Each Engineer shall use these numbers in determining their fixed lump sum fee. However, each Engineer shall also provide a written assessment of the person-hours required to complete each phase of the project. Resident inspection time will be documented and variation from the estimated 5,200 person-hours will be debited or credited from the Engineer's contract as required at the end of the project. All disbursements for the full-time resident inspection services, excluding local transportation, accommodations, and meals while on site, shall be included in the Engineer's fee. A site office, accommodations, meals, and a vehicle (including fuel and maintenance) for local transportation will be provided for the resident inspector through the construction contract. The estimated inspection hours do not include commissioning. The Engineer will be responsible to include in their fees all engineering hours and expenses for the commissioning activities identified in Section 4.6.*
- The Engineer's Resident Inspector shall at all times have current and up to date contract documents, including up to date drawings and specifications available at the site of the work and shall ensure the Contractor is working from current drawings and specifications. The inspector shall ensure all changes to the contract are marked up on the drawing and specifications.
- The Engineer shall ensure the Contractor has up to date drawings and specifications on-site, and that the Contractor is properly recording all changes on these such that proper As-Built drawings can be submitted.
- The Engineer's Resident Inspector shall maintain a daily log book, recording all events when on-site. The Engineer shall issue weekly reports complete with photographic record from the site. These reports shall be distributed electronically to the PPM and the Project Team no later than five (5) working days after the reporting period. These weekly reports will also include an updated schedule from the Engineer. If no changes to the schedule are made in a given week, it is not necessary to include the formerly submitted schedule, however, it shall be stated in the weekly report that this is the reason for exclusion.
- The Engineer shall submit an updated schedule to the PPM outside of the regular weekly report submissions if a change to the schedule occurs affecting the critical path. This schedule is to be submitted to the PPM within two (2) days of the change being discovered by the Engineer.
- For each Project Team meeting during construction, the Engineer shall ensure the Contractor distributes an updated schedule to the Project Team for review at least five (5) working days prior to the meeting.
- The Engineer shall maintain, at all times, proper communication channels as per the Project Approval documents and as per the Construction Protocol. These will be reviewed at the pre-construction meeting. The Engineer shall also ensure that the Contractor maintains proper communication channels throughout the project.
- In their proposal, the Engineer shall include the activities related to the commissioning process. The Engineer shall ensure that a representative of all major equipment manufacturers incorporated in the works are available (additional information is provided in Section 4.6).
- The Engineer shall ensure that the Contractor submits a detailed Operations and Maintenance (O&M) manual, with maintenance information on all equipment within the plant.
- The Engineer shall prepare two (2) copies of a Project Manual document that includes all shop drawings, operating and maintenance procedures, references for all spare parts, suppliers' information, As-Built (record) drawings, and any other pertinent information as may be required for the operation and maintenance of the completed works. This manual must be provided in hard copy binder format and in electronic PDF format. The Engineer, working with the Contractor, is responsible for providing an accurate and complete set of As-Built drawings. Incomplete As-Built drawings are not acceptable.

- Upon completion of the project works, the Engineer shall prepare project completion documentation in hard copy paper format and electronically in PDF format. These documents are required by ISC funding services. Fees will be held back from the Engineer until this is received in a form acceptable to the Owner.

The Service Provider is required to implement the following Quality Assurance program during the construction of the facility:

- Check all layouts to verify conformance with design drawings.
- Inspect all construction work and installation of equipment.
- Keep proper records of the progress of the construction work, noting unusual or unforeseen events that may have delayed the progress of work.
- Include photographic evidence of key installation work that may be difficult to verify at project completion or future reviews (i.e. distribution piping that will be buried or connections to buildings)
- Review shop drawings to verify that contractual requirements are met for materials and equipment.
- Issue clarification drawings to meet intent of contract requirements.
- Provide technical specialists to carry out inspection of work constructed or installed to verify its compliance with contractual requirement and codes, regulations, etc.
- Arrange for external specialist testing firms to verify work that is beyond the expertise of the Service Provider.
- Perform check-out/verification of all equipment, process and/or mechanical system, instrumentation & control system and SCADA system.
- Verify that the Contractor performs all instrumentation calibration as specified.
- Inspect and ensure that the Contractor executes the work professionally and with skilled craftsmanship.
- Verify that the Contractor observes the Occupational Health and Safety Act, and all applicable Regulations for Construction Projects.
- Ensure that all spills are contained and cleaned up by the Contractor immediately when found. Contact all environmental agencies/departments that has jurisdiction on the project, and advise them of the spill and action taken, if any, to contain and mitigate its impact on the environment.
- Ensure that the Contractor institutes environmental protection measures prior to commencing any construction works on the site as specified in the contract.
- Ensure that all regulatory agencies have been notified of completed work and that the required inspections have been carried out.

The Engineer shall prepare a detailed operating manual for submission to the Project Team. This must be available at least one month in advance of commissioning so that it can be referenced by the operators of the plant.

The operational manual shall provide clear and detailed step-by-step instructions for operator to follow. The operational manual and maintenance manual shall be completed before commissioning the system.

The format of the Operation Manual for the water treatment facility shall be prepared by the Engineer in accordance with the latest edition of the Ontario Ministry of the Environment's "MASTER MODEL OPERATION MANUAL".

The Unit Operation Descriptor shall conform, at a minimum, to Table 2.5 of the Manual. A Descriptor is a typical task to be performed for a Unit Operation. Depending on the Unit Operation, it may or may not require all of the Descriptors listed in Table 2.5.

The draft version of the manual shall be completed and delivered to the First Nation on completion of detailed design for review and comment.

When the construction works have been completed, the Service Provider shall revise the draft Operation Manual and submit the final version of the Operation and Maintenance Manuals to the First Nation Project Manager. The First Nation Project Manager shall review and approve the Operation and Maintenance Manuals.

The Service Provider shall allow adequate time for the training of the First Nation Operating staff on the operation of the facility. The Service Provider shall provide a minimum of four hours of classroom training to the operators. Training shall be conducted on site. The Service Provider shall provide all classroom material, information, etc. for the training session

As a minimum, the training shall include the following:

- 1) Operation of the facility before expansion works
- 2) Operation of the facility after expansion works
- 3) Description and function of newly constructed treatment process
- 4) Treatment process and effluent criteria
- 5) Identification of critical process bottlenecks
- 6) Process upset and rectifications
- 7) Sampling and monitoring
- 8) Safety procedures
- 9) Handling of alarms
- 10) On-line Operation of the facility and SCADA System
- 11) Using the Manual as an on-line tool
- 12) Procedures for First Nation Operating staff to update the Manual
- 13) Video recordings of training sessions to be used as future reference for operators

4.6. Commissioning (Provisional)

Refer to Chapter 15 of ISC's PIPM, for requirements for commissioning and sample component verification test templates. Commissioning and verification tests are also to be performed in accordance to the latest version of the more stringent of applicable regulations and standards.

The start-up and commissioning process is a quality assurance procedure required to ensure that the works will operate in accordance with the design intent. The completed water treatment plant shall meet or exceed the established design requirements. It is the responsibility of the Engineer to verify that all components of the new facility function and interact with other systems and processes as required. The purpose of this section, therefore, is to identify the procedures and minimum requirements necessary to ensure that CLFN is provided with a fully functional facility upon completion of construction activities.

The start-up and commissioning process must be fully documented and submitted following system verification. The Contractor will coordinate the testing and commissioning of all equipment and provide copies of test results and reports to the Engineer. The Engineer will witness such tests and submit these to the CLFN.

Start-up is the verification of the proper installation of all mechanical, electrical, and instrumentation equipment. It relates to those activities and tests that are required to advance the newly installed equipment, control systems and facility processes to an operational readiness level.

Commissioning is the verification of the proper functioning of the various systems individually and as a whole. It is the act of placing the equipment into full operational service meeting the appropriate regulatory requirements and specified parameters without system failures under design operating conditions. Commissioning shall not commence until the construction phase has been successfully completed.

The Engineer shall review and approve the Contractor's Commissioning Plan and ensure performance guarantees are in place for the treatment equipment to be used for the project. The Commissioning Plan shall follow the procedure stated in ISC's PIPM.

The Engineer shall ensure that the Contractor delivers a draft of the Commissioning Plan for review at least forty-five (45) days prior to commissioning, so that the Project Team is in receipt of an approved and recommended Commissioning Plan at least thirty (30) days prior to commissioning.

The Engineer shall ensure that the Contractor performs proper disinfection of the treated water storage reservoir and distribution lines. The Engineer shall ensure that the Contractor performs a flushing and swabbing program.

Please note that if the Pandemic is still active when commissioning takes place, costs resulting from delays related to work stoppage due to COVID will be determined prior to construction.

Start-Up Phase

During the start-up phase, the Engineer and all relevant Sub-Contractors and suppliers shall demonstrate the proper operation of all components of the installed equipment and the facility.

A minimum of two (2) months prior to the anticipated date of start-up, the Engineer shall develop and provide the Contractor with a pre-commissioning checklist outlining items of work that must be in final working order prior to commissioning. This checklist shall be followed by the Contractor during the start-up period and reviewed with the Engineer and CLFN representative.

Start-up shall be conducted a minimum of two (2) weeks prior to commissioning. As a minimum, it shall take place in the presence of CLFN representative(s), the Engineer, any Sub-Consultants, the Contractor, the operator(s), and all required suppliers, Sub-Contractors, and the system programmer.

During the start-up phase, the Engineer shall:

- Approve the start-up date in consultation with the CLFN;
- Witness all tests and sign test reports as a witness;
- Review the completed pre-commissioning checklist and advise the Contractor of any deficiencies or corrections to be made.

The start-up phase includes, but is not limited to, the following:

- Manufacturer's/supplier's certification of equipment operational readiness;
- Instrumentation and control system checking;
- Instrumentation calibration;
- Testing of HVAC systems, power generation systems, building electrical systems, and any other system essential to the operation of the facility;
- Verification of PLC and SCADA operation along with proper data collection to meet Ontario Regulation 170/03; and
- Start-up of equipment.

The pre-commissioning checklist, as completed by the Contractor, shall be provided to the Engineer for review. After reviewing the checklist, the Engineer will advise the Contractor of any deficiencies and any

corrections to be made. The Contractor shall employ whatever means necessary to correct the deficiencies as quickly as possible. The Engineer shall carry an inspection to ascertain that all deficiencies have been corrected before commissioning is scheduled. Once the Engineer is satisfied that all equipment/systems are in order and all noted deficiencies have been corrected, the Engineer, in consultation with the CLFN representative, will establish a date for the commencement of commissioning.

Commissioning Phase

During the commissioning phase, a series of test procedures will be performed to verify that the equipment is operating properly. The commissioning stage is to ensure automatic plant operation through the PLC. These procedures shall take place over an initial three (3) day trial run period under normal operating conditions and a consecutive fourteen (14) day final performance and reliability run period during which the Engineer shall instruct the Contractor's commissioning supervisor to perform operational adjustments that will simulate normal operating and other design parameters at the 0, 5, 10, and 20-year design flows.

During commissioning of equipment by the Contractor, the Engineer shall be present to ensure the commissioning plan is followed. The Contractor, including all applicable mechanical and electrical Sub-Contractors, in the presence of the Engineer, the Sub-Consultant(s), and CLFN's representative(s), shall complete commissioning of equipment. The facility operator(s) shall also be present during this process to witness the functional performance testing and proper operation of the equipment being commissioned.

The Contractor shall provide the Engineer draft copies of the Operating and Maintenance Manual at least one (1) month prior to the commencement of the three (3) day trial run period.

The Contractor shall meet with the Engineer to discuss and finalize the procedure for the trial run and final performance and reliability run period. This will be carried out according to a project-specific system verification checklist.

Performance and Reliability Run (Trial Run and Final Run)

During the performance and reliability run the Engineer shall:

- Monitor the performance and reliability run on behalf of CLFN.
- Assess whether any abnormalities affect the integrity of the test during the testing period.
- Assess the results of the test run and determine whether additional testing is required.
- All performance data is to be collected and stored by the SCADA system for verification.

The complete plant will perform for an initial trial run period of three (3) continuous working days under normal operating conditions. During this period the Contractor shall have qualified electrical and mechanical superintendents on site. The superintendents shall assist the Engineer and operators in verifying the operation of the system.

The Contractor shall investigate the cause of all abnormalities such as vibration, overloading, overheating, unexpected operating results and provide reports as necessary to the Engineer to demonstrate that the abnormalities have been resolved and eliminated.

The Contractor retains responsibility of the plant until substantial completion is accepted. The scope of work of this contract includes the performance and reliability run and substantial performance is conditional on completion of this test to the satisfaction of the Engineer.

Additional site visits required by the Engineer, suppliers, Sub-Contractors, and CLFN representative(s) to successfully complete the performance and reliability run, as a result of the Contractor being unprepared, shall be at the expense of the Contractor.

After successful commissioning of all systems during the three (3) day trial run, the facility will be operated with the support of the Contractor for a minimum period of fourteen (14) continuous days without failure under normal as well as 0, 5, 10, and 20-year design operating conditions. If the system fails to perform during this performance testing period as specified, the Contractor shall take appropriate measures to correct the problem(s). On completion of the remedial work, the performance test shall recommence and extend for another fourteen (14) continuous days. This procedure will be repeated until the system operates in accordance with the specified requirements. The Contractor shall have qualified mechanical and electrical personnel on site during this fourteen (14) day operational period. The Engineer shall require the Contractor to have a representative of the treatment equipment supplier on site full time for the entire performance testing period.

Attendance at Start-Up and Commissioning

The Engineer shall ensure that the Contractor arranges for all applicable mechanical and electrical Sub-Contractors, including authorized equipment representatives and the system programmer, to be on site during the start-up and commissioning phases. The Engineer shall ensure that CLFN's representative(s) and operator(s) are in attendance on the date for commencement of the start-up and commissioning phases.

The Contractor must ensure that all equipment is installed and operational prior to commencement of the start-up phase. The equipment representatives must be prepared to demonstrate proper operation of their respective equipment during this period.

Termination of Commissioning Phase

The commissioning phase will only be terminated upon successful completion of the following:

- Verification/check-out of all equipment, systems, and sub-systems to ensure they meet the design requirements;
- Completion of the fourteen (14) day continuous performance and reliability run period at the 10 and 20-year design flow;
- Completion of operator(s) training; and
- Submission of all deliverables, start-up and commissioning reports, performance tests, equipment manuals, operation and maintenance manual, and Engineer's report on commissioning and operation of facility.

Substantial completion is conditional on successful completion of the fourteen (14) day performance and reliability run period, operator training plan, submission of equipment manuals, and performance test records.

The start of the one (1) year warranty period shall be effective from the date of substantial completion of the contract, as per the certificate of substantial performance issued by the Engineer.

As-Built Drawings

The Engineer shall submit, within one (1) month of substantial completion, a complete set of As-Built drawings. The Engineer shall submit two (2) full-scale copies of the As-Built drawings, plus a PDF and AutoCAD copy. The As-Built drawings are to be submitted and accepted by the Project Team. The Engineer, working with the Contractor, is fully responsible to provide an accurate and complete set of As-Built drawings. Incomplete and/or drafted As-Built drawings are not deemed acceptable.

Assessment by the MECP Enforcement Branch

The Engineer shall coordinate the assessment of the facility by MECP or a Drinking Water Inspector (under the direction of MECP) to ensure that the design and construction conform to the Letter of Conformance as issued by MECP.

4.7. Warranty Phase (Provisional)

During the Warranty Phase, the Engineer shall keep regular contact with local operations personnel, the Overall Responsible Operator (ORO) and coordinate with the Contractor as required to address any warranty work identified.

The Engineer shall complete a six-month inspection of the plant and shall inspect all major components with the contractor. The Engineer shall schedule a 4-hour training sessions with the operators, to provide refresher training to the operators on the plant design and operation, and shall answer any questions the operators may have. The Engineer must provide a report to the First Nation detailing the findings. The Engineer must coordinate the timely completion of any corrective work required with the contractor.

Near the end of a one (1) year warranty period, the Engineer shall arrange a warranty inspection of all major components. The Engineer shall confirm that any corrective work required previously has been addressed. Following the inspection, the Engineer must provide a report to CLFN detailing the findings. The Engineer must coordinate the timely completion of any corrective work required with the Contractor and oversee the completion of the required work identified during the Warranty Inspection.

4.8. Drawings and Associated Information

All drawings, specifications, and other related contract documents prepared under this contract by the Engineer shall be owned by CLFN.

Additional information on deliverables is provided in the ISC Project Implementation Procedures Manual. The Engineer shall provide the Project Team with sufficient copies of the drawings, specifications, etc., at various stages of the project development. Drawings, specifications, and capital cost estimates and 20-year lifecycle cost estimates are required at the following stages:

- 33% design stage - two (2) full size hard copies, digital PDF copy, and AutoCAD format submission
- 66% design stage - two (2) full size hard copies, digital PDF copy, and AutoCAD format submission
- 99% design stage - two (2) full size hard copies, digital PDF copy, and AutoCAD format submission
- Final Tender Documents - two (2) full size hard copies, digital PDF copy, and AutoCAD format submission
- As-Built Drawings – two (2) full size hard copies, digital PDF copy, and AutoCAD format submission

The Engineer shall provide the following drawings and associated information:

- Cover sheet with CLFN logo, location plan, and drawings index.
- General site plan.
- Provide a full set of detailed site, civil, architectural, structural, process, instrumentation, mechanical, and electrical drawings.
- Provide full sheet flow schematics for the WTP showing piping, appurtenances, equipment, etc.
- Provide full sheet flow schematics for the Distribution System showing piping, appurtenances, equipment, etc
- Provide As-Built drawings in hardcopy, AutoCAD (complete with all Xref files) and PDF format.
- All details and notes shall be large enough to be legible when the drawings are reduced to 11 x 17 size.
- All drawings shall be prepared in metric (SI) units.
- All drawings shall be prepared using AutoCAD software.

- The completed tender package and As-Built drawings must be provided in AutoCAD format.
- All reports and drawings are to be distributed electronically in PDF format.
- Operation and maintenance plans and manuals in PDF.
- Reviewed and approved shop drawings in PDF, as part of the O&M manuals.
- Construction pictures in JPG format.

The completed drawings are to be the property of CLFN, which the community may use in the future as a basis for changes/upgrades to the water treatment plant.

Reports shall be presented in draft format for review and approval by the Project Team. The Engineer shall obtain written approval from the Project Team prior to continuation of the Scope of Work or publication of the report. Reports presented in draft format shall be submitted to the Project Team five (5) working days prior to the scheduled meetings. Reports shall be revised as required, by the Engineer to meet the scope of work and to incorporate the approved comments resulting from the project meetings.

5. Changes to the Terms of Reference

If requested in writing by the Project Manager, the Engineer will make any required changes to the Contract. The Engineer will advise the Project Team of any such effect on the time schedule and budget or any other implications of the changes. Such changes will be incorporated into the Contract by a formal Change Order. No changes required by the Engineer to remedy errors or other problems attributable to shortcomings of the Engineer, including persons employed or supervised by them, shall entitle them to additional fees. At no time shall the costs for construction, professional project management, or engineering services be exceeded without prior written authorization of both the Curve Lake First Nation Project Coordinator and ISC.

6. Project Requirements

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

The Engineer must confirm that the population projections from the final water treatment plant feasibility study align with current community housing projections and review and confirm or provide alternative recommendation(s) the proposed solution from the feasibility study.

The Engineer must maintain strict budget control and ensure that the design is, at all times, in compliance with the project budget.

At the production of the initial cost estimate, the Engineer is to identify all risk elements that may impact pricing and include a budget item to address this potential risk. This risk identification must be updated at each cost estimate.

The schedule is to be considered paramount during the course of the work and effort to expedite the schedule must be implemented by the design team.

The Engineer must ensure that dedicated staff is assigned to this file and special consideration will be given during the proposal evaluation process to the appropriate resourcing as demonstrated in the proposal.

Only team members that are actually going to work on the project shall be listed in the proposal and the Engineer shall not substitute key staff without the permission of the Project Team.

7. Constraints

7.1. Liaison

The Engineer shall:

- Meet and discuss with Chief and Council the ways and means by which community participation can occur.
- Encourage community participation where possible.
- Work closely with CLFN and the rest of the Project Team, as and when required.
- Not commence site visits or fieldwork without first advising and seeking the concurrence of the CLFN Project Coordinator.

7.2. Consulting Services

The Engineer shall:

- Agree to enter into a Contract for the complete design engineering services described in the Terms of Reference. The Scope of Work shall be as outlined by these Terms of Reference with the cost of services not to exceed the accepted maximum upset limit as submitted by the Engineer.
- No additional work shall commence until formal approval is received by the Engineer, in the form of a Change Order approving the work and related additional cost. No additional payment for any additional work will be made unless a Change Order is in place ahead of the work being started.
- Provide complete and comprehensive professional services in the specialty fields required to carry out the Work, including any sub-consulting works.
- Carry out the Work in accordance with an accepted schedule presented by the Engineer with their proposal and to submit monthly/weekly reports describing progress and indicating milestones achieved.
- Make use of existing plans, reports, and records to the maximum extent possible.

8. Project Schedule and Meetings

8.1. Project Schedule

The Project Team will be working towards the goal of construction commencement from November 2021 (pending confirmation of funding), with substantial completion achieved in November 2023. If the Engineer is able to find efficiencies to expedite this timeline, they should present to the Project Team for consideration.

The Engineer shall provide a proposed schedule to accommodate the activities listed below to achieve the above mentioned construction start and substantial completion timelines.

The following project schedule (Table 8.1) identifies most, but not necessarily all, tasks which will be required during the course of this project. The tasks identified with an asterisks (*) represent meetings held on site in Curve Lake First Nation.

Note that dates in the project schedule have not been populated as the Engineer shall provide a schedule with their proposal developed using Microsoft Project, which will be required to be updated by the Engineer throughout the project.

Table 8.1: Project Schedule

Project Milestone	Completion Date	Responsibility
Conceptual Design Phase		
*Design Kickoff Meeting / Contract Signing	January 20 th , 2021	Project Team
Review of Existing Information		Engineer
Start Pilot Study		Engineer
Conclude Pilot Study		Engineer
Conduct Site Investigations (geotechnical, topographic, survey, bathymetric soundings, etc.)		Engineer
Pre-consultation with DFO, if required		Engineer
Produce Draft Conceptual Design Brief Submission		Engineer
*Draft Conceptual Design Brief Review and Meeting		Project Team
Finalize Conceptual Design Brief and Issue to Project Team (c/w updated Class C cost estimate)		Engineer
Value Engineering Workshop 1		Project Team

Final Design Phase		
66% Design and Specifications Submission & Preliminary Class B Estimate		Engineer
Value Engineering Workshop 2		Project Team
*66% Design Review and Meeting		Project Team
Operator Training Action Plan Submission		PPM / Consultant / First Nation
Operational Functionality Review (OFR)		Project Team
99% Design and Specifications Submission		Engineer
Obtain Approvals from MECP (including letter of conformance and plant classification), ESDC, DFO, MNR, TC, Hydro, etc.		Engineer
*99% Design Review and Meeting		Project Team
Business Case – to be completed at the 99% Design Stage		PMP / Engineer / First Nation
Professional Quantity Surveyor (PQS) Review		Project Team
100% Tender Drawings and Specifications		Engineer
Pre-Tender Estimate		Engineer
Tender Package Approval		Project Team
Project Approval Request (By FN and ISC in Parallel with Final Design)		
Revise Project Approval Request (PAR) (if required)		Engineer
CLFN Review and Approval of Revised PAR		First Nation
ISC Approval of Revised PAR		ISC
Tender		
Advertise Pre-Qualification Documents on MERX		Engineer
Pre-Qualification Submission Review and Recommendation		Engineer

Issue Tender Documents to Pre-Qualified Contractors		Engineer
*Pre-Tender Site Visit		Engineer
Tenders Review & Recommendation of Award		Engineer
Construction Phase		
Award		First Nation
*Construction Kickoff Meeting / Contract Signing	November 2021	Project Team
Construction / Contract Admin		PMP / Engineer / ISC / Tech Advisor
Shop Drawing Reviews		Engineer / ISC / Tech Advisor
Full Time On-Site Inspection (18 months)		Engineer
*Monthly Project Meetings (x18)		Project Team
O&M Manuals and Record Drawings		PMP / Engineer / ISC
Start-Up / Training		Contractor
14-Day WTP Performance Testing		Contractor
*Final Inspection and Formal Commissioning (Substantial Completion)	November 2023	PMP / Engineer / ISC
Final Inspection and Commissioning Reports		PMP / Engineer / ISC
Completion Reporting Phase		
Submit Draft Completion Report		PMP / First Nation
Review Completion Report		ISC
Revise and Submit Final Completion Report		PMP / First Nation
Warranty Inspection		
*One Year Warranty Inspection and Report		PMP / Engineer / ISC

The Project Team will work to expedite their reviews to ensure this schedule is met. The Engineer shall assign sufficient resources to ensure that this schedule is met and confirm in their proposal that the schedule can be met. Please note that time is of the essence. Any realistic ideas toward expediting the project schedule will be well received.

The Engineer shall:

- Allow sufficient time in the project schedule to distribute documents to the Project Team.
- Allow the Project Team a minimum of five (5) working days from the date of receipt, to review and comment on any submission.
- Be responsible for maintaining the approved project schedule, as submitted by the Engineer in his proposal.
- Provide a copy of each updated schedule to the Project Team.
- Advise the Project Team in writing of any actual or potential changes to the approved project schedule.

8.2. Project Meetings

In their proposal, the Engineer shall allow for the meetings as identified above in Section 8.1. The Engineer shall arrange their own travel costs to attend the identified onsite meetings. The Engineer's proposal shall outline their assumptions around travel costs, in case changes are made. The Engineer shall also provide a separate cost for additional meetings in Curve Lake First Nation as they are sometimes required. The Engineer shall also provide a separate cost credit for any meeting that was proposed to be held in CLFN, but is held via teleconference due to potential COVID-19 related travel restrictions.

In addition to the scheduled meetings, the Engineer shall allow for regular conference calls with the Project Team throughout the design and construction phases as deemed necessary. The anticipated average duration of each conference call is 1.5 hours.

Community consultation during regular site visits in Curve Lake First Nation will be required on an as-needed basis to collect input from the community. The Engineer will be expected to participate in these sessions as required.

The site inspector shall conduct weekly meetings with the Contractor to discuss planned works and schedule.

Given the current pandemic, travel into the community may be restricted. The PPM, Consultant, any sub-consultants such as geotechnical firms, contractors, and any other entities will require permission from Curve Lake First Nation prior to entering the community. It is expected that the Consultant and any other entities requesting permission to enter the First Nation will need to submit to the Project Team a Pandemic Plan for review and acceptance which will outline project-specific measures which will be followed to mitigate risk to the First Nation members. Safety of community members is of utmost importance and a failure to follow the agreed upon Pandemic Plan may result in termination.

9. Progress Reporting

The Engineer shall report to the Project Manager, the extent of work completed that period, and milestones achieved to date:

- On an interval of not more than fourteen (14) calendar days (verbally).
- On a monthly interval, a written report detailing the work accomplished during the period and commentary on the compliance with the schedule. This report is due one week after the end of each month.
- On an interval of thirty (30) calendar days, a physical and financial summary in the form of an invoice that details the project budget, invoice for the period categorized by fees and expenses, including any Sub-Consultant costs incurred for that period.

10. Submission Requirements

Proponents will not be permitted to visit the site prior to the design kickoff meeting following contract award.

This proposal is to be strictly electronic and will comprise of a "two envelope" system, to be titled as the "Technical Section" and the "Cost Section". The Engineer shall submit only an electronic copy of their proposal via email. The electronic submission must include one (1) PDF file that includes the Technical Section and one (1) PDF file that includes a password protected Cost Section.

An electronic copy of the proposal must be emailed to and received by the following email addresses prior to the aforementioned submission due date and time (see Section 2.1). Please ensure that you include a download link if one or both of the files may be too large to send via email.

To: Sean.Petrus@colliersprojectleaders.com

Cc: Mackenzie.Brown@colliersprojectleaders.com

In order to be considered, proposals or amendments thereto must be received before the time and date for the receipt of proposals. For consistency, www.timeanddate.com will be used as the official clock for receipt of proposals. Please note that the lowest priced, or any proposal, will not necessarily be accepted.

The Technical Section of the proposal shall include, but not be limited to, the following information:

- The qualifications of the Engineering firm to undertake the project based on experience on similar projects in the same subject area in both government and private sectors. A list of clients and a brief description of the project and scope of work is required. Methods for controlling costs and schedules shall be presented.
- The names and resumes of the Engineer's Project Team and all persons to be employed for the services to complete the scope of work, including the portion(s) of the work to be undertaken by each (i.e. municipal, structural, electrical, mechanical). The Project Manager and site inspector proposed by the Engineer shall be considered in the award of the work.
- A list of Sub-Consultants proposed for the project, together with a resume of qualifications and experience of each.
- A detailed time and activity schedule (Gantt chart, in weeks) for the performance of their services based on the requirements of the Terms of Reference. The submitted schedule shall be considered in the award of the work. The schedule shall show all key stages including project meetings. The schedule shall be based on award of the design contract within two weeks of the tender closing.
- The methodology proposed and the technical methods to be utilized in the performance of the work and any innovative and constructive ideas.
- Copies of liability insurance coverage and statements of membership in good standing documentation from PEO for all P. Eng.'s assigned to the project must be provided upon notice of intent to award.
- Time-task matrix showing scope broken down with hours assigned per team member.

The Cost Section of the proposal shall contain the following:

- The fixed consulting fees and disbursements for the performance of services based on the requirements of the Terms of Reference to be provided in a separate sealed envelope. Hourly rates for all assigned staff, administration fees on disbursements, or on Sub-Consultant fees, and other consulting firm policies shall be submitted.

10.1. Schedule of Fees and Disbursements

The Engineer shall provide a cost breakdown of the services requested in this Terms of Reference. The breakdown shall show the fixed cost of professional fees and expenses. The work breakdown shall be in the form of a time and task activity matrix and demonstrate the person-hours for each task.

The cost breakdown and time cost categories by section shall include those listed on the cost of services form found in Section 11 of this TOR.

11. Cost of Services Form (To be Provided in a Separate E-Mail)

Cost Envelope shall include the Cost of Services Form and a detailed Time Task Matrix with hours assigned per team member and hourly rates.

Location of Work: Curve Lake First Nation

Description of Work: Engineering Design, Contract Administration, and Site Inspection Services

Item	Service	Fees	Disbursements	Total
1	Background Review, Confirmation of Design Concept and Preliminary Design			
2	Detailed Design			
3	Environmental Review and Approval. All other Approvals and Permits			
4	Operator Training Plan Development			
5	Tender Phase (provisional)			
6	Contract Administration Services (provisional)			
*7	Resident Site Inspection Services (provisional)			
8	Commissioning (provisional)			
9	Warranty Phase (provisional)			
10	As-Built Drawings (Provisional)			
11	Cash Allowance – Shop Drawing Procurement		\$30,000	
12	Cash Allowance – Pilot Testing, Water Sampling and Bench Scale Testing		\$150,000	
13	Cash Allowance – Additional Investigations (Geotech, Survey, Bathymetry, etc.)		\$160,000	
	Totals			
A	Additional Meeting(s) in CLFN (provisional)			
B	Credit for meeting to be held via teleconference rather than on-site meeting (provisional)			
C	Credit for preparing all capital cost estimates without the use of licensed member of the CIQS/OIQS (provisional)			

**Resident Site Inspection Services shall be based upon a total of 5,200 person-hours*

Name of Firm: _____

Address of Firm: _____

Signature of Engineer: _____

Position/Capacity: _____

12. Engineer Questions

Questions are to be submitted to the Professional Project Manager by email only and prior to the aforementioned due date and time (see Section 2.1) for questions.

Please direct questions to:

Sean Petrus, P.Eng., BAdmin
Colliers Project Leaders
29 Cumberland St. S
Thunder Bay, ON, P7B 2T4
sean.petrus@colliersprojectleaders.com

and carbon copy (cc) questions to:

Mackenzie Brown, B.Eng.
Colliers Project Leaders
136 Bayfield St. Suite 101
Barrie, ON, L4M 3B3
mackenzie.brown@colliersprojectleaders.com

13. Evaluation Team

Members of the team evaluating the Engineer's qualifications and proposals shall consist of the following Project Team members:

- Curve Lake First Nation Project Coordinator
- Professional Project Manager (Colliers)
- ISC Regional Senior Program Officer
- ISC Engineer
- Ontario First Nations Technical Services Corporation Technical Advisor

One evaluation form will be completed by each the above parties and the results will be averaged to produce the evaluation team score used in the selection of the Engineer.

14. Proposal Evaluation

Mandatory requirements that the Engineer must provide in their proposal:

- That the persons assigned to the lead roles in the project are respectively registered or licensed to practice in the province of Ontario with a P. Eng. designation. Proof of registration and/or licensing and Professional Insurance is to be provided within three (3) business days upon notice of intent to award. Failure to comply will render the proposal non-compliant and the next highest rated firm will be contacted.
- Fees and disbursement for the specified consulting services expressed as a lump sum (fixed) and summarized on a COST OF SERVICES FORM submitted in a separate cost envelope.
- Three (3) references from three (3) different organizations for which the Engineer has performed similar work. All references must include the following contact information: contact name, current telephone number, and a short description of the project. Failure to provide the aforementioned contact information of all references will result in disqualification. References which key proposed project team members were not team members of will not be considered eligible.

The proposals will be evaluated only on the strengths of the written presentations. 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:

Firm Performance on Similar Projects (20 points): Experience, registration, and satisfactory performance on similar completed projects (First Nation and municipal). Specific experience on First Nation projects and municipal (meeting Provincial O. Reg. 170/03) will be considered. References will be contacted.

Project Team (20 points): The number, qualifications, and relevant experience of personnel to be assigned to the proposed team.

Proposal (10 points): The depth and detail of the proposal which indicates an understanding of the scope, size, and complexity of the project.

Schedule (10 points): The proposed schedule for the work. Management of the work, delegation of responsibility, work plans, schedule and cost control, reporting, and quality control.

Methodology (25 points): The methodology proposed for the performance of the work in accordance with the Terms of Reference. This includes the Engineer's management section and proposed skills transfer to CLFN.

Cost of Services (15 points): The Engineer's fee proposal as submitted on the Cost of Services Form and submitted in a separate cost envelope.

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

1. Each proposal will first be evaluated separately by each member of the Evaluation Team using the point system for all criteria *except costs* as indicated on the attached "Evaluation Criteria Table".
2. The evaluation procedure using all criteria *except costs* is to:
 - a. Assign a score between 0 and the max score for all criteria in each proposal; and
 - b. Add up each mark to determine the subtotal.
3. The cost sections are opened for all Proposals attaining 60 points or more on the technical component. Where the Proposal does not score a minimum of 60 points in the technical evaluation portion, the cost portion will remain unopened and the password will not be requested.
4. The terms of the contract will be negotiated with the Consulting Engineer with the highest points. Should negotiations breakdown, the Consulting Engineer with the second highest points will be contacted. This procedure will be continued until a contract is finalized.

15. Evaluation Criteria Table

Criteria	Max Score
<p>Firm Performance on Similar Projects: Experience, registration, and satisfactory performance on similar completed projects (First Nation and municipal). Specific experience on First Nation projects and municipal (meeting Provincial O. Reg. 170/03) will be considered. References will be contacted.</p>	20
<p>Project Team: The number, qualifications, and relevant experience of personnel to be assigned to the proposed team. Team to include sufficient engineering resources, as well as other specialties as applicable, with adequate balance of proposed senior, intermediate, and technical resources. Appropriate relevant experience is evident among project team members.</p> <p>Project Manager/Lead Engineer has at least ten (10) years of experience in the design of water treatment facilities.</p> <p>Resident Site Inspector has at least five (5) years of construction inspection experience in the delivery of water treatment facilities.</p> <p>Time Task Matrix showing number of hours proposed for each personnel is submitted.</p>	20
<p>Proposal: The depth and detail of the Proposal which indicates an understanding of the scope, size, and complexity of the project. The Proposal demonstrates that the Proponent has reviewed background information and has a good understanding of the project background and scope. Previous successful history of work with remote First Nation communities will be scored favourably.</p>	10
<p>Schedule: The proposed schedule for the work. Management of the work, delegation of responsibility, work plans, schedule and cost control, reporting and quality control, and schedule saving opportunities.</p> <p>The Proposal discusses how the Engineer will maintain the schedule such that construction will start in November 2021. The Engineer will confirm that proposed resources are available such that this deadline can be met.</p>	10
<p>Methodology: The methodology proposed for the performance of the work in accordance with the Terms of Reference. This includes the Engineer's management section and proposed skills transfer to CLFN.</p> <p>Project Management methodology, including QA/QC, schedule and cost control will be included.</p>	25
Subtotal – Minimum Score of 65 out of 85 to proceed	
<p>*Cost of Services: The Engineer's fee proposal as submitted on the cost of services form and submitted in a separate cost envelope. Provisional items will be included in calculation.</p> <p>Cost of Services form to include detailed Time Task Matrix.</p> $\text{Cost Score} = \frac{\text{Lowest Proposal Cost}}{\text{Evaluated Proposal Cost}} \times 15$	15

**The project team reserves the right to evaluate cost of services utilizing alternative industry standards methods such as the market window method.*

Evaluating Team Member: _____

Appendix A: Final Water Feasibility Study