The Municipality of the County of Cumberland

Request for Quotations

RFQ-MCC-1903 WATER WELL DRILLING CONTRACTOR

Closing Date: Wednesday, October 30, 2019
Closing Time: 2:00 pm

The Municipality of the County of Cumberland
1395 Blair Lake Road, Upper Nappan, N.S., B4H 3Y4

REQUEST FOR QUOTATIONS - WATER WELL DRILLING CONTRACTOR

PRODUCTION WELL PROGRAM, PARRSBORO, NS

1. INFORMATION TO PROPONENTS

The Municipality of Cumberland will be receiving proposals no later than 2:00 PM October 30, 2019, for RFQ-MCC-1903 Water Well Drilling Contractor. Quotes must be submitted in a sealed envelope clearly marked RFQ-MCC-1903 attention Kellie Seaman. Please send proposals to:

Municipality of the County of Cumberland
Upper Nappan Service Centre
1395 Blair Lake Road
Upper Nappan, NS B4H 3Y4
Attention: Kellie Seaman, Recruitment & Procurement Officer

There will not be a public opening of the submissions received.

It is the responsibility of each Proponent to ensure their submission arrives on time. Any late submissions may not be accepted. Submissions may be withdrawn at any time prior to opening. The Municipality of the County of Cumberland reserves the right to waive technicalities or minor (in the sole opinion of the Municipality) non-compliance, to reject any or all submissions, or any portion thereof, to advertise for new Proposals, to proceed to do the work otherwise, or to abandon the work, if in the best interests of the Municipality.

The Municipality reserves the right to request clarification of information submitted and to request additional information if required. All costs associated with the preparation of a submission and any supplemental information shall be borne solely by the Proponent, and shall not be passed on to the Municipality under any circumstances.

Any Addendum (corrections, changes, additions, or clarifications) will be posted on the Municipality's website. No other notification of any such Addendum will be provided. Prospective Proponents should check the website prior to submitting their proposal.

2. SUMMARY

The County of Cumberland (The County) is seeking competitive bids to drill a production well in the existing Parrsboro Well Field. All work is to be completed per the Nova Scotia Well Drilling Regulations, and to meet the requirements of an Application for a Water Withdrawal Permit. The work will be supervised and directed by the Owner's Representative, CBCL Limited.

3. SITE ACCESS

The County will prepare an access road, including a 25' x 25' drilling pad to accommodate the rig and support truck. The location of the production well will be approximately mid-way between existing Wells 3 and 4, to the north of Well 1.

4. PRODUCTION WELL DRILLING

The new production well will be completed as a screened well, installed in the sand and gravel material that forms the Utility's well field. The setting of the well field near the elevation of the adjacent river results in a heightened risk of GUDI conditions. Periodic flooding and/or a limited thickness of confining material indicate that the well construction should include a cement grout seal in the annulus of the borehole above the screen. Construction of the well using a temporary outer casing (rather than a telescoping screen) is assumed to provide the best means of ensuring an adequate annular seal.

CBCL Limited will be on-site to collect cuttings and log the borehole. The driller will facilitate the collection of cuttings samples at 5-foot intervals. Finer-grained material is likely to be encountered at depths exceeding approximately 60 feet. When this finer-grained unit is encountered the borehole will be terminated and sealed to allow for sample analysis and design of the screen by CBCL Limited.

After the screen has been manufactured the 8" well will be completed and installed by the drilling contractor. The outer casing will be retracted to expose the screen and allow for development of a natural filter pack. Development will proceed via surging and airlifting for approximately 8 hours, or until the turbidity of surged water is nominal. The annulus of the borehole above the screen will be sealed using cement grout, placed using a tremie pipe.

5. PUMPING TESTS

Each completed well will be subjected to a step test and a 72-hr constant-rate test. The step test will consist of four consecutive 1-hour steps, at pumping rates from 50 - 200 igpm, depending on the response of the well. Each step test will include 1 hour of recovery after the pump is shut-off, and before the pump is removed from the well. The constant rate test will include up to 4 hours of recovery time.

Power will not be made available at the drilling sites and must be supplied by the contractor. Unit rates for pumping tests must include the cost of rental and fuel for a gen. set / power source.

All pumping rates must be monitored, maintained, and recorded using an inline flow meter. Water must be discharged a minimum of **300 ft** from the pumped well to avoid recirculation during the tests. The driller will be responsible for furnishing all labour, materials, equipment and instrumentation required to complete this task, independent of assistance from the Utility or CBCL Limited. CBCL will provide sample bottles for the collection of samples after 24 hours and 48 hours during the constant rate test. The drilling contractor will collect and label these samples, and store them in the provided cooler, to be collected by CBCL Limited at the end of the test.

The driller will complete and submit a report of all activities within 14 days of the completion of fieldwork. The report will include:

-driller's borehole log, including lithology, casing length, slotted sections etc. per NSE regulations
-time-pumping rate data
-time-drawdown data
-time-parameter data (in situ probe)

CBCL Limited will be on-site during step tests and during the first and final hour of the constant-rate test. CBCL will collect water quality samples during the step test, and during the final hour of the constant-rate test. CBCL will provide sample bottles, and manage communication with the laboratory.

6. SITE CLEANUP

Remove all garbage and debris before demobilizing from the site. Borehole cuttings are to be distributed evenly around the well head.

7. SCHEDULE

Work is to be completed between November 1 and November 30, 2019. Please provide your price and offer of services on or before **2:00 pm October 30, 2019**.

APPROXIMATE QUANTITIES

Exact drilling depths and well design will be finalized in the field as a part of drilling activities. The following approximate quantities are based on the Utility's existing production wells. These quantities are to be used for bidding purposes. The screen will not be pre-ordered, as the slot-size, length, construction, and development time will be determined as the work proceeds.

Finished Casing Diameter	8" / 203 mm
Depth	60 ft / 18 m
Length of Screen	20 ft / 6.1 m
Development Time	8 hr
Step Test	4 x 1 hr + recovery (50 to 200 igpm)
Constant Rate Test	72 hours + 4 hours recovery (up to 200 igpm)

8. PRICE

Provide a **lump sum** price, exclusive of taxes and including all drilling, bit-ware, mobilization, materials, labour, accommodations, reporting, and stand-by time. Show unit rates using the attached SCHEDULE OF RATES. Lump sum prices will be used to select a successful bidder. Final prices billed will be determined based on actual drilling depths as shown on the driller's borehole log and record of drilling. The drilling contractor will bill the County directly, subject to review of quantities and completion of the work by CBCL Limited.

The lump sum price should not include an estimate for Standby time for unexpected delays due to transport issues. Standby time for delays will be billed at the unit rate. Billing for additional Standby time will be based on the nature and timing of the delay, to be approved by CBCL Limited and the County.

SCHEDULE OF RATES: Drilling and Well Construction Unit Costs

Contractor: _____

1. Mob./Demob/Accommodations	=	_____ + HST
2. Drilling, 12 inch diam., $ per ft.	=	_____ + HST
3. Well Casing, 12 inch diam., $ per ft.	=	_____ + HST
4. Drive Shoe, 12 inch welded in place	=	_____ + HST
5. Well Casing, 8 inch diam., $ per ft.	=	_____ + HST
6. Stainless Steel Well Screen, 8” ~30 slot x 20 ft long	=	_____ + HST
7. Cement Grout, piped into annulus above screen	=	_____ + HST
8. Well Cap, 8” Diameter	=	_____ + HST
9. Well Development, $ per hour	=	_____ + HST
10. Drilling Standby Time, $ per hour	=	_____ + HST
11. Step Test, 4 x 1 hr + 1 hr recovery	=	_____ + HST
12. Pumping Test, 24 Hours + 4 hr recovery	=	_____ + HST
13. Standby Time, $ per hour	=	_____ + HST
14. Contingencies and Other Costs	=	_____ + HST
_____	=	_____ + HST
_____	=	_____ + HST
_____	=	_____ + HST
_____	=	_____ + HST
_____	=	_____ + HST

Earliest Date Available: _____

CONTACT INFORMATION

Technical questions concerning this Scope of Work may be directed to:

Colin Walker, M.Sc., P.Geo
CBCL Limited
Tel: (902) 478-8875
Email: colinw@cbcl.ca