



The Corporation of the Town of Tecumseh

Public Works & Environmental Services

To: Mayor and Members of Council

From: Denis Berthiaume, Manager Water & Wastewater Services

Date to Council: April 23, 2019

Report Number: PWES-2019-25

Subject: Internal Lining Replacement of the
Town of Tecumseh Elevated Water Tank

Recommendations

It is recommended:

That pursuant to the Town's Purchasing Policy Section 3.3 Single/Sole Sourcing (By-law 2017-63), Landmark Municipal Services (Landmark) **be retained** to sandblast and re-line the interior of the Town of Tecumseh's elevated water tank in the amount of \$448,365 excluding HST;

And that the Mayor and Clerk **be authorized** to execute an agreement, satisfactory in form to the Town's Solicitor, with Landmark.

Background

Levels of protection to municipal drinking water have been achieved following the Walkerton tragedy. Subsequent legislative changes have set rigorous standards in the municipal residential drinking water system to achieve a major transformation of drinking water protection. One aspect of the safety net includes the Drinking Water Quality Management System (DWQMS). The DWQMS concepts provide guidance on the development, implementation, maintenance and continual improvement of the Quality Management System. Scheduled maintenance of the Town's water infrastructure, including the elevated water tank, is a required element within the DWQMS.

Landmark designed and constructed the Town's elevated water tank in 1991 and has since performed all inspections (completed every five years as recommended by the American

Water Works Association (AWWA)) with the most recent inspection occurring on June 5, 2018. Recent repairs were completed on September 22, 2015.

Landmark is an engineering and contracting company founded in 1974 and is the originator of the Composite Elevated Tank (CET). This innovation was a paradigm shift from the way elevated towers had traditionally been constructed, incorporating the use of a concrete pedestal to significantly reduce long-term maintenance costs. Landmark's expertise in this type of construction led the company to become the market leader in high-capacity elevated storage construction throughout North America.

Landmark is one of the largest and most experienced designers, constructors, and maintainers of steel storage tanks and is responsible for the majority of CET installations in North America. Landmark's elevated tank experience includes projects over 3.5 million gallons and heights exceeding 250 feet. Landmark brings over 40 years of leadership to this project.

Landmark is a full-service contractor and has performed all of the work and maintenance on Tecumseh's Water Tower. Landmark crews employ specialized construction processes, including a highly evolved system of concrete placement, precise assembly of steel plate and detailed coatings application.

To enhance consumer protection through continual improvement, the Overall Responsible Operator of the Town's water distribution system recommends inspections, modifications and repairs to the Town's water tower be provided by the builder of the tower, Landmark.

At the December 11, 2018 Regular Meeting of Council, Council approved the recommendations of PWES Report No. 2018-08 titled 2019-2023 Public Works & Environmental Services Five Year Capital Works Plan that authorized Administration to proceed with the 2019 capital works projects including the water tower internal lining replacement (Motion RCM-361/18).

Comments

On June 5, 2018, Landmark was retained to clean the interior of the Town's elevated water tank and perform a comprehensive interior inspection, as recommended by the AWWA best management practices.

A subsequent inspection report was prepared by Landmark indicating that there are numerous osmotic blisters and corrosion cells throughout the tank interior, mainly on the floor and around the water line. The painter's rails were found to be heavily corroded. Heavy paint damage was found at the high water line and on the access tube as well as the entire ladder. It was also noted that the ceiling has heavy corrosion at the roof plate overlaps. The overall surface of the ceiling has general corrosion that indicates the lining has become porous with age and is no longer providing barrier protection. The inspection report states that if the recommended repairs are delayed, the corrosion cells on the interior walls will become leaks, which could be catastrophic.

The recommendation from Landmark is that the interior lining of the tank should be completely removed via abrasive blast cleaning to SSPC-SP10 Near-White Metal Clean, then re-lined with

an AWWA D102 ICS-3 system. All corrosion pits should be repaired by pool welding patch plates.

Administration recommends that the Town authorize the Internal Lining Replacement for the Town of Tecumseh Composite Elevated Water Tank by Landmark. To complete this project the water tower will be taken out of service for approximately four to five weeks, which would take place late summer this year. The Tecumseh Water Tower has been taken out of service multiple times since 2006 when the Town started to receive water from Windsor without any water pressure concerns or issues in the distribution system. As in the past, the Water Department will closely monitor the water flows and pressures during the maintenance period.

Section 3.3 Single/Sole Sourcing of By-law 2017-63, being a by-law to govern procurement policies and procedures, states that:

“In circumstances where there may be more than one source of supply in the open market, but only one of these is recommended by the Department Director, with the concurrence of the Purchasing Coordinator, for consideration on grounds that it is more cost effective or beneficial to the Town; and where the expenditure will exceed \$30,000, approval must be obtained from Town Council prior to negotiations with the single source...”.

Since Landmark designed and constructed the Town’s elevated water tank and has performed all inspections every five years on behalf of the Town, Landmark is the preferred company to sandblast and re-line the interior of the Town’s elevated water tank. It is further recommended that the Mayor and Clerk be authorized to execute an agreement, satisfactory in form to the Town’s Solicitor, with Landmark.

Consultations

Financial Services

Financial Implications

PWES Report No. 2018-08 provided an estimated project cost of \$470,000 to be funded from the Water Facilities Reserve Fund.

The total tendered/projected cost is under the \$470,000 budget by \$13,744, as detailed in the table below:

Details	Amount
Project Budget	\$470,000
Tendered/Projected	\$448,365
Non-rebateable HST (1.76%)	\$7,891
Total Tendered/Projected	\$456,256
Surplus	\$13,744

Link to Strategic Priorities

Applicable	2017-18 Strategic Priorities
<input type="checkbox"/>	Make the Town of Tecumseh an even better place to live, work and invest through a shared vision for our residents and newcomers.
<input checked="" type="checkbox"/>	Ensure that the Town of Tecumseh's current and future growth is built upon the principles of sustainability and strategic decision-making.
<input type="checkbox"/>	Integrate the principles of health and wellness into all of the Town of Tecumseh's plans and priorities.
<input checked="" type="checkbox"/>	Steward the Town's "continuous improvement" approach to municipal service delivery to residents and businesses.
<input type="checkbox"/>	Demonstrate the Town's leadership role in the community by promoting good governance and community engagement, by bringing together organizations serving the Town and the region to pursue common goals.

Communications

Not applicable

Website

Social Media

News Release

Local Newspaper

This report has been reviewed by Senior Administration as indicated below and recommended for submission by the Chief Administrative Officer.

Prepared by:

Denis Berthiaume, ORO
Manager Water & Wastewater Services

Reviewed by:

Phil Bartnik, P.Eng.
Director Public Works & Environmental Services

Reviewed by:

Luc Gagnon, CPA, CA, BMath
Director Financial Services & Treasurer

Recommended by:

Margaret Misek-Evans, RPP, MCIP
Chief Administrative Officer

Attachment Number	Attachment Name
None	None