



# **PIERS ISLAND WATER TANK REPLACEMENT PROJECT**

Summary Report April 2020

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**This information package is a *summary document* only. Detailed tender and bid response documents are available upon request to the Water Trustee, Charlie Troger. [charlie@piersisland.ca](mailto:charlie@piersisland.ca)**

## History

When the PIID Trustees are required to contemplate future actions, their mandate allows them to form what are called ‘Select Committees’. The *Water System Select Committee* met in October 2017 to consider water-system related issues, one of which was how to deal with the leaking, aging, seismically unsound and labour-intensive water tank. The committee consisted of Chair, Charlie Troger, Water Trustee, and members Bob Crooks, John Hall, Bill Jordan, Colin Robertson, and Ander Wynne-Edwards. The committee narrowed its focus, with PIID mandate, on the need to address the Piers Island water tank.

### Alternative Options Identified

- Repair and maintain existing tank.
- Extend life of existing tank using a liner.
- Replace existing tank with new tank or tanks.

### Committee’s Activities

- Reviewed the existing tank condition and architecture.
- Considered the options and decided that tank replacement made the most sense.
- Analyzed the complexity of the project and opted for professional advice.
- Retained Stantec Engineering as project consultants.

### Committee’s Decision

Through a Stantec study the team decided on tank type, a bolted-steel, glass-lined, 50,000-gallon tank (10,000 gallons large than the old tank) and a budget of approximately \$425,000 including consulting fees. This tank was the best technology available for the Piers Island physical environment.

All of the activities listed above were approved by the PIID Trustees and have been reported to landowners in Water Trustee reports as they have unfolded.

## Consultant: Stantec

Stantec Engineering was founded in 1954, as D. R. Stanley Associates in Edmonton, Alberta. Stantec provides professional consulting services in planning, engineering, architecture, interior design, landscape architecture, surveying, environmental sciences, project management, and project economics for infrastructure and facilities projects. The Stantec Community unites approximately 22,000 employees working in over 350 locations across six continents. They have a Victoria office and have performed much consulting work for Vancouver Island clients such as municipalities.

Stan Spencer, the consultant, is a Principal in the Stantec BC Water Team and has more than 45 years of experience in the field of water and wastewater infrastructure projects.

Stantec's appointment was approved at the PIID Trustees' meeting held April 16, 2019. The contract totaled \$48,986 and was defined in four phases.

### **Stantec's Role**

Stantec was retained to provide the following services throughout the life cycle of the project:

- preliminary design,
- detailed design,
- tender support, and
- construction administration, field service and post construction services.

### **Scope of Work**

The committee realized that there was a balance to be struck in the identification of work to be included in the tender. All those activities that contributed to the actual tank and its electrical and plumbing requirements that connected the tank to the existing infrastructure were deemed to be in scope and best left intact for the vendors to quote on.

These activities included:

- tank,
- roof,
- de-chlorination manhole,
- foundation,
- tank plumbing,
- tank electrical,
- excavation, and
- water circulation system.

The committee determined that contracting out these issues to a single vendor would minimize risk and clarify warranties.

All those activities that could be completed by others with sufficient expertise and would not affect liability or warranties were considered open to completion outside of the tender.

These included things such as:

- geotechnical survey,
- locating and moving cables,

- establishing initial grades,
- building a lean-to valve shelter,
- moving sirens,
- road repair,
- final site grading, and
- old tank removal.

These items are being contracted by Charlie Troger, Water Trustee, thus avoiding unnecessary overheads accrued during the tendering process.

## Water Tank Installation Support Select Committee

Once the *Water System Select Committee's* role to recommend a water tank replacement solution to the PIID Trustees was fulfilled, the committee was dissolved. A new committee, the *Water Tank Installation Support Select Committee* was approved at the PIID Trustees' meeting held November 26, 2019. This committee consists of Chair, Charlie Troger, Water Trustee and members Bob Crooks, John Hall, Bill Jordan, Colin Robertson and Ander Wynne-Edwards.

## Tender-related Activities

- Stantec issued a tender to two qualified vendors in BC, Greatario and H2flow. (The only two vendors in BC that market bolted-steel, glass-lined tanks.)
- \$50,000 grant received through application to the CRD (gas tax funds).
- Julien Bahain agreed to assist with the tender review.
- John Hall stepped down due to work commitments.
- Ander Wynne-Edwards stepped aside from committee work to avoid a conflict of interest. (He formed part of the installation team on the Greatario bid.)
- Site visit conducted by Stantec and committee members.

## Vendor Selection Process

- The tender responses were received on March 26, 2020.
- The consultant provided the committee with his evaluation of both tender responses:
  - Both vendors submitted qualified bids.
  - One vendor quoted on a tank manufactured in England and the other vendor quoted on a tank manufactured in the US.
  - There was a difference of \$11,925 between the high and low bid. The high bid was \$367,485 and the low bid was \$355,560.
- The committee met on April 1, 2020 to discuss both bids. Unresolved issues were identified and a 'Request for Clarification / RFC' list was developed.
- Zoom meetings were organized by Stantec and held with each vendor to discuss identified issues. Present from committee were Bob Crooks, Charlie Troger and Stan Spencer from Stantec.
- Written responses to each RFC question were then requested and received from each vendor.
- The committee met on April 11, 2020 to discuss vendor options in light of tender responses, Request for Clarification meeting and review of project key objectives initially defined. After extensive discussion and careful review of both tender responses matched against the overall, long-term objectives ***the committee agreed to award the contract to Greatario.***

This decision was influenced by a number of factors:

- Access to long-term maintenance resources.
- Type of tank roof offered.
- Manufacturing process of CST Industries tank (Greatario supplier).
- Installation team offered by Greatario.
- Interior glass coating offered in the CST Industries tank and their proprietary glass panel edge protection process.
- Interior glass coating colour.

### Award Criteria

The select committee defined three major criteria with which they evaluated the bid responses. They debated the merits of each response using these criteria and assigned scores to each vendor. In each case, they assigned the leader in a category the maximum score and then determined, sometimes subjectively, what the relative second score would be.

- Quality of end product 55% weighting
- Price 30% weighting
- Experience/service/installation 15% weighting

In the case of price, the committee assigned the criterion “low price” the maximum score and then allowed the second vendor a percentage of that score reflecting the dollar difference between the two bids. ( $\$355,560/\$367,485 \times 30 = 29$ , a weighting of 29% for Greatario and 30% for H2Flo).

These are two clearly capable vendors and the committee identified only minor differences between the two vendors that influenced the committee’s decision. The committee was in strong agreement that *quality* was a key factor. The committee is looking for a 50-year solution and believe the chosen vendor provides the product best able to meet that requirement.

Using this model, the committee assigned Greatario a score of **99** and H2flow a score of **91**.

## Successful Vendor: Greatario

GREATARIO ENGINEERED STORAGE SYSTEMS is the established and recognized market leader for the design and build of bolted-steel, glass-lined tanks and covers for liquid storage across Canada. Since 1986, their extensive knowledge and technical expertise have allowed them to design and build over 400 tanks and 100 dome covers across Canada. They provide and install CST Industries tanks.

## The Piers Island Water Tank Solution

The tender response provides an eight-page description of the parts and services proposed. The tender also specifies the requirement for the solution to be compliant with a number of industry standard specifications. As well, in many cases the tender specification refers to the MMCD (Master Municipal Construction Documents – Platinum Edition), a standard tool used in the construction industry to define how work will be done, disputes resolved, and contracts written. This tool is used by the CRD and they will expect that, to honour the conditions of our \$50,000 grant, we adhere to its standards.

| Item                                    | Description  | H2Flow           | Greatario        |
|---|--|------------------|------------------|
| <b>1</b>                                | <b>General Requirements</b>  |                  |                  |
| 1.1                                     | Mobilization/Demobilization  | \$ 16,385        | \$ 16,000        |
| 1.2                                     | Bonding/Insurance  | \$ 4,016         | \$ 7,500         |
| 1.3                                     | General Conditions   | \$ 4,375         | \$ 15,435        |
| Subtotal General Requirements           |  | \$ 24,776        | \$ 38,935        |
| <b>2</b>                                | <b>Site Civil</b>  |                  |                  |
|   | Civil Works:   |                  |                  |
| 2.1                                     | Excavation (Soil)  | \$ 1,000         | \$ 8,200         |
| 2.2                                     | Backfill (Compacted Crush 19 mm) under tank slab   | \$ 1,375         | \$ 5,900         |
| 2.3                                     | Drain and overflow pipes + dechlorination manhole + apron as per drawing C102                    | \$ 4,032         | \$ 23,500        |
|   | Watermains and Fittings  |                  |                  |
| 2.4                                     | 100 mm and 75 mm Schedule 80 PVC pipes and fittings from PS2 to tank as per drawing C102         | \$ 6,231         | \$ 11,750        |
| 2.5                                     | Valves, fittings and pipe in Pumphouse 2 addition as per drawing C201                            | \$ 16,220        | \$ 9,500         |
| Subtotal Site Civil                     |  | \$ 28,858        | \$ 58,850        |
| <b>3</b>                                | <b>Storage Reservoir</b>   |                  |                  |
| 3.1                                     | Foundation + underslab pipes   | \$107,157        | \$ 71,250        |
| 3.2                                     | Supply and Install glass fused to steel water storage tank (~243 m <sup>3</sup> )                | \$144,031        | \$125,900        |
| 3.3                                     | Internal piping and mixers   | \$ 6,897         | \$ 14,700        |
| Subtotal Storage Reservoir              |  | \$258,085        | \$211,850        |
| <b>4</b>                                | <b>Electrical, Controls and Instrumentation</b>  |                  |                  |
| 4.1                                     | Electrical cable and conduit, junction box JB-01 as per E101 and EI 603                          | \$ 6,953         | \$ 14,730        |
| 4.2                                     | Ultrasonic Level Indicator/Transmitter + control panel CPL-01 as per drawings E 10/EI 601/EI 602 | \$ 26,631        | \$ 34,820        |
| 4.3                                     | Backup float switches as per drawing C202  | \$ 10,257        | \$ 8,300         |
| Subtotal Electrical and Instrumentation |  | \$ 43,841        | \$ 57,850        |
| <b>Subtotal Construction Costs</b>      |  | <b>\$355,560</b> | <b>\$367,485</b> |
| GST                                     |  | \$ 17,778        | \$ 18,374        |
| <b>Total Construction Costs</b>         |  | <b>\$373,338</b> | <b>\$385,859</b> |



The eight pages of technical description submitted by Greatario have not been included with this information package. The committee has received many drawings and hundreds of pages of documentation on this project that some people may find interesting to peruse in more detail. These documents are all available upon request by emailing [charlie@piersisland.ca](mailto:charlie@piersisland.ca).

Some of the documents available upon request include:

- Tender drawing package containing all technical drawings (14 drawings)
- Piers Island Water Tank Request for Proposal (45 pages)
- Stantec Tender Review (36 pages, includes responses from both vendors and comparison of prices)

The detailed cash-flow analysis of the project financials is shown below:

- Note: PIID pays GST and subsequently receives a full GST rebate. This payment and rebate are not shown below.
- Note: After contract signing, the committee will negotiate the removal of an electronic level sensor from the contract.

## Project Financing

| Piers Island Improvement District (PIID) Water Tank Replacement Project  |                  |                   |                  |
|--|------------------|-------------------|------------------|
| Items  | Debit            | Credit            | Balance          |
| Water Capital Asset Replacement Plan (current)   | \$314,525        |                   | \$314,525        |
| #124 Water Capital Asset Replacement Plan Disbursement Bylaw 2019  | \$ 50,000        |                   | \$364,525        |
| Capital Region District (CRD) Grant 2019   | \$ 50,000        |                   | \$414,525        |
| 2020 Capital Asset Replacement Plan tax (*assumption: 80%, however, distribution between Fire, Land and Water to be determined by PIID Trustees) | \$ 52,800        |                   | \$467,325        |
| Ancillary expense to date 2019/2020  |                  | -\$ 7,715         | \$459,610        |
| Stantec Consulting expense (to date)   |                  | -\$ 29,953        | \$429,657        |
| Stantec Consulting expense (outstanding)   |                  | -\$ 19,047        | \$410,610        |
| Greatario  |                  | -\$367,485        | \$ 43,125        |
| Ancillary expense (outstanding)  |                  | -\$ 21,000        | \$ 22,125        |
| <b>Totals</b>  | <b>\$467,325</b> | <b>-\$445,200</b> | <b>\$ 22,125</b> |

\*amounts are estimates

## Contract Conditions

### COVID-19 Pandemic Implications

The committee discussed the possible implications that could be brought about by the COVID-19 pandemic. They viewed the major issues to be unforeseen additional costs and delays in the completion of the project. At this time, water tank manufacturing and installation are viewed as essential industries. The committee has, however, reached an agreement with Greatario to sign a mutual indemnity clause to avoid any claims against each other in the case of project delays. This will form a part of the contract documentation.

The committee also sought clarification from the CRD and have been assured that the 2020, \$50,000 grant will be valid if the project were not to complete until 2021.

### Warranty

Both vendors, in compliance with the tender request, provided a five-year warranty as well as an extension of warranty coverage to ten years. It is the opinion of the Select Committee that a ten-year warranty is a prudent precaution for such a long-term investment.

## Conclusion

The Water Tank Installation Support Select Committee is proud to present this solution for your review. After over two years of hard work they believe that their recommendation, when implemented, will serve the Piers Island community for many years.

**The committee encourages you to bring any questions to the *Water Tank Information Meeting* scheduled for Thursday, April 16<sup>th</sup> at 7:00 p.m.**

**Below is the invitation to attend the meeting via Zoom. If security is an issue, calling into the meeting by telephone is a viable option.**

Topic: Water Tank Information Meeting

Time: Apr 16, 2020 07:00 PM Pacific Time (US and Canada)

Join Zoom Meeting

<https://zoom.us/j/96835686068?pwd=M21OVkh5d1BHbXhZNVRxYnJqeHB3UT09>

Meeting ID: **968 3568 6068**

Password: **381919**

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