



Staff Report

Administration – Communications

Report To: Committee of the Whole Meeting
Meeting Date: November 29, 2022
Report Number: FAF.22.167
Title: Victoria Street Water Tower Design Considerations
Prepared by: Jason Petznick, Communications Coordinator, Capital Projects

A. Recommendations

THAT Council receive Staff Report FAF.22.167, entitled “Victoria Street Water Tower Design Considerations”;

AND THAT Council directs staff to proceed with option ____ as provided in Staff Report FAF.22.167.

Option “A”

AND THAT Council directs staff to proceed with a white coating with “Thornbury” and “The Blue Mountains” lettering as depicted in Option #1 from Category #1.

OR

Option “B”

AND THAT Council directs staff to proceed with Option ____ from Category ____

OR

Option “C”

AND THAT Council directs staff to proceed with a public survey to gauge community support for any one, or combination, of the following design categories: Solid Colour Designs, Colour Block Designs, Detailed Designs.

B. Overview

This Staff Report provides background information on the Victoria Street Water Tower Rehabilitation Project, and an overview of the creative brief and branding that staff have used to prepare the preliminary designs.

C. Background

The Victoria Street water tower was originally constructed in the late 1970s by Horton CBI Limited, and now requires rehabilitation work to ensure it continues to provide a reliable service to the Blue Mountains community of Thornbury. Rehabilitation of the tower was identified as a preferred alternative solution through the West Side Water Storage Environmental Assessment which was completed in late 2021. The recommended rehabilitation work includes complete exterior and interior media blasting, exterior and interior steel repairs, interior lining upgrades, and exterior coating upgrades. The rehabilitation work is estimated to extend the operational lifespan of the tower by 18-25 years from the time of completion with scheduled inspections and maintenance. Town staff identified an opportunity through the exterior coating process to evaluate new options for colours and designs.

D. Analysis

The opportunity to evaluate the design and visual appearance of the Victoria Street Water Tower was presented through the need to rehabilitate the tower. It is important to emphasize that the primary purpose of the project is to rehabilitate the tower, and therefore the process of selecting a design should not inhibit or delay the required work.

Due to the rehabilitation work, the water tower must receive an external coating. Of which, the least expensive option would be to paint the water tower a solid colour, such as white. However, understanding the prominence and significance of the water tower within the local landscape, staff realized an opportunity to bring forward more detailed designs for Council's consideration.

With this in mind and to meet the deadline, staff have researched water tower design directions used by other local governments and have created a series of designs that can be classified within three separate categories (Solid Colour Designs, Colour Block Designs and Detailed Designs). In collaboration with the Town's Consulting Engineer, CIMA Canada Inc. (CIMA+), staff have also been able to provide preliminary cost estimates for each category.

Design Considerations

Prior to creating the designs, staff compiled a list of considerations to help influence the design process. These considerations included:

Legibility – Any text or lettering included on the tower must be kept at a scale that keeps it legible from a distance

Viewing angles – It was brought up during the research phase that the water tower is a primary landmark in the community. As it is currently, lettering should be kept on the north and south sides of the tower.

Wear – Dirt and wear generally starts to appear on the top and bottom thirds of spheroid tanks. If a design can camouflage that wear, it would be beneficial.

Timelessness – The coating applied through this project is estimated to last for 18-25 years. Therefore, the design should not include any major elements that are likely to change during that period.

Use of Corporate Logo and Branding – With the considerations of legibility and timelessness in mind, staff recommend that the designs utilize colours and typefaces that are consistent with the current corporate brand, in lieu of using the Town’s corporate logo. Given the estimated 18-25-year lifespan of the coating that will be applied, there’s too much of a risk that the current corporate logo will change at some point during the lifespan. The text included within the Town logo would also be extremely small when used in this application, and the logo could end up warped on rounded surface if printed at a size that allowed for better legibility.

Creative Brief, Inspiration and Colour Scheme

To stay within project timelines, staff took the initiative to prepare a creative brief, list of design considerations, and series of designs that have been reviewed and supported by the Project Team, Communications Department and Senior Management Team.

The creative brief was prepared using information gathered from previous public surveys, specifically the responses to Question 8 from the Official Plan Phase 1 Review Survey which asked, “How would you want the Town of The Blue Mountains to change over the next 25 years. What are five words that best describe your vision?” This question was used because the timeline matches with the estimated lifespan of the Tower repairs. The word cloud generated by the responses to this question can be found in Attachment 1 on this report. Predominant themes around nature, the environment and sustainability were found. The designs that have been prepared take inspiration from the winding waters of the Beaver River, the rolling waves of Georgian Bay and the vast green space of the Niagara Escarpment and Beaver Valley. They also utilize colours from the Town’s brand colour palette of white, green and blue.

Design Options

To present Council with options, various designs within each category were created. The designs can be found in Attachment 1 on this report.

Category 1 – Solid Colour Designs

This design category represents the least expensive design option as the water tower would be painted one single colour.

The estimated cost to apply an exterior coating from this category is \$300,000 to \$315,000, plus an additional \$25,000 for text/lettering.

Category 2 – Colour Block Designs

This design category represents the mid-range design option in terms of cost. A colour block design is more expensive than a solid colour design based on the need to mark out respective sections of the tank.

The estimated cost to apply an exterior coating from this category is \$340,000, plus an additional \$25,000 for text/lettering.

Category 3 – Detailed Designs

This design category represents the most expensive design option in terms of cost but also allows for creativity within the design.

Increased labour effort will be required to prepare and apply detailed graphics. The estimated cost to apply an exterior coating system from this category is \$370,000 to \$400,000, plus an additional \$25,000 for text/lettering.

At this stage, the accuracy of the estimated exterior coating costs during construction noted above is anticipated to be within a range of -15% and +20% of the construction market.

Timeline

In order to receive the most competitive quotes possible, it is imperative that the Town has a construction tender ready to be released in January 2023. The project is currently on schedule to meet this timeline, but risks falling behind schedule if the process of finalizing the direction for the coating is delayed

Community Design Submissions

At the beginning of the design process, staff discussed the option of soliciting designs from the local art community. Staff opted not to proceed with this direction as the project timeline did not allow for the time required to engage and solicit designs from the local art community in an equitable manner. Staff also felt it was unfair to request local artists to complete work for the Town with no guarantee of compensation.

Lead Abatement Procedure

Since the original presentation of this Report, CIMA+ has confirmed the presence of a lead-based primer on the water tower. Therefore, full lead abatement will be required on this project. The abrasive blasting work will require construction of a full scaffolding structure and shrouding around the water tower to facilitate the work. The scaffolding structure and shrouding will also protect the nearby residential properties and culturally significant homes located near the tower from contamination of lead chips, dust and grit.

Furthermore, the abrasive blasting will create noise at the work site. This work will not proceed outside of the approved times outlined in the Noise By-law and will not occur on weekends or statutory holidays. Although, this work may be disruptive the abrasive blasting, scaffolding, and shrouding is necessary for any steel repairs and re-coating to ensure the long-term service life of this critical water infrastructure.

The presence of a lead-based primer on a tower of this vintage is not out of the ordinary, and the required lead abatement processes are common in rehabilitation projects of this type.

Contractors that engage in this work are familiar with the mitigation measures, and the risk level of exposure is very low when these measures are in place.

E. Strategic Priorities

1. Communication and Engagement

We will enhance communications and engagement between Town Staff, Town residents and stakeholders

2. Community

We will protect and enhance the community feel and the character of the Town, while ensuring the responsible use of resources and restoration of nature.

F. Environmental Impacts

Due to the presence of a lead-based primer, full lead abatement will be required on this project. The abrasive blasting work will require construction of a full scaffolding structure and shrouding around the water tower to facilitate the work. The scaffolding structure and shrouding will also protect the nearby residential properties and culturally significant homes located near the tower from contamination of lead chips, dust and grit.

G. Financial Impacts

Staff have invested an estimated 20 hours into the creation of the Creative Brief and designs. The category of design chosen will impact the overall cost of the project. Any revisions requested at this point will result in additional staff hours invested into updating the designs. Overall project budget could be impacted further if selection of a final design is delayed beyond the award of the construction tender.

H. In Consultation With

Kevin Verkindt, Senior Infrastructure Capital Project Coordinator

Tim Hendry, Manager of Communications and Economic Development

Senior Management Team

I. Public Engagement

Any comments regarding this report should be submitted to Jason Petznick, Communications Coordinator, Capital Projects at jpetznick@thebluemountains.ca

J. Attached

1. Victoria Street Water Tower Rehab – Project and Creative Brief

2. Victoria Street Water Tower Rehab – Draft Design Survey

Respectfully submitted,

Jason Petznick
Communications Coordinator, Capital Projects

Shawn Everitt
Chief Administrative Officer

For more information, please contact:
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519-599-3131 extension 302

Report Approval Details

Document Title:	FAF.22.167 Victoria Street Water Tower Design Considerations.docx
Attachments:	- Attachment-1-Victoria-Street-Water-Tower-Rehab-Project-and-Creative-Brief.pdf - Attachment-2-Victoria-Street-Water-Tower-Rehab-Design-Survey-Draft.pdf
Final Approval Date:	Nov 21, 2022

This report and all of its attachments were approved and signed as outlined below:

No Signature - Task assigned to Tim Hendry was completed by assistant Liz Saunders

Tim Hendry - Nov 18, 2022 - 2:02 PM

Shawn Everitt - Nov 21, 2022 - 9:12 AM



Victoria Street Water Tower Rehab

Project & Creative Brief

Background

Project History

- Water Tower was originally constructed in 1977 by Horton CBI Limited
- Last recoated in early to mid-1980s
- Rehabilitation work identified as a preferred alternative solution through the West Side Water Storage EA



What needs to be done?

- Work approved through the 2022 Town Budget
 - Complete exterior and interior media blasting
 - Exterior and interior steel repairs
 - Interior lining upgrades
 - Exterior coating upgrades
- Completion of this work, with scheduled inspections and maintenance, is estimated to extend the Tower's lifespan by 18-25 years

Image of Water Tower Rehabilitation in Deep River, Ontario



The Opportunity

Choose a design for the water tower that will stand over Thornbury for the next 18-25 years



Analysis

Design Considerations

- ✓ Legibility

Text/lettering must be kept at a scale that allows it to be read from a reasonable distance

- ✓ Viewing Angles

Tower is a primary landmark for sailors, therefore primary lettering should face north towards Georgian Bay

- ✓ Wear

Dirt and wear on spheroid tanks generally starts to appear on the top and bottom thirds of the tank

- ✓ Timelessness

The coating is estimated to last for 18-25 years, therefore elements of design should not include anything likely to change during that period

- ✓ Use of Corporate Logo and Branding

Considering legibility and timelessness, staff recommend that designs utilize colour and typefaces that are consistent with the Town's corporate brand instead of the corporate logo

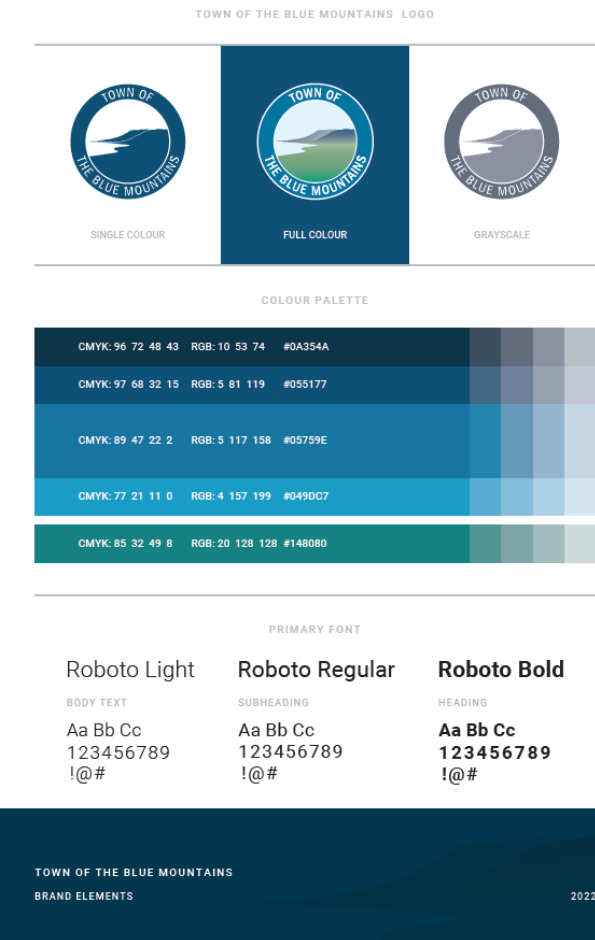
Creative Brief Background

- We looked to Question 8 from the Official Plan Phase 1 Review Survey Results
 - “How would you want the Town of The Blue Mountains to change over the next 25 years. What are five words that best describe your vision?”
- Timeline of the question matches with the expected lifespan of the Tower repairs
- Predominant themes around nature, environment, green, sustainability



Theme and Colour Scheme

- Based on resident input from the Official Plan Survey, we're taking inspiration from:
 - The rolling waters of Georgian Bay
 - The snaking path of the Beaver River
 - The vast green space of the Niagara Escarpment
 - The natural beauty of our rural areas and the Beaver Valley
- Rely on Town's existing colour palette



Category 1 - Solid Colour Designs

- These designs represent the least expensive design option
- Estimated cost to apply a coating from this category is \$300,000 to \$315,000 plus an additional \$25,000 for text/lettering

Option 1 - White



Option 2 - Green



Option 3 - Blue



Category 2 - Colour Block Designs

- Mid-range design option – additional cost to mark out sections of the tank
- Estimated cost to apply a coating from this category is \$340,000 plus an additional \$25,000 for text/lettering

Option 1 – Blue/White/Blue



Option 2 – Green/White/Green



Option 3 – Green/White/Blue



Category 3 - Detailed Designs

- These designs represent the most expensive design option
- Estimated cost to apply a coating from this category is \$370,000 to \$400,000 plus an additional \$25,000 for text/lettering

Option 1



Option 2



Option 3



Project Timeline



- In order to receive the most competitive quotes possible, it is imperative that the Town has a construction tender ready to be released in January 2023
- Project is currently on track to meet timeline, but risks falling behind schedule if the process of finalizing the direction for coating is delayed

Lead Abatement

- CIMA+ has confirmed the presence of a lead-based primer on the water tower
- Full lead abatement processes will be required including:
 - Shrouding of tower during media blasting
 - Clean up and disposal of all paint and blast material
 - Additional safety procedures for workers
- These abatement procedures are commonplace during rehabilitation of structures of this vintage. With mitigation measures in place, the risk of exposure is very low.

Image of Water Tower with lead containment shroud



Thank you for your time



Please send any questions or comments to:

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jpetznick@thebluemountains.ca
ext. 302

Kevin Verkindt, C.E.T.
Project Manager
kverkindt@thebluemountains.ca
ext. 304



Victoria Street Water Tower Design - Public Survey Project Background



The Victoria Street Water Tower in Thornbury was originally constructed in 1977 by Horton CBI Limited and has remained in operation since. Rehabilitation of the water tower was identified as a preferred alternative solution through the Town's [West Side Water Storage Environmental Assessment](#). The work to be completed includes:

- Exterior and interior steel repairs
- Interior lining upgrades
- Exterior coating upgrades

This work will require full stripping and recoating of the exterior and interior of the structure, and is estimated to extend the Tower's lifespan by 18-25 years. The scope of work has given the Town the opportunity to explore new design concepts for the tower. The budget for this work was approved through the Town's 2022 budget process.



Victoria Street Water Tower Design - Public Survey Creative Inspiration

To stay within project timelines, the design concepts for the water tower have been completed by the Town's Communications Department. To ensure the design brief aligned with the community's vision, Staff looked at the results of Question 8 from the Town's Official Plan Phase 1 Review Survey which asked,

"How would you want the Town of The Blue Mountains to change over the next 25 years. What are five words that best describe your vision?"

This question is relevant because the timeline of the question matches the expected lifespan of the tower repairs. The word cloud below was generated from the answers to that question.



Staff identified clear themes around nature and the environment in the responses from the Official Plan Survey, and have put together a series of designs taking inspiration from:

- The rolling waters of Georgian Bay
- The snaking path of the Beaver River and other tributaries
- The vast green space of the Niagara Escarpment
- The natural beauty of the Beaver Valley and our rural areas

These themes and inspirational items also allowed staff to utilize the Town's existing corporate colour palette of green, blue and white.



Victoria Street Water Tower Design - Public Survey

Survey Outline

The design concepts have been split into three separate categories:

1. Solid Colour Designs
2. Colour Block Designs
3. Detailed Designs

This survey will allow respondents to rank the designs in each category in order of their personal preference. The final question asks whether the respondent would prefer to see the Town pursue a Solid Colour Design, Colour Block Design or Detailed Design for the final design direction of the water tower.

The results of the survey are scheduled to be presented to Town Council for consideration at their meeting on **Month Date, Year**.



Victoria Street Water Tower Design - Public Survey Solid Colour Designs and Considerations

- Lighter colours generally have a higher UV stability, while darker colours would be expected to fade in 15-20 years
- Dirt and contamination will appear on the lower portion of the sphere, and will likely be more visible on lighter colours
- Pressure washing is recommended every 10 years to maintain good appearance

Option 1 - White



Option 2 - Green



Option 3 - Blue



* Rank the Solid Colour Design options in order of your preference

(only one selection per column allowed)

	#1 Choice	#2 Choice	#3 Choice
Option 1 - White	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Option 2 - Green	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Option 3 - Blue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Victoria Street Water Tower Design - Public Survey Colour Block Designs and Considerations

- Lighter colours generally have a higher UV stability, while darker colours would be expected to fade in 15-20 years
- Dirt and contamination will appear on the lower portion of the sphere, and will likely be more visible on lighter colours
- Pressure washing is recommended every 10 years to maintain good appearance

Option 1 - Blue/White/Blue



Option 2 - Green/White/Green



Option 3 - Green/White/Blue



* Rank the Colour Block Design options in order of your preference

(only one selection per column allowed)

	#1 Choice	#2 Choice	#3 Choice
Option 1 - Blue/White/Blue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Option 2 - Green/White/Green	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Option 3 - Green/White/Blue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Victoria Street Water Tower Design - Public Survey Detailed Designs and Considerations

- Lighter colours generally have a higher UV stability, while darker colours would be expected to fade in 15-20 years
- Dirt and contamination will appear on the lower portion of the sphere, and will likely be more visible on lighter colours
- Pressure washing is recommended every 10 years to maintain good appearance

Option 1

This design was inspired by the rolling waves of Georgian Bay and the vast tree canopy covering the Niagara Escarpment and Beaver Valley.



Option 2

This design was inspired by the winding waters of the Beaver River and other tributaries, and also includes a crown of falling apple tree leaves.



Option 3

This design takes inspiration from the Town's corporate logo and tourism logo, depicting Georgian Bay and the Niagara Escarpment.



* Rank the Detailed Design options in order of your preference

(only one selection per column allowed)

	#1 Choice	#2 Choice	#3 Choice
Option 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Option 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Option 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Victoria Street Water Tower Design - Public Survey

Overall Design Direction and Considerations

- The cost of stripping and application for a **solid colour design** is estimated to be in the range of \$325,000 to \$340,000
- The cost of stripping and application for a **colour block design** is estimated to be in the range of \$360,000 to \$365,000
- The cost of stripping and application for a **detailed design** is estimated to be in the range of \$390,000 to \$425,000
- Lighter colours generally have a higher UV stability, while darker colours would be expected to fade in 15-20 years
- Dirt and contamination will appear on the lower portion of the sphere, and will likely be more visible on lighter colours
- Pressure washing is recommended every 10 years to maintain good appearance

* Considering the affiliated costs and other factors, which design direction would you prefer to see the Town proceed with?

- ☐ A Solid Colour Design
- ☐ A Colour Block Design
- ☐ A Detailed Design

Please feel free to add any comments for consideration.



Victoria Street Water Tower Design - Public Survey

Contact and Demographic Information

* Contact Information

Name

Email Address

* What is your age?

- ☐ Under 18
- ☐ 18-24
- ☐ 25-34
- ☐ 35-44
- ☐ 45-54
- ☐ -
- ☐ 65+

* Please select the option that best describes yourself:

- ☐ Full-time resident (lives in The Blue Mountains year-round)
- ☐ Part-time resident (lives in The Blue Mountains for 6-11 months per year)
- ☐ Seasonal resident (lives in The Blue Mountains for less than 6 months per year)
- ☐ I own property, but I do not live in The Blue Mountains
- ☐ I am not a resident or property owner in The Blue Mountains

* Where is your property located in the Town of The Blue Mountains

* Would you like to continue receiving email updates regarding the Victoria Street Water Tower Rehabilitation Project?

- ☐ Yes
- ☐ No

