

Sound Wall Lifecycle Replacements for Critical Locations Update

RECOMMENDATION:

That the Infrastructure and Planning Committee recommend that Council direct Administration to complete additional priority Sound Wall Lifecycle Program locations with immediate lifecycle needs from existing capital funds.

HIGHLIGHTS

- This report provides an update on Council direction from the 2020 Mid-Cycle Budget Adjustments on The City of Calgary's Sound Attenuation Wall (sound wall) Lifecycle Replacement Program by providing an overview of program progress and a plan for leveraging remaining funds to continue with repairs to prioritized locations.
- **What does this mean to Calgarians?** Sound walls provide noise attenuation and visual screening for high volume roadways. Investing the remaining funds to continue the lifecycle replacement plan will address safety concerns, minimize public impact, and allow work to go ahead sooner.
- **Why does this matter?** Maintaining the sound wall network in safe condition improves quality of life for residents and communities. If sound wall assets reach critical condition, it would result in the removal of the sound wall due to safety risks and will result in increased complaints to The City, along with decreased liveability for adjacent residents.
- The City of Calgary maintains approximately 95 kilometers of sound walls, with a total estimated asset valuation of \$143 Million.
- This program supports the Strategic Alignment to Council's Citizen Priorities: A city that moves under the Surface Transportation Noise Policy Number (TP003).
- The approved 2019-2022 One Calgary Capital Budget of approximately \$2 Million replaced approximately 1.3 kilometers of sound walls. This budget was leveraged in the first two years of the lifecycle program.
- In 2020, Council approved a one-time request of \$4 Million from the Lifecycle Maintenance and Upgrades Reserve (LMUR) to replace approximately 1.7 kilometers of sound walls that were in critical lifecycle condition.
- Resulting from The City's competitive procurement process and effective project management, additional priority sound walls can be replaced from the one-time capital funding approved in 2020.

DISCUSSION

Background

In the One Calgary Budget Cycle 2019-2022, \$1.98 Million was approved to make lifecycle investments in sound walls. Although funding was equally distributed in the 4 years, the budget was advanced in 2019 and 2020 to address priority locations. As condition assessments continued city-wide, several locations were identified and required immediate attention.

On December 16, 2020, a report to the Standing Policy Committee on Transportation & Transit (TT2020-1397 – Attachment 1) was presented with recommendations to Council to allocate \$4 Million in one-time funding from the Lifecycle Maintenance and Upgrade Reserve (LMUR) to the

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Sound Wall Lifecycle Program to meet program deficiencies to address and replace approximately 1.7 kilometers of sound walls.

By the beginning of April 2021, a procurement process closed with several submissions. With priority locations identified (Attachment 2), construction commenced in mid-May 2021. A contractor completed repairs at Southland Drive SW & 14 Street SW by June 2021 and then started repairs at 14 Street SW & 75 Avenue SW). To date, 5 of the 6 wall locations are 90% substantially completed, with Crowchild Trail NW between 32 Avenue NW to 24 Avenue NW 85% completed. Deficiency work for all locations will resume in May 2022.

Resulting from The City's competitive procurement process, additional priority sound walls can be replaced by leveraging the remaining capital funds. Proposed locations are approaching critical condition status and have been identified in Attachment 3, which equates to approximately 320 meters of sound wall. The procurement process could begin as early as Q3 of 2022 and construction could begin by the end of the year. Planning is underway to identify budget requirements to continue the lifecycle replacement program for the next 4-year budget cycle.

STAKEHOLDER ENGAGEMENT AND COMMUNICATION (EXTERNAL)

- Public Engagement was undertaken
- Public Communication or Engagement was not required
- Public/Stakeholders were informed
- Stakeholder dialogue/relations were undertaken

Through 3-1-1 service requests from citizens and community associations, concerns have been expressed regarding the condition and state of the sound walls in various communities city-wide. The City will continue to communicate regularly with adjacent community associations and ward offices relating to the timing of planned lifecycle replacement.

IMPLICATIONS

Social

Sound walls provide value for a variety of stakeholders including adjacent residents and the general public. Although the primary function of a sound wall is to mitigate noise caused by adjacent traffic, they also provide a secondary benefit of separation between vehicular and other modes of transportation and screen visible traffic.

Environmental

The City of Calgary continues to participate and explore innovative ideas with regards to sound wall design and construction along with more environmentally friendly materials such as recycled rubber and composites. Investing in materials with an increase in life expectancy, durability and a shorter replacement period, ultimately reduces the carbon footprint on the environment. Sound walls also act as a barrier to wildlife on high volume roadways which can reduce the number of wildlife strikes.

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Economic

Sound wall asset data has been integrated into The City's Bridge Management System as an engineered structure to assist with future lifecycle maintenance and budget forecasting. As more data such as condition assessments are captured, efficiencies will be found and will maximize effectiveness that would equate to increased longevity and performance of the sound wall network.

Service and Financial Implications

No anticipated financial impact

None

The remaining capital funds that were previously approved can be used to address approximately 320 meters of priority sound walls. Unit rates for these projects are typically dependent on the total scope of the repair program. A larger work program will likely result in more competitive market pricing, thus allowing The City to complete more repairs.

RISK

The City adopts a risk-informed and evidence-based approach of managing infrastructure risks. Sound wall risks are identified and assessed regularly. Risk treatments are applied to minimize the infrastructure risks based on available resources.

Public Safety: Concrete sound wall panels and posts that have deteriorated significantly pose a potential safety risk and can impact homeowners, adjacent road users, pedestrians, and cyclists.

Budget Impact: Existing capital funds can be leveraged immediately to develop a lifecycle replacement plan for the next series of priority sound wall investments.

Reputational: Lack of action to adequately address documented safety issues may expose the City of Calgary to potential liability or reputational risk and this is mitigated through a detailed inspection program.

ATTACHMENT(S)

1. Sound Wall Lifecycle Replacement for Critical Locations - TT2020-1397
2. Sound Wall Lifecycle Replacement Progress
3. Proposed Locations for 2022 Program

Department Circulation

General Manager/Director	Department	Approve/Consult/Inform
Doug Morgan	Transportation	Approval