

Mitigating the Impacts of Severe Weather Events in Calgary

RECOMMENDATIONS:

That the Priorities and Finance Committee recommend that Council:

1. Approve Administration's severe hail weather strategies and actions as identified in Attachment 2.
2. Approve the proposed resilient roofing rebate program in principle and direct Administration to return with full details to PFC in 2021 April.
3. Request that the Mayor write a letter to the Province of Alberta requesting funding to support the proposed resilient roofing rebate program; and a second letter to the Minister of Alberta Municipal Affairs seeking support for proposed code changes to roofing and siding materials in hail-prone areas.

HIGHLIGHTS

- In cooperation with external and internal stakeholders, Administration has prioritized actions that will mitigate damage to buildings from severe weather events and improve the preparedness and response to these events in Calgary. As agreed upon with stakeholders during engagement and debrief sessions, Calgary Building Services is best-positioned to lead a holistic approach to mitigating hazards to buildings, and Calgary Emergency Management Agency is best positioned to lead improvements in preparedness, communication, and coordination for severe weather events.
- What does this mean to Calgarians? Administration's work will drive practical solutions to reduce impacts to buildings and improve communication and coordination related to severe weather events.
- Why does this matter? The completion of actions for roofs and siding, as listed in Attachment 2, will reduce long-term costs, increase personal safety and property protection, and reduce stress and social impacts related to building repairs. Environmental and economic impacts are reduced by avoiding unnecessary material replacement and consequently reducing the embodied energy in those materials. The completion of the improvement plan outlined in Attachment 4 will result in better preparedness, communication, and coordination when facing severe weather events.
- Through the review of the information with stakeholders, hail was identified as the most immediate threat to residential buildings in Calgary; therefore, actions related to hail will be accelerated for immediate implementation, such as: education for citizens/stakeholders/City Administration, exploring the resilient roof rebate program, exploring additional incentives with the insurance industry, advocacy of code change requests with the province, and policy review.
- Council directed Administration to engage development and building industry stakeholders to comprehensively examine building and planning standards, including building codes and material standards, to make new construction and building alterations more climate-resilient and sustainable while taking into consideration housing affordability and climate change adaptation and disaster risk reduction measures, and to use this information to inform advocacy to the Minister of Municipal Affairs on potential amendments to the Provincial Building Codes, with a report back to Council by Q1 2021.
- Council also directed Administration to conduct a comprehensive debrief of The City's (including our partners and other levels of government) response to the severe storms in June 2020 with a detailed report and recommendations back to Council by Q1 2021.

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- Strategic Alignment to Council's Citizen Priorities: A city of safe and inspiring neighbourhoods
- Background and Previous Council Direction is included as Attachment 1.

DISCUSSION

Notice of Motion PFC2020-0828 Disaster Relief and Mitigation has several resolutions under its purview. The purpose of this report is to provide an update to resolutions 1.a, 1.b, 1.c, and 1.d.

Resolution 1.a. Report back with initial cost estimate for the Notice of Motion actions

Calgary Building Services did not bring forward a report to Council in 2020 September because there was no funding needed.

Resolution 1.b. Expedite and waive fees for permits related to the 2020 June 13 hail event

Calgary Building Services developed tools to identify permits related to the 2020 June 13 hail event via geospatial indicators and permit type. Furthermore, these applications are given priority. Applicants may also have the development and building permit fees waived via an authorized declaration and refund process. So far, five applications have been prioritized, and over \$1,300.00 in fees waived. A permit is not required if replacing roofing or siding with similar material (eg. damaged vinyl siding replaced with new vinyl siding). A permit is also not required when replacing windows with new ones of the same size.

Resolution 1.c. Engagement with development and building industry stakeholders

Because of the visibility of the damage from the 2020 June 13 hail event, it is often assumed that the majority of the damage was done to exterior walls of homes; however, the greatest damage in terms of dollars was to the roofs. Of the \$1.4 billion in damages, \$800 million of the damage was on roofs.

Calgary Building Services worked with external and internal stakeholders to explore a series of actions to increase the resiliency of residential buildings to severe weather events in Calgary, with the focus mainly on exterior building components. Please see Attachment 1 for the background on the project plan and for the list of stakeholders who participated in the engagement sessions. The aim was to develop an all-encompassing program with a suite of actions, delivered concurrently on several fronts, as a holistic set under the following categories:

- Education – to create public awareness of the benefits and options of resilient materials
- Incentives – to reduce the cost of adopting more resilient materials and to increase the demand and installation of those materials
- Regulations – to increase building resiliency for all new construction

All of the potential mitigation actions from the engagement sessions have been collated, evaluated, and prioritized. Please see Attachment 2 for details on the immediate mitigation actions for roofs and siding, as discussed with stakeholders. A number of immediately actionable items will be in place for the active hail season in 2021, such as:

- March/April: A City-hosted symposium with the insurance industry on the benefits of impact resistant materials to continue the exploration of incentives.
- April: Administration will return to the Priorities and Finance Committee with full details on the proposed Impact Resistant Roofing Rebate program. As identified in Attachment

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3, the program is to provide eligible homeowners with a \$2,000 rebate for roof replacement costs when installing impact resistant materials.

- April/May: Education campaign developed and implemented including:
 - the release of the *Climate Resilient Home Handbook* (in multiple languages), led by Environment & Safety Management.
 - the release of a homeowner’s checklist of “what you need to know when hiring a roofing contractor”.
 - webinar on the benefits of impact resistant materials for homeowners with subtitles in multiple languages.
 - a campaign for stakeholders (including BILD Calgary Region and the Calgary Real Estate Board) on mitigating against climate hazards and the benefits of impact resistant materials.

Engagement will be ongoing with external and internal stakeholders. Further refinement and prioritization of actions, including possible building code changes will continue throughout Phase 2 of the project. This work will proceed under Calgary Building Services’ guidance in partnership with stakeholders and will result in implementation of actions both independently and in concert with stakeholders, such as:

- Ongoing: Advocacy with the province to require hail resistant materials (roofing and siding) in hail-prone areas
- Ongoing: Continued work with the insurance industry on initiating incentives
- Ongoing: Proactively mitigating the increasing likelihood of climate disasters
- March: Explore the introduction of a building envelope inspection

Resolution 1.d. Conduct a debrief of The City’s response to the storms in 2020 June

Calgary Emergency Management Agency convened a meeting of multiple Agency members to converse and debrief on the event which resulted in an After Action Report/Improvement Plan Summary; a summary of learnings and improvement ideas is included as Attachment 4. Participating Agencies included numerous City business units and external organizations including Environment and Climate Change Canada.

This After Action Report/Improvement Plan Summary analyzes incident results, identifies strengths to be maintained and built upon, reviews potential areas for further improvement, and supports the development of corrective actions. The opportunities for improvement identify gaps and provide a framework to enhance The City of Calgary’s preparedness and response to future severe weather event emergencies.

STAKEHOLDER ENGAGEMENT AND COMMUNICATION (EXTERNAL)

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

Engagement work is ongoing with external and internal stakeholders.

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IMPLICATIONS

Social

Repairing buildings after severe weather events resulting in damage is a source of considerable stress for citizens. Time to assess and action repairs, manage financial costs, and the potential disruption of daily schedules all negatively impact the long-term social wellbeing of communities.

Environmental

Reducing the need for repairs after severe weather events has several positive environmental benefits, including reducing the release of embodied Greenhouse Gas (GHG) in construction materials, and operational GHG reductions in shipping, material handling, and installation as identified in the Climate Resiliency Strategy. Avoided repairs also reduces landfill waste generation. Actions identified in Attachment 4 align with and further advance the Climate Resilience Strategy, specifically section 6.2 of the climate adaptation action plan.

Economic

Reducing repair after severe weather events has both positive and negative impacts for the economy; individual building owners would benefit tremendously from avoided costs related to repairs (including uninsured losses), avoided lost wages and productivity, and potential reductions in insurance premiums. While there are negative impacts from reducing the impacts of severe weather (eg. reductions in contractor and construction material sales), positive impacts far outweigh this and include benefits to insurers, civic infrastructure, and emergency response costs. As the policies considered would be applicable to all districts in Calgary, there is also economic benefits and resiliency in avoiding damages incurred from storms in maintaining business continuity, maintaining business functionality, and the potential to reduce The City's and the province's recovery efforts as well.

Service and Financial Implications

Self-supported funding

Calgary Building Services has reprioritized the 2021 work plan to accommodate the initiation of the work in Attachment 2, and will continue to dedicate 2.0 full-time equivalents and add a limited term position to lead the work from its self-funded operating budget, for a total of \$450,000.00 per year which includes all associated costs, excluding the funding for the proposed Impact Resistant Roofing Rebate program.

If economic conditions see an increase in permit volumes, positions may have to be backfilled to ensure service delivery timelines for Calgary Building Services are able to be met.

RISK

Timing of code change does have a dependency on political will at the provincial level. In addition, there is a review process that can have code change requests rejected.

ATTACHMENT(S)

1. Previous Council Direction and Background
2. Comprehensive Mitigation Actions for Roofs and Siding

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- 3. Proposed Impact Resistant Roofing Rebate
- 4. CEMA After Action Report/Improvement Plan Summary

Department Circulation

Stuart Dalgleish	Planning and Development	Approve
Katie Black	Community Services	Approve