

Meeting Date: July 10, 2024

Subject: Flood Mitigation – Reach 6

Approvals: Kelly Hansen

Director

Henry Hunter

Chief Administrative Officer

Recommendation(s):

1. THAT the Flood Mitigation - Reach 6 project be approved with structural mitigation placed at a minimum elevation of 250.9m, between Clearwater Drive and the Clearwater River, with future growth consideration of the Clearwater Drive corridor.
2. THAT Administration proceed with relocating the Heritage Shipyard to a new location within the riverfront alongside Reach 6 and provide structural mitigation of all historical artifacts to a minimum elevation of 250.9m.

Summary | Background:

Administration recommends that Reach 6 entails the construction of a new structural mitigation between Clearwater Drive and Clearwater River for the following reasons:

- Lower capital investment
- Retention of historical significance of the waterfront by incorporating Heritage Shipyard
- Opportunity to engage industry partners to present a positive image of Wood Buffalo
- Ease of construction, reduced community impacts during construction
- Reduced impact to private residents and businesses
- Retain the option for growth of the Clearwater Drive corridor for future generations
- Opportunities for riverside enhancements

This report has been prepared to support the above recommendation, as well as the overall Flood Mitigation Framework, and provides a detailed update on the progress of Reach 6 and how Administration came to the above noted recommendation. Administration also seeks direction from Council on four (4) key design constraints, as described herein. With Council's direction, the project will move towards detail design and regulatory approvals. Administration also anticipates some initial priority work to advance to construction in 2025.



Council identifies the conclusion of flood mitigation infrastructure investments as one of the milestones in its 2022-2025 Strategic Plan. Prioritization of flood mitigation has been further emphasized following the 2020 flood. Reach 6 will be the last permanent flood mitigation reach along Clearwater Drive to provide flood mitigation for Downtown Fort McMurray. The reach spans from east of Riedel Street to the south end of Franklin Avenue, connecting both Reaches 5 and 7.

Design initially began with concept development of three (3) proposed designs:

- Preliminary Design: Twinning Clearwater Drive (elevated westbound lanes)
- Option 1: Raising Clearwater Drive
- Option 2: Structural mitigation between Clearwater Drive and Clearwater River

Concept designs were reviewed with Administration in July 2022. Administration rejected the preliminary design of twinning Clearwater Drive due to technical challenges of providing traffic access to accommodate left turns at local roads (King Street, Queen Street, Hospital Street, and Alberta Drive), as well as safety challenges of providing pedestrian access from downtown to the river front.

Virtual and in-person public engagement sessions, along with an online survey were facilitated by the Municipality from September 15 to October 16, 2022. All three (3) options were presented during engagements; however, the preliminary design of twinning Clearwater Drive with elevated westbound lanes was provided as information only and identified that it was not recommended by Administration. The design was shared as part of the survey so participants would be aware of all design options considered by the project team.

Options 1 and 2 were presented for participants to provide their feedback on key considerations. The feedback received did not lean towards a definitive preferred option, worth noting is the estimated costs of each option were not presented to the public. The top five (5) themes identified were, in no particular order: preserving the view of the river; the appearance of the flood mitigation works; safety; cost; and access to the river.

Reach 6 Update

Over the course of the preliminary design, key project design constraints required input and direction from the Municipality:

- Land acquisition (Imperial Oil Limited and/or Suncor).
- Location of the Heritage Shipyard
- Spatial planning for the future growth considerations of the Clearwater Drive corridor.



- Flood Mitigation type: either raise Clearwater Drive or construct new structural mitigation as identified in Option 1 and 2 from the original concept design.

Ultimately, the decision on each constraint will impact the footprint and location of the flood mitigation, including details such as the need for retaining walls, impacts on adjacent properties, and the ability to accommodate river front connectivity. The outcomes associated with land acquisition do not impact the schedule as the project design will pivot to suit. The ultimate location of the Heritage Shipyard does not impact schedule; however, this does impact the details surrounding the design of the mitigation program. The method in which each constraint is managed does impact the total cost of implementing Reach 6.

To solicit input on the design constraints, a total of seven (7) internal and external stakeholder workshops were conducted from December 2023 to April 2024. Participants included stakeholders from various internal departments, relevant external organizations including the Heritage Society, as well as members of various Council Committees. The intent of the workshops was to collect measurable feedback from stakeholders on the specific design constraint that aligned with their areas of expertise. This feedback was compiled to present Council with the outcomes for design decisions.

A summary report of the workshops has been prepared and submitted to Administration. The overall outcome has identified the preferred alternative for each design constraint, as follows:

1. Land acquisition (Imperial Oil Limited and/or Suncor lots)
 - a. Resolution from the Workshop 1 was to proceed with acquisition of both the Imperial Oil and Suncor lots.
2. Location of Heritage Shipyard
 - a. Resolution from Workshop 2A/2B was to relocate the Heritage Shipyard to a new site; and
 - b. Relocate to a new location where permanent flood mitigation can be provided.
3. Spatial planning for the future growth considerations of the Clearwater Drive corridor
 - a. Resolution from Workshop 3A/3B was to retain Clearwater Drive as a 2-lane road, but to allocate a corridor for future growth considerations based on community need.
4. Form of Flood Mitigation, either raise Clearwater Drive or to construct new structural mitigation between Clearwater Drive and the Clearwater River
 - a. Resolution from Workshop 4A/4B was to construct structural mitigation to an elevation of 250.9m between Clearwater Drive and the Clearwater River.



Alternatives:

Should Council choose to provide the direction to raise Clearwater Drive, the following alternative motion can be presented:

THAT Administration be directed to construct the Flood Mitigation - Reach 6 project as an elevated road with a minimum elevation of 250.9m, without consideration for future growth of the Clearwater Drive corridor.

Budget | Financial Considerations:

Probable cost estimates have been prepared for two (2) options, either the raising Clearwater Drive or the construction of structural mitigation between Clearwater Drive and the Clearwater River. The cost estimates reflect the available footprint for construction based on the preferred alternatives from Workshops 1, 2A/2B and 3A/3B. In general, the following assumptions apply:

- The Heritage Shipyard would be moved to a new location within the general vicinity of the Reach 6 project area and built in a manner that all historical artifacts are protected at or above 250.9m.
- The Imperial Oil Limited (IOL) lot would be acquired and remediated in a timely manner. It is assumed that environmental mitigation and clean-up costs of the site would either be completed by IOL, or costs to do so be borne by IOL. Should the IOL lot not be acquired in a timely manner, a structural wall would be constructed along Clearwater Drive at a height of approximately 3 metres high.
- The Suncor lot would be acquired and remediated in a timely manner. It is assumed that environmental mitigation and clean-up costs of the site would either be completed by Suncor or costs to do so be borne by Suncor. Should the Suncor lot not be acquired in a timely manner, either an easement with Suncor would be sought or a structural wall would be constructed to support the structural mitigation.
- Costs to address any environmental issues or complete site cleanup outside of the IOL and Suncor lots are not included as there are no known records of additional environmental cleanup required outside of these 2 lots.

Based on the preliminary design work undertaken, probable cost estimates have been developed. These probable cost estimates have an accuracy range of -30/+50%.

The probable cost estimate for Option 1 (Raising Clearwater Drive) is \$94M.

The probable cost estimate for Option 2 (Structural mitigation between Clearwater Drive and Clearwater River) is \$55.8M.

Both probable cost estimates include costs associated with design and construction services.



Strategic Plan Alignment | Impact:

The recommended motions will allow the Reach 6 project to be advanced to the detailed design stage, ensuring the project remains in alignment with the values and milestones of the 2022-2025 Strategic Plan and the Multi-Year Flood Mitigation Program.

Fiscal management: Administration has demonstrated their commitment to deliver the project in a fiscally, environmentally, and socially responsible manner by incorporating internal and external stakeholders in the workshop process. The transparency of the process offers the community confidence the design has been a collective effort that will reduce project timelines and budget increases.

Building Partnerships: Engagement of industry partners and stakeholders to implement disaster mitigation and ensure expansion options for future generations is retained. Thus, supporting the milestone of promoting a positive image of Wood Buffalo.

Downtown Visualization: Development of Reach 6 will achieve the milestone of concluding the flood mitigation infrastructure.

Rationale for Recommendation(s):

Progression of the Reach 6 design is in alignment with the 2022-2025 Strategic Plan and the Multi-Year Flood Mitigation Program. Based on the outcomes from the workshops with internal and external stakeholders, there is clear consensus of the value for the following:

- Acquiring the Imperial Oil and Suncor lots.
- Relocating Heritage Shipyard to where it can be provided with permanent flood mitigation within the Reach 6 area.
- Allocating land for future growth consideration of the Clearwater Drive corridor in concert with future community needs.

Therefore, Administration's recommendation is to proceed with all three (3) items within the Reach 6 project. To reiterate what has been stated earlier in this report, Administration recommends that Reach 6 entails the construction of a new structural mitigation between Clearwater Drive and Clearwater River for the following reasons:

- Lower capital investment
- Retention of historical significance of the waterfront by incorporating Heritage Shipyard
- Opportunity to engage industry partners to present a positive image of Wood Buffalo
- Ease of construction, reduced community impacts during construction



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- Reduced impact to private residents and businesses
- Retain the option for growth of the Clearwater Drive corridor for future generations
- Opportunities for riverside enhancements

For the reasons presented above, Administration recommends the Motion as presented, for the construction of a new flood mitigation between Clearwater Drive and the Clearwater River.

Attachment(s):

1. What We Heard about Reach 6 Flood Mitigation
2. Flood Mitigation – Reach 6 PowerPoint Presentation

