

Flood Mitigation Program Planning Overview

Updated: August 2021

Long Term Plan

Build all reaches to 250.4 m plus freeboard (0.5 m) for a total elevation of 250.9 m, using berms/retaining walls/permanent walls/elevated roads or any combination thereof.

Note: In addition to the direction provided to complete structural work, the resolutions below also speak to enhanced flood provisions and advocacy. Flood provisions will be presented publicly for Council consideration as part of the Land Use Bylaw re-write, which will be brought forward during the term of the 2021-2025 Council. An update on advocacy is presented within the body of the report.

Reach	Pre-2020 Flood	September 15, 2020 Council Resolution	Current Status	Anticipated Completion
DOWNTOWN AND HERITAGE VILLAGE				
1 C.A. Macdonald Way to Borealis Park	Berm/elevated trail built to 250.0 m	<p>THAT Administration complete the structural flood mitigation project for Downtown to a level of 1:200 (250.9m) by October 15, 2022, limit development below 250m, and introduce enhanced flood provisions in Land Use Bylaw for development above 250m; THAT Council advocate on behalf of Downtown property owners to the Government of Alberta and the Insurance Bureau of Canada; and THAT Administration report back to Council with a progress update within 90 days.</p>	<p>Prior to the September 2020 Council resolution, Reaches 1-4 were completed to the 1:100 year flood elevation level or needed only minor work. The September 2020 Council resolution directed the elevation to be increased to the 1:200 year flood elevation level. Collaboration with the Waterfront Park group has resulted in the top-up of Reaches 1-4 being moved to the Waterfront Park project scope as these areas overlap entirely with the Waterfront Park project area, present significant opportunities for coordination and have low complexity from a technical perspective.</p>	<p>Reaches 1-6 are scheduled for completion in 2022.</p>
2 Borealis Park to Morrison Street	Partially at 250.0 m or higher – minor grading anticipated			
3 Morrison Street to Hardin Street	Constructed as elevated road at nominal elevation of 250.5 m – considered complete			
4 Hardin Street to McLeod Street	Constructed as elevated road at nominal elevation of 250.5 m – considered complete			
5 Wrapping around Edgewater Court and Riverwalk Villas	Next area slated for design		<p>The Request for Proposals for the preliminary design, detailed design, and construction administration of Reach 5, and the preliminary design of Reach 6, is currently in the contract execution stage.</p>	
6 Riedel Street to Longboat Landing	Next area slated for design		<p>Reach 9 was under construction to the 1:100 elevation (250.5 m) at the time of the September 2020 Council resolution. It is now substantially complete at 250.5m with only minor landscaping work remaining. Elevation of 250.9m can be achieved with temporary measures.</p>	
9 Heritage Village	Construction contract for berm at 250.5 m was about to start			<p>Reach 9 is complete to the 1:100-year ice jam flood elevation. Top up to the 1:200 ice jam elevation of 250.9m is to be achieved using temporary mitigation measures.</p>
LONGBOAT LANDING				
7 North Longboat Landing	Varying elevations. Detailed design was underway for berm at 250.5 m	<p>THAT Administration complete the structural flood mitigation project for Longboat Landing to a level of 1:200 (250.9m) by October 15, 2021, limit development below 250m, and introduce enhanced flood provisions in Land Use Bylaw for development above 250m; THAT Council advocate on behalf of Longboat Landing property owners to the Government of Alberta and the Insurance Bureau of Canada; THAT Administration report back to Council on progress within 90 days; and</p> <ul style="list-style-type: none"> - engage with residents about the pedestrian walkway; - ensure that a pedestrian walkway is part of the flood mitigation project taking into account, feedback for Longboat Landing; and - landscape all municipal property near Longboat Landing adjacent to the river on or before October 15, 2022 as part of flood mitigation. 	<p>A public engagement campaign was conducted in 2020 to seek input on the design of the proposed pedestrian pathway included in the design of reaches 7 and 8, the berms being constructed around Longboat Landing. The full engagement results were included in the March 9, 2021 Council Report and it was noted during the meeting that the strong and divergent feedback warrants a design review of the pedestrian pathway. This work will not impede progress of berm construction. Due to the need to re-visit the trail alignment as a component of waterfront redevelopment connectivity, there aren't plans to build the trail at this time. The current scope includes sod and seeding for the 2021 construction season and any further development of a trail is pending based on results of the review.</p> <p>The structural flood mitigation for the Longboat Landing community will consist of approximately 1,200 meters of structural clay berm that will surround the Longboat Landing development. At the completion of the 2021 construction season, 500 meters of the 1,200 meters will have been</p>	<p>Reaches 7 and 8 are scheduled for completion by October 15, 2022.</p>

Reach	Pre-2020 Flood	September 15, 2020 Council Resolution	Current Status	Anticipated Completion
			completed. As of August 19, 2021, the structural mitigation along the northeast side of Longboat Landing is constructed to +/-250.2m and is on schedule for completion to 250.9m by October 15, 2021.	
8 East Longboat Landing and Mills Ave booster	Varying elevations. Detailed design was underway for berm at 250.5 m. Land acquisition was in progress.		Temporary flood protection measures will be implemented in this location in preparation for River Break-Up 2022 where the permanent mitigation is not yet complete. Design was revised to 250.9 m. Land acquisition has been completed. Construction tender is being prepared.	
WATERWAYS				
10 Waterways	Built to 1:40 (248.5 m). Detailed design underway for elevated road at 250.5 m	THAT Administration continue with building a structural mitigation solution as previously directed (to a level of 1:200 (250.9 m) by October 15, 2022) and THAT Administration limit development below 250.9m and introduce enhanced flood provisions in the Land Use Bylaw for development above the 250.9m elevation.	The design revision for Reach 10 to 1:200 elevation is nearly completed (design was 90% complete for 1:100 elevation at time of September 2020 Council resolutions) and is being revised to 250.9m. The tender package for the new retaining wall on Saline Creek Drive is being reviewed. The draft tender package for the remainder of Reach 10 expected in fall. Reach 11 construction has been tendered via Best Value Procurement. Contract award is being considered.	Reach 10 and 11 are scheduled for completion by October 2023.
10 JHP (J. Howard Pew Park)	Varying elevations. Detailed design underway for elevated road at 250.5 m			
11 Saline Creek Drive to Waterways	Nominally 248.5 m, design underway for elevated road at 250.5 m			
TAIGANOVA				
Not part of the Flood Mitigation Program <i>Note: Neighbourhood-level mitigation only</i>		THAT Administration complete flood mitigation for TaigaNova Eco-Industrial Park to a 1:200 flood level elevation (250.9m), limit development below 250m, and introduce enhanced flood provisions in the Land Use Bylaw for development above 250, with a target completion date of October 15, 2021.	Design consultant selected to advance the conceptual level design through to detailed design. Geotechnical investigations expected to begin Q3 to support the detailed design phase. Construction expected to start in Q2 2022, with construction striving for completion by October 2023.	Scheduled for completion by October 2023.
DRAPER				
Not part of the Flood Mitigation Program		December 15, 2020: THAT Administration determine the feasibility of a grant program for lot-by-lot individual flood mitigation solutions for properties in Draper where the underside of the main floor joists are below 250.9m as the flood risk treatment for Draper and report back to Council; and THAT Administration limit development below 250.9m and introduce enhanced flood provisions in the Land Use Bylaw for development above 250.9m.	Preliminary discussions with Alberta Environment and Parks regarding how to approach regulatory applications for lot-specific mitigation. Initial analysis of survey is complete.	