

**TOWN OF DRUMHELLER
BYLAW NUMBER 17.22
DEPARTMENT: DEVELOPMENT**

Amending Bylaw 17.20

BEING A BYLAW OF THE TOWN OF DRUMHELLER IN THE PROVINCE OF ALBERTA TO
AMEND MUNICIPAL DEVELOPMENT PLAN BYLAW 17.20

WHEREAS, pursuant to the provisions of Clause 639 of the Municipal Government Act, RSA 2000, c.M. 26, the Council of the Town of Drumheller (hereinafter called the Council, has adopted Municipal Development Plan Bylaw 17.20;

AND WHEREAS the Council deems it desirable to amend Municipal Development Plan Bylaw 17.20;

AND WHEREAS, a notice was published once a week for two consecutive weeks on November 2, 2022, and again on November 23, 2022 the last of such publications being at least five days before the day fixed for the passing of this Bylaw, including the date and location of a public hearing meeting where concern can be heard; and

NOW THEREFORE the Council hereby amends Municipal Development Plan Bylaw 17.20 as follows:

1. SHORT TITLE

1.1. This Bylaw may be referred to as MDP 2022 Amendments -A Bylaw 17.22.

2. PURPOSE

2.1 The purpose of this bylaw is to establish amendment to the Town of Drumheller Municipal Development Plan Bylaw 17.20.

3. CHANGES/DELETIONS

3.1 Remove any reference to freeboard being 0.75m and replace with 0.50m.

3.2 Remove any reference to the minimum berm elevation being 1,640 cms and replace with 1850 cms.

3.2 Remove any reference to the minimum berm width from 6.0 meters and replace with 4.0 meters.

The following specific sections are affected;

3.1 DRUMHELLER: A FLOOD COMMUNITY
Section 3.1.6 MUNICIPAL FLOOD PROGRAM [...]

The typical dike cross section is planned to be at least ~~6-m~~ **4 m** wide (at the top), with 3:1 horizontal to vertical side slopes, built to a minimum of ~~1,640 cms~~, **1850 cms** with an adaptable plan to have safe zones, strategic evacuations and rapidly increase dike heights on an emergency response basis for floods in excess of those up to ~~1850 cms~~ **2100 cms**.

[...]

For reference, The City of Calgary uses 0.5 m of freeboard, the Town of High River uses 1.0 m of freeboard, and the BC Dike Design and Construction Guide: Best Management Practices suggests 0.6 m of freeboard. The Town of Drumheller has selected ~~0.75m~~ **0.50 m** as the minimum freeboard to be included in required dike heights.

3.2 CHANGING THE CHANNEL

Section 3.2.1 KNOW YOUR FLOW

[...]

Figure 6 Red Deer River Conveyance (1850 CMS + 0.75 M ~~0.50 M~~ Freeboard) shows the space the river needs when it flows at a 1850 cms flow rate (including 0.75 m ~~0.50 M~~ of freeboard), a possible flood scenario.

3.2.3 MAKE EXISTING DEVELOPMENT SAFER

Graphic references minimum berm width of 6 meters and minimum berm design height of 1640 cms. Amend image to reference minimum berm width of 4 meters and a minimum berm height of 1850 cms.

[...]

Structural measures create a 'Protected Zone' between the river and System 2100, providing enhanced access to finance and insurance for existing properties as Drumheller gradually grows out of the river. Figure 8 - Proposed Structural Measures, shows at a high level where structural measures will be implemented in existing neighbourhoods. These structural measures will need to be built to protect to a minimum flow rate of 1,620 cms 1850 cms plus a freeboard of 0.75 meters ~~0.50 metres~~ to account for challenging topography or uncertainty

7 FLOOD MITIGATION AND CLIMATE ADAPTION

7.1 CONVEYANCE CAPACITY

- a) Conveyance capacity for the Red Deer River within Drumheller shall be defined at a rate of 1850 cms plus ~~0.75m~~ **0.50 m** of freeboard.

7.2 DESIGN AND CONSTRUCTION OF STRUCTURAL MEASURES

- c) Structural measures should be designed to:
- i. protect to a minimum flow rate of 1850 cms;
 - ii. include a freeboard of ~~0.75m~~ 0.50 m beyond the target flow rate elevation;
 - iii. have a suitable top width of ~~6 meters~~ 4 meters or more, making the system adaptable by allowing vehicle access to add material that raises the barrier elevation in response to higher flow;

MAPS AND OVERLAYS

FIGURE 6 RED DEER RIVER CONVEYANCE (1850 CMS + ~~0.75M~~ 0.50M FREEBOARD)

Legend

- 1850 cms + 0.75m ~~0.75m~~ 0.50 m freeboard Limits
1850 cms + 0.75m ~~0.75m~~ 0.50 m freeboard Conveyance
1850 cms + 0.75m ~~0.75m~~ 0.50 m freeboard Conveyance – Under Review

FIGURE 7 EXISTING DEVELOPMENT IN CONFLICT WITH RIVER CONVEYANCE (1850 CMS)

Legend

- 1850 cms + 0.75m ~~0.75m~~ 0.50 m freeboard Limits
1850 cms + 0.75m ~~0.75m~~ 0.50 m freeboard Conveyance
1850 cms + 0.75m ~~0.75m~~ 0.50 m freeboard Conveyance – Under Review

FIGURE 8 - PROPOSED STRUCTURAL MEASURES

Legend

- 1850 cms + 0.75m ~~0.75m~~ 0.50 m freeboard Limits
1850 cms + 0.75m ~~0.75m~~ 0.50 m freeboard Protected Overlay
1850 cms + 0.75m ~~0.75m~~ 0.50 m freeboard Protected Overlay – Under Review

1850 cms + 0.75m ~~0.75m~~ 0.50 m freeboard Conveyance Overlay
1850 cms + 0.75m ~~0.75m~~ 0.50 m freeboard Conveyance Overlay – Under Review

PART 4 TRANSITIONAL


- 4.1 Town of Drumheller Bylaw 17.20 is hereby amended.
- 4.2 Bylaw 17.22 comes into force on the date of the third and final reading.

READ A FIRST TIME THIS 24TH DAY OF OCTOBER, 2022.

PUBLIC HEARING HELD THS 5TH DAY OF DECEMBER, 2022

READ A SECOND TIME THIS 23RD DAY OF JANUARY, 2023

READ A THIRD AND FINAL TIME THIS 6TH DAY OF MARCH, 2023.


MAYOR


CHIEF ADMINISTRATIVE OFFICER