

BRIEFING NOTE

DATE:	March 6, 2023
TITLE:	East Coulee Berm Alternate Alignment Selection and Road Closure Bylaw Amendment
DEPARTMENT:	Resiliency and Flood Mitigation Office
PRESENTED BY:	Deighen Blakely
ATTACHMENT:	Overview of East Coulee Berm with Alignment Alternates Marked-up (Nov. 17, 2022)

INTRODUCTION / PURPOSE

The engineering design team for the East Coulee berm proposed two alternate alignments for the downstream end of the berm where it ties to higher ground – one that falls on the existing road allowance to tie to higher ground and one that crosses private land at RW306; D; F and ties to high ground at 1 Avenue. Following discussions with the landowners, public consultation and review of the costs for each alternate, the Flood Office has determined the preferred alignment is to run the downstream end of the berm along the road allowance. This alignment requires a slight adjustment to the area shown on the Road Closure Bylaw 21.22 plan drawing, which came to Council on November 7, 2022 for First Reading. As the change to the road closure area is small and does not impact an active roadway, it will be amended in the Alberta Transportation submission package and during the Second Reading of the bylaw at Council.

BACKGROUND

The design of the East Coulee berm was prepared by WSP engineering consultants. The downstream/east end of the berm ties to higher ground adjacent the private land at RW306; D; F. The parcel at RW306; D; F is inundated during the 100-year design flood, with Alternate #1 alignment of the berm bisecting this lot at approximately on the diving line between where the flooding depth is less than 1 m and greater than 1 m (i.e. the diving line between where the land would be categorized as Flood Fringe or Floodway). This parcel does not at present have any residential dwellings. Without the berm in place, about half of the parcel is flooded by less than the 1m depth, so would be developable in future under the Flood Fringe regulations in the Town's Land Use Bylaw. As such, design team to prepared an alternate alignment for the berm, Alternate #2, which excluded this lot and ran along the adjacent road right of way. Alternate #2 uses 2000 m³ less fill material and one less culvert crossing as well as reducing the required tree clearing area. The two alternates were reviewed with landowners for this parcel as well as being presented at the November 17, 2022 Community Engagement Session. Based on feedback received, and a review of the costs associated with each alternate, the Flood Office and Town Administration have decided to use Alignment #2 which follows the existing road right of way to tie to higher ground on 1 Avenue, versus purchasing a portion of the parcel in question and building the berm across the lot. Using Alternate #2 allows the landowner to retain control of their entire property, with future development still permitted on the lot, subject to Flood Fringe and Floodway development regulations. The landowners have been informed of development regulations and their flood risk and are in agreement with the plan. The alternate alignment on the road right of way is shorter so less costly (estimated savings ~ \$175,000) and the cost of property purchase is also eliminated, making Alternate #2 overall the lower cost alternate.

KEY POINTS

- The Flood Office considered two alignment for the downstream end of the East Coulee berm.
- In consultation with the public, the landowners and Town Administration, Alternate #2 was selected, which runs along an existing road right-of-way and excludes one unoccupied property at the downstream end of the community.
- The excluded property will remain developable in the future under the Town's Land Use Bylaw Regulations for Flood Fringe for the portion of the lot where the flooding depth is less than 1m. The Floodway portion of the property will remain undevelopable.
- The Road Closure Bylaw 21.22 for this berm will be slightly adjusted in this area to include the additional land needed for the berm up to 2nd Ave.
- The portion of the berm which falls on the road right of way between 2nd Avenue and 1st Avenue is relatively low in height (0 to 1 m) and will be designed as a raised roadway to maintain traffic access to the area, including ramps up and over the berm.

IMPLICATIONS / CONSEQUENCES

Selecting the alternate berm alignment at the east end of East Coulee will reduce construction and property acquisition costs for the berm, in keeping with Council's May 2022 direction to reduce overall program costs. The excluded property will remain developable under the Land Use Bylaw regulations for Flood Hazard Areas.

Why couldn't we do the same in Lehigh – leave the development regulations to take care of the parcels there? The entire residential community of Lehigh is flooded by a depth of greater than 1 m, and/or has a flood flow velocity of at least 1 m/s, making the whole community Floodway as defined by the Provincial Flood Hazard Mapping and the Town's Land Use Bylaw. Only very limited land uses are permitted Floodway areas, with no residential development allowed. With the Provincial Disaster Assistance program changes, the Town did not want to leave the residents of Lehigh unprotected - both financially and from the ravages of flooding. Thus, the Town determined the best option for flood protection in Lehigh was a full buyout of the community. Portions of the East Coulee parcel in question in this situation are flooded by less than 1 m water depth and less than 1m/s flood flow velocity, so would be developable as Flood Fringe property in the future, under the Land Use Bylaw regulations for Flood Fringe. The developable area with and without the berm in place would be similar for this lot as the proposed berm alignment on the lot falls on the dividing line between the anticipated Flood Fringe and Floodway dividing line.

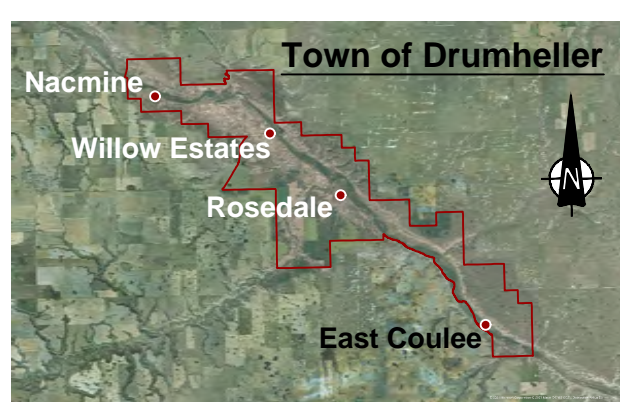
To implement Alternate #2 Road Closure Bylaw 21.22 for this berm will be slightly adjusted in this area to include the additional land needed for the berm up to 2nd Ave, which will be done for the Alberta Transportation submission package and during the Second Reading of the bylaw at Council.

FINANCIAL

The anticipated overall cost savings is in the order of \$175,000, in addition to reducing the number of property acquisitions in East Coulee from nine to eight. The design and construction costs are eligible for funding under the Program's overall \$55M budget, supported by the Town, The Province and The Federal Government.

COMMUNICATIONS

- The Flood Office Land Agent has spoken with the landowners at RW306; D; F to inform them of the selected berm alignment and they are happy with the selected option.
- The Flood Office Land Agent has spoken with the two adjacent landowners regarding the change of extents to Road Closure Bylaw 21.22, and no concerns were raised.
- A notice of the selected berm alignment will be posted on the Flood Readiness website, along with the current berm alignment map
- The Alberta Environment Flood Mapping team will be apprised of the change and will be sent a copy of the new berm alignment so it will be reflected accurately in the Provincial Flood Hazard Maps, once berm construction is complete.



NOTES:

- EXISTING GROUND CONTOURS INFORMATION WAS DERIVED FROM LIDAR (2018) AND PROVIDED BY DRFMO.
- HIGH RESOLUTION AERIAL PHOTO FROM 2019 AND PROVIDED BY DRFMO.
- UPGRADE DIKE LENGTH = 730 m
NEW DIKE LENGTH = 905 m
- 9 PARCELS DIRECTLY IMPACTED
- 121 HOMES PROTECTED

LEGEND:

- | | | | |
|--|-----------------------------------|--|--------------------|
| | PROPOSED DIKE AND SWALE EXTENTS | | STORM NETWORK |
| | FLOW BOUNDARY 1850 cms | | GAS SERVICE LINE |
| | RIVER CROSS SECTION STATION LABEL | | POWER LINE |
| | | | WATER SERVICE LINE |
| | | | SEWER NETWORK |

Project Number: CW238404
Date: OCTOBER, 2022



DRUMHELLER RESILIENCY AND FLOOD MITIGATION PROGRAM
CONCEPTUAL DESIGN AND FEASIBILITY STUDY

Figure 1



REQUEST FOR DECISION

TITLE:	Proposed East Coulee East End Road Closure Bylaw 21A.22
DATE:	February 28, 2023
PRESENTED BY:	Darryl Drohomerski, C.E.T., CAO
ATTACHMENT:	Bylaw 21A.22; Schedule 8

SUMMARY:

As part of the Town's Flood Mitigation Project and provincial funding agreement, the Province is requiring the Town of Drumheller owns the land that current or proposed berms will be placed, including those berms that currently or would sit on Public road rights-of-way. A portion of these rights-of-way need to be closed for the construction of the new berms. This Bylaw deals with closing a portion of the right of way at the west end of River Drive in East Coulee to facilitate berm placement. The previous Bylaw 21.22 recommended a closure that was approximately 30 meters shorter than the length that is now required because of a change in berm alignment.

RECOMMENDATION:

That Council gives first reading to East Coulee East End Road Closure Bylaw 21A.22 and sets the Public Hearing date for April 3, 2023. Council will first need to repeal motion M2022.247 that passed first reading of Bylaw 21.22.

DISCUSSION:

Under the funding agreement between the Town and Alberta Environment, the construction of any new berms shall be placed on land owned by the Town of Drumheller, including any road rights of way. This road closure bylaw will accomplish that task for the East Coulee Berm that parallels River Drive at the east end of East Coulee as well as closes a portion of an unnamed original road allowance.

There is a difference between a right of way and a road. A road is the surface that is contained within the right of way and is generally 7-9 meters wide. A right of way is a legal entity under the ownership of the Province and is varies from 6 meters (for an alley) to 20-40 meters for a street or avenue. Many rights of way, at least in Drumheller area, may not have a road contained within the boundary. In the case of rights of way adjacent to the Red Deer River, the right of way extends to the water's edge as shown in the attached drawing.

These portions of road closures are necessary in order to wrap the berm around, and protect, the east end, and ultimately all, of East Coulee.

The lands where the berm is being placed will be converted into Public Utility Lot to align with the other land in the valley that berms currently or will reside upon.

FINANCIAL IMPACT:

The costs to convert this land is included with the Flood Mitigation project and is a requirement of the provincial funding agreement.

STRATEGIC POLICY ALIGNMENT:

Flood Mitigation is the key strategic priority of this Council and Administration.

COMMUNICATION STRATEGY:

A notice of the proposed Road Closure and Public hearing will be provided via;

- Newspaper ads in the Drumheller Mail will run on November 30 and December 7
- Letters to properties in the adjacent area will be mailed out by November 25
- Posting on the Town Website, DrumhellerOnline Community Events Page.

MOTION:

That Council repeal motion M2022.247 that passed First Reading of Bylaw 21.22.

That Council give first reading to East Coulee East End Road Closure Bylaw 21A.22 and set the Public Hearing date for April 3, 2023.

SECONDED:

Prepared By:



Darryl Drohomerski, C.E.T.
Chief Administrative Officer

Reviewed By:

Denise Lines

Denise Lines
Legislative Services

Approved By:



Darryl Drohomerski, C.E.T.
Chief Administrative Officer

TOWN OF DRUMHELLER
BYLAW NUMBER 21A.22
DEPARTMENT: FLOOD MITIGATION / DEVELOPMENT

East Coulee East End Road Closure

THIS IS A BYLAW of the TOWN OF DRUMHELLER, in the Province of Alberta for the purpose of closing portions of undeveloped roads and undeveloped original road allowance as depicted on the attached:

SCHEDULE – ‘8’; being a portion of the Original Road Allowance between the S.W. ¼ Section 28 and the S.E.1/4 Sec. 29 and portions of 1st. and 2nd. Streets on Plan 801 1334 all within Township 27, Range 18, West of the 4th. Meridian to public travel and acquiring title to these lands in the name of the TOWN OF DRUMHELLER pursuant to Sections 22 and 23 of the Municipal Government Act, Chapter M-26, Revised Statutes of Alberta 2000, as amended.

WHEREAS; the Town of Drumheller, the Province of Alberta and the Government of Canada have entered into an agreement to construct flood mitigation berms along portions of the Red Deer River in the Town of Drumheller to protect properties and the citizens of Drumheller from the ravages of flood waters, and

WHEREAS; it has been found that construction of flood mitigation berms in the subject area is impossible without encroaching upon and using parts of the aforementioned undeveloped roads, and

WHEREAS; the parties to this flood mitigation project have agreed that land used for berm construction must be in the name of the Town of Drumheller, and

WHEREAS; the Council of the Town of Drumheller is satisfied that this activity is in the best public interest and no one will be adversely affected by this road closure Bylaw; and

WHEREAS; a notice of this undeveloped road closure was published in the Drumheller Mail once a week for two consecutive weeks; on _____ and again on _____ the last of such publications being at least five days before the day fixed for the passing of this Bylaw; and

WHEREAS; the Council of the Town of Drumheller held a public hearing on the day of, 2022 at their regular or special meeting of Council in which all interested parties were provided an opportunity to be heard;

NOW THEREFORE; be it resolved that the COUNCIL of the TOWN OF DRUMHELLER, in the Province of Alberta does hereby enact to close a portion of the Original Road Allowance between the S.W. ¼ Section 28 and the S.E.1/4 Sec. 29 and portions of 1st. and 2nd. Streets on Plan 801 1334 all within Township 27, Range 18, West of the 4th. Meridian as shown depicted on the attached Schedule – ‘8’ which is more particularly described as:

PLAN
AREAS ‘ A’, ‘B’ and ‘C’
EXCEPTING THEREOUT ALL MINES AND MINERALS

to public travel and acquiring three titles to these lands in the name of the TOWN OF DRUMHELLER with a mailing address of; 224 Centre Street, DRUMHELLER, Alberta T0J 0Y4 pursuant to Sections 22 and 23 of the Municipal Government Act, Chapter M-26, Revised Statutes of Alberta 200, as amended.

SHORT TITLE

This Bylaw may be cited as East Coulee East End Road Closure Bylaw 21A.22

TRANSITIONAL

This Bylaw takes effect on the day of the third and final reading.

READ AND PASSED THE FIRST TIME BY THE COUNCIL OF THE TOWN OF DRUMHELLER, THIS ___ DAY OF ___, 2023.

MAYOR: HEATHER COLBERG

DARRYL E DROHOMERSKI, C.E.T
CHIEF ADMINISTRATIVE OFFICER

APPROVED BY: ALBERTA INFRASTRUCTURE and TRANSPORTATION

Seal

MINISTER OF ALBERTA INFRASTRUCTURE AND TRANSPORTATION
ROOM 425, LEGISLATIVE BUILDING,
10800 97TH. AVENUE, EDMONTON, ALBERTA. T5K 2B6

READ AND PASSED THE SECOND TIME BY THE COUNCIL OF THE TOWN OF
DRUMHELLER, THIS __ DAY OF __, 2023.

MAYOR: HEATHER COLBERG

DARRYL E DROHOMERSKI, C.E.T
CHIEF ADMINISTRATIVE OFFICER

READ AND PASSED THE THIRD TIME BY THE COUNCIL OF THE TOWN OF
DRUMHELLER, THIS __ DAY OF __, 2023.

MAYOR: HEATHER COLBERG

DARRYL E DROHOMERSKI, C.E.T
CHIEF ADMINISTRATIVE OFFICER

EAST COULEE DISTRICT
DRUMHELLER, ALBERTA

PLAN SHOWING PROPOSED ROAD CLOSURE
AFFECTING PARTS OF THE
ORIGINAL ROAD ALLOWANCE BETWEEN
S.W.1/4 SEC.28 AND S.E.1/4 SEC.29,
AND 1st STREET & 2nd STREET ON
PLAN 801 1334
ALL WITHIN THE
S.W.1/4 SEC.28 AND S.E.1/4 SEC.29,
TOWNSHIP 27, RANGE 18, W.4M.

SCALE= 1:2000 ————— OCTOBER, 2022

LEGEND:

Distances are in metres and decimals thereof.
Area affected by this plan is shown thus.... 