



Legislation Details (With Text)

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Title: Letters of Support Request - Red Willow Park West Meadowview Construction & Ray Gibbon Drive Expansion
Presented by: Dawny George, Director, Engineering Services

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TAMRMS#: B06

Letters of Support Request - Red Willow Park West Meadowview Construction & Ray Gibbon Drive Expansion

Presented by: Dawny George, Director, Engineering Services

1. That Council supports Administration's applications for *Water Act* approvals in support of construction of Phase 1 of Red Willow Park West Meadowview and Phase 2 of Ray Gibbon Drive.
2. That the Mayor provide a letter to Alberta Environment and Parks confirming Council's support for Administration's application for *Water Act* approval in support of the construction of Phase 1 of Red Willow Park West Meadowview;
3. That the Mayor provide a second letter to Alberta Environment and Parks confirming Council's support for Administration's application for *Water Act* approval in support of the construction of Ray Gibbon Drive Phase 2.

PURPOSE OF REPORT

Administration is requesting a letter indicating Council support be provided to accommodate the additional information request made by Alberta Environment and Parks (AEP) in response to Administration's recent Water Act application. This application is required to enable construction of the Red Willow Park West Meadowview Phase 1, Grey Nuns White Spruce Park (GNWSP) project.

Administration is anticipating similar requests will be made by AEP for the planned work associated with the twinning of Ray Gibbon Drive Phase 2. Therefore, Administration is requesting a second (separate) letter of support that will be submitted proactively with the project's forthcoming Water Act approval application.

ALIGNMENT TO PRIORITIES IN COUNCIL'S STRATEGIC PLAN

Strategic Priority #3: Building a Transportation Network: Integrated transportation systems.

Corporate Business Plan: Steward the construction schedule, mitigating the associated risks, for the four phases of twinning Ray Gibbon Drive, in its entirety to 2029, to an arterial standard.

Strategic Priority #4: Infrastructure Investment: Identify and build needed capital assets.

Corporate Business Plan: N/A

ALIGNMENT TO LEVELS OF SERVICE DELIVERY

Service Name: Trail System

Service Definition: Definitions currently in development to align with Municipal Development Plan and Active Transportation Plan.

Service Component: Not applicable

Current Service Level:

- Planning and Design: Park classification, design and development are outlined through the City of St. Albert Parks and Open Space Standards and Guidelines.
- Construction: Construction outlines through the Engineering Standards.
- Hours: Hours are in alignment with Parks Bylaw 19/65.
- Access: Free access spontaneous spaces. Park and trail sign standards are in alignment with Administrative Directive - A-CS-08 - Parks and Trails Sign Standards.

ALIGNMENT TO COUNCIL DIRECTION OR MANDATORY STATUTORY PROVISION

N/A

BACKGROUND AND DISCUSSION

GNWSP (Grey Nuns White Spruce Park):

As part of the planning for GNWSP, connectivity and access were key considerations when designing the trail network. Residents have used the existing pedestrian access on the Ray Gibbon Drive bridge to access the former Hogan Road and into the Grey Nuns White Spruce Forest. This access is the only connected route for viable active mode accommodation north of Ray Gibbon Drive, yet it is constantly closed due to seasonal flooding and wet conditions caused by poor drainage. Because of the lack of alternative routes, and the impact of season flooding, the proposed access and connection provided by the GNWSP is deemed critical for the network. See figure 1 below for location.

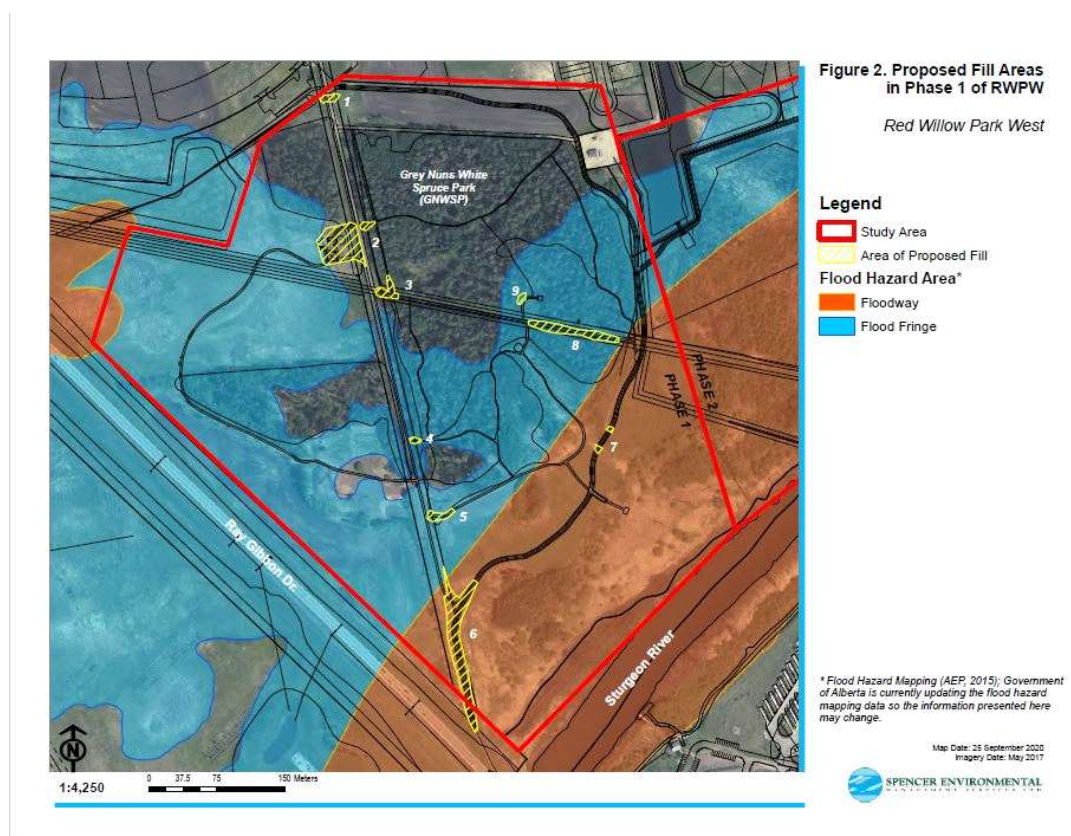


Figure 1: Project Area Overview

While many alternatives were considered, ultimately a raised trail with culverts best meets the objective of reasonable access through all seasons, managing construction and operational costs, maintaining connectivity to GNSWP and north into Riverside and managing existing flooding and standing water issues. The below photos illustrate the trail connection condition in a normal spring melt (May 2020).



The raised trail requires bringing a relatively small amount of fill to the site. This is challenging as the area is within the floodplain of the Sturgeon River, and more specifically the floodway, generally described as the area where the water is fastest and deepest during a flood event. Development within the floodway is discouraged but is permitted for certain types of infrastructure, including public infrastructure and recreational trails, subject to a *Water Act* approval that ensures the proposed development will not impede the flow of water and does not contribute to flooding of the built

environment.

Development in the flood fringe, which is the area of land outside of the floodway that in a more rare or infrequent flood event (e.g. 1 in 25 year, 1 in 100 year) carries any additional water is likewise discouraged but permitted for certain uses. Much of the GNWSP is within the flood fringe and the design and development of the park as a whole has considered the wet soil conditions and concerns with potential flooding.

The GNSWP project is occurring simultaneously with the provincial update to the Flood Hazard Mapping for the Sturgeon River. Concerns were raised that adding fill into the floodway would invalidate the modelling done to create new flood hazard maps. A river engineering firm was engaged by the City to complete additional modelling to assess the impacts to the floodway as the result of the fill and any changes that may result to the flood hazard mapping. Their results indicated that there is minimal to no impact to the floodway due to the additional fill, if appropriate culverts are installed and that the addition of fill has no impact to the draft flood hazard mapping being created by AEP.

Based on the positive result from the engineering study, a Water Act application was submitted in December 2020. A supplemental information request was received by Administration on March 5, 2021 requiring clarification that key requirements for development in the floodway were considered including:

- to keep infrastructure and people out of harm's way
- to ensure adequate hydraulic capacity is maintained for flood flows
- to maintain the relevance of our flood mapping products

Further technical data, alongside maintenance and monitoring for public safety components are being compiled by the project team to assure AEP that the above has been adequately addressed. Assessed risks and proposed mitigations are shown in the table below:

Risk	Mitigation	Other Considerations
Public are on the trail during a flood event	<ul style="list-style-type: none"> • Ongoing monitoring of river levels and flow rates • Proactive trail closures when river levels are high • Raise trail surface high enough to keep water flows under the trail except in more extreme events 	<ul style="list-style-type: none"> • Regular river monitoring is an existing service and information is readily available from Environment Canada • Trail closures are part of ongoing service delivery
Public infrastructure is lost during a flood event	<ul style="list-style-type: none"> • Minimize infrastructure in floodway • Ensure adequate grade to allow water to flow across trail surface • Provide culverts to convey floodwater appropriately under trail 	<ul style="list-style-type: none"> • The Sturgeon River is slow flowing under normal conditions and the floodplain is wide at this point • Loss of infrastructure is unlikely

Fill impedes flow of water	<ul style="list-style-type: none"> • Provide appropriate culverts • Provide appropriate trail grades and cross slopes • Minimize amount of fill required 	<ul style="list-style-type: none"> • River engineering study states this risk is minimal to none with the trail design
Development in the floodway contributes to increased erosion and sedimentation during flood events	<ul style="list-style-type: none"> • Maintain natural vegetation as much as possible to reduce soil loss • Re-naturalize areas of former use as much as practicable over time (e.g. former Hogan Road, nursery site, Atco access road) • Minimize amount of fill • Use environmentally sensitive materials and methods for development in the floodplain • Completing ongoing monitor for erosion and sedimentation concerns 	<ul style="list-style-type: none"> • All structures are engineered and anchored appropriately • Increased naturalization of the area is planned over time • All construction projects require erosion and sedimentation control plans during construction to ensure no materials is entering nearby waterbodies
Fill invalidates the flood hazard mapping being finalized by AEP	<ul style="list-style-type: none"> • Minimize amount of fill required • Maintain existing topography as much as possible 	<ul style="list-style-type: none"> • River engineering study was not able to model an impact to flood hazard maps based on the submitted design and proposed fill areas

Further, AEP has requested:

“(b) acknowledgment that City staff and council are aware of the inherent risks of this activity, as described in the bullet points above. Particularly the third bullet; AEP River Forecasting is revising flood hazard maps for this reach of the river this Spring, and as the construction of this project will likely occur at a later date, the new flood hazard maps may not be up-to-date. This is significant because the public will rely on the accuracy of these maps for safety and planning. Specific acknowledgment of this risk is important”

Administration believes that this trail is essential for connectivity along the river and north along Ray Gibbon Drive and have adequately addressed the risks associated with the proposed trail development within the floodway. Further, that responsible public access to GNWSP needs to be established, which necessitates some infrastructure in the flood fringe. Throughout the design, the wetness of the area and potential flooding have been considered and risks minimized wherever possible, balancing the risks of unmanaged public access with the risks to infrastructure in infrequent flood events. Staff are confident that this project should proceed as currently designed.

Ray Gibbon Drive Phase 2 improvements are in process and currently at the detailed design stages. Actions are underway to advance a Water Act Approval application for the proposed design of the roadway widening and accommodation of active modes (trail) on the north east side of the river and

roadway. It is anticipated that there will be similar requirements to place additional fill into the floodway to accommodate the new infrastructure; therefore, the project team is seeking to proactively address AEP's concerns and affirm Council's support at this time.

STAKEHOLDER COMMUNICATIONS OR ENGAGEMENT

GNWSP:

Engagement on the Red Willow Park West Meadowview project occurred from 2018-2020, starting with the Red Willow Park West Master Plan update and continuing into detailed design for GNWSP. In late 2019, 10 stakeholder groups were engaged directly, 113 residents completed surveys online and 77 residents attended a public open house on October 8, 2019. There were several adjustments made to the proposed design in response to the comments received but feedback was supportive of the project overall. A full report can be found at this [link](https://stalbert.ca/site/assets/files/5829/grey_nuns_white_spruce_park_public_engagement_report_2020.pdf) [<https://stalbert.ca/site/assets/files/5829/grey_nuns_white_spruce_park_public_engagement_report_2020.pdf>](https://stalbert.ca/site/assets/files/5829/grey_nuns_white_spruce_park_public_engagement_report_2020.pdf).

Specific to the Water Act approval, a public notice was placed in the Gazette for a period of seven days as required by AEP. Three inquiries were received, with no formal submissions on the application submitted to AEP.

Ray Gibbon Drive:

Public and stakeholder engagement had been extensive during the planning of the "West Regional Road", now called Ray Gibbon Drive. The corridor alignment was finalized in the early 2000's and during the design and construction, there were various engagement actions.

Administration and City Council had communicated extensively with Provincial representatives and Alberta Transportation (AT) on the Ray Gibbon Drive widening project, resulting in a finalized cost share Agreement in 2019 to deliver on the widening of the corridor. The Agreement captures some specifics of anticipated design, inclusive of design speed as well as following the City's Complete Streets Guidelines, which result in a priority for accommodation of active modes. AT is a direct project partner who has supported the proposed project details, design drawings and work plans to date.

For the widening of the corridor, project information is shared publicly; however, no formal "new" engagement is occurring as the planned improvements are in line with the forecasted widening needs that had been communicated during the early stages.

Specific to the Water Act Approval, the project team will be following all required application and notification processes.

IMPLICATIONS OF RECOMMENDATION(S)

Financial:

None at this time

Legal / Risk:

The recommended action acknowledges that there is a risk that the flood hazard mapping to be released for the Sturgeon River in 2021, which is used by resident and Administration to support decision making and future planning within and near the floodplain, may not be entirely accurate due to the works proposed.

For the GNWSP project, with the completion of additional flood hazard modelling, Administration is confident that this risk is insignificant. For Ray Gibbon Drive, this risk is still unknown but is expected to similarly be insignificant or able to be mitigated through additional design and engineering controls.

Program or Service:

None at this time

Organizational:

None at this time

ALTERNATIVES AND IMPLICATIONS CONSIDERED

If Council does not wish to support the recommendation, the following alternatives could be considered:

Red Willow Park West Meadowview Phase 1

Alternative 1. Council could direct Administration to withdraw the application and redesign the trail alignment to no longer be within the floodway. This would cause significant project delays and require additional funding committed for redesign work. Redesigning the trail alignment out of the floodway could not be connected to the Ray Gibbon Drive bridge. An alternative route may be more costly with increased connection distances and have additional challenges with timing of surrounding projects (e.g. Ray Gibbon Drive twinning, Riverside neighbourhood build out).

Alternative 2. Council could direct Administration to continue with creating the new trail connection but require that the trail not be raised and no fill brought into the floodway. This alternative will provide improved accessibility compared to the current situation but will not address existing safety and access concerns with flooding. This alternative may also cause increased maintenance as portions of the asphalt trail will be submerged each year for a substantially longer period of time.

Ray Gibbon Drive

There are minimal alternative options recommended for the Ray Gibbon Drive project due to the scope of work crossing and running perpendicular to the river area and through the flood plain.

Administration acknowledges Council's priority of having these corridor improvements completed and anticipates that for infrastructure sustainability, completion of connectivity and accommodation of all modes the area will require some degree of fill material. The design will attempt to minimize impact to the natural area and the application submitted to Alberta Environment and Parks will meet all required and requested criteria; however, a priority of this work will be placed on considerations of accommodation and sustainable infrastructure.

Report Date: March 11, 2021

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