

## Whitemud Creek Pedestrian Bridge (Smith Crossing, B062) Replacement

### Environmental Impact Assessment

#### RECOMMENDATION

That Executive Committee recommend to City Council:

That the Environmental Impact Assessment for the Whitemud Creek Pedestrian Bridge (Smith Crossing, B062) replacement project, as set out in Attachment 1 of the November 16, 2021, Integrated Infrastructure Services report IIS00654, be approved.

#### Report Purpose

##### **Council decision required.**

Council is asked to approve the Environmental Impact Assessment for the Whitemud Creek Pedestrian Bridge (Smith Crossing, B062) bridge replacement project in accordance with the North Saskatchewan River Valley Area Redevelopment Plan - Bylaw 7188.

#### Executive Summary

- This report requests City Council's approval of the Environmental Impact Assessment (included in Attachment 1) for the Smith Crossing Pedestrian Bridge replacement (the Project).
- The Environmental Impact Assessment (EIA) for the Project concludes that any potential adverse effects of the project can be avoided, reduced, or mitigated by applying appropriate measures during project design and construction.
- Any residual impacts in either the construction or post-construction stage will be neutral or positive relative to current baseline conditions.
- Approval of this report demonstrates the City's commitment to environmental project reviews, environmental permitting and environmentally sound design. This work ensures that the City's environmental stewardship outcome is met during the construction of this project.

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## REPORT

The Smith Crossing Pedestrian Bridge (B062) is located over Whitemud Creek, immediately south of 23 Avenue and approximately 35 metres downstream of the confluence of the Whitemud Creek and Blackmud Creek. The bridge provides pedestrian access to the MacTaggart and Larch Sanctuaries within the river valley system and is located in Whitemud Creek Ravine, within the boundaries of the City of Edmonton's North Saskatchewan River Valley Area Redevelopment Plan (Bylaw 7188), as shown on Figure 1 on page 66 of Attachment 1.

The existing bridge was constructed in approximately 1914. The bridge was named after Robert and Elizabeth Smith and family who were the pioneers in that area. It was historically used as a vehicle bridge over Whitemud Creek before it was repurposed as a pedestrian bridge in 1961. The bridge is a 24.4 metre long single-span and based on a condition assessment, the bridge has reached the end of its service life requiring replacement to maintain safe operation for pedestrian use.

The preliminary design of the project was completed in Spring 2021. Detailed design is underway and construction is anticipated in 2022 and 2023.

In accordance with Section 3.4.3 of the North Saskatchewan River Valley Area Redevelopment Plan - Bylaw 7188, the Project is subject to an EIA that outlines current conditions in the project area, evaluates potential risks, and identifies adverse impacts that must be eliminated, minimized, or mitigated through design, landscaping, and construction measures.

A Site Location Study is not required because the bridge will be replaced over the same footprint as the existing bridge and path connections and it would not be considered a new transportation corridor under the North Saskatchewan River Valley Area Redevelopment Plan.

The EIA discusses potential impacts (Attachment 1, Section 5) on the physical and biological environment resulting from the implementation of the project elements referenced in the report. The EIA provides mitigation measures to ensure the project will not result in any significant adverse impacts on the environment. Whitemud Creek and Blackmud Creek in the bridge project area are not mapped in the City of Edmonton's Flood Protection Overlay area or the Province's flood hazard mapping - as such, there is a low risk of flooding during the construction period.

As summarized in the EIA, some of the potential impacts and mitigations include:

- Creek Bank Slope Stability:
  - Baskets with rocks inside will be installed as part of the new bridge construction to prevent erosion. The proposed measures will be reviewed during construction to determine if additional protection is warranted.
- Habitat during Construction:
  - Work crews will be instructed not to disturb wildlife. The contractor's Environmental Construction Operation plan will include worker/wildlife encounter protocols.
- Vegetation:
  - Project clearing limits will be marked with highly visible flagging to minimize the extent of vegetation loss.

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- Efforts will be made to minimize tree and shrub removal in work sites to the minimum necessary in accordance with the City of Edmonton Corporate Tree Management Policy C456C.
- Disturbance to a Snake Hibernaculum:
  - The exact location of the hibernaculum (underground chambers that animals use through winter to protect them from the cold) is unknown. The contractor will be required to collaborate with Alberta Environment and Parks to develop a mitigation plan.
- Deleterious Substances or Sediments:
  - The contractor will prepare and implement a Spill Prevention and Emergency Response plan, a Care of Water plan, and an Erosion and Sedimentation Control plan to prevent any spills of deleterious substances and release of sediments.
- Impact on Recreational Use:
  - Temporary fencing will be installed around the active construction area and signage will be posted indicating project information, duration, and a phone number for inquiries.

The EIA also highlights positive environmental aspects of the project:

- The new bridge abutments will be located further away from the streambed compared to the existing abutments.
- The new bridge will be longer and raised in elevation resulting in a larger opening over Whitemud Creek compared to the existing bridge.
- The raised elevation will provide clearance above the water level during a major flood.
- The larger opening under the new bridge will have a positive impact on ecological connectivity and wildlife movement.

Environmental mitigation strategies will form part of the contractual requirements for the construction of the Project. Many of the mitigation strategies outlined in the EIA align with existing City policies such as the Envisio ISO 14001 standard, Corporate Tree Management Policy (C456C) and the Public Tree Bylaw (18825). In addition, the contractor will be required to develop and maintain an Environmental Construction Operations plan for the duration of the work and to implement additional mitigation strategies outlined in the assessment that are not part of current City policies. Some of the mitigation measures include:

- Cleaning equipment before moving into the project area to help reduce the potential transfer and spread of weed species.
- Revegetating cleared areas with topsoil and an appropriate seed mix.
- Level of weed control required until desired vegetation becomes established.
- Disposal of all existing bridge material as required by environmental policies.
- Immediately stabilizing banks disturbed by any activity associated with the project to prevent erosion and/or sedimentation, preferably through revegetation with native species suitable for the site.

The EIA also noted Historical Resources as a consideration for the Project. The bridge is not listed on the Inventory of Historic Resources in Edmonton. A Historical Resources Act Approval has

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been granted for the Project. To limit the risk of impacting any heritage resources, all construction activities will be confined to the identified project footprint. All work will be immediately suspended and the Provincial Ministry of Alberta Culture, Multiculturalism and Status of Women will be contacted should potential historical resources be discovered during construction.

Prior to the start of construction, anticipated to begin in Quarter 4 of 2022, a pre-construction public information session will be held. Key highlights of the information that will be shared include:

- Information for nearby residents and users of the Smith Crossing Pedestrian Bridge regarding construction details and timelines; and
- Details regarding the expected construction activities and trail closures that will affect the public, including how trail traffic will be managed or redirected throughout construction.

Communication activities and advertisements for the pre-construction information session will be in development soon. The communication and information sharing activities will take into consideration all COVID-19 public health restrictions in place at that time. Additional information will also be available on the City of Edmonton's website:

[https://www.edmonton.ca/projects\\_plans/roads/smith-crossing-pedestrian-bridge-replacement](https://www.edmonton.ca/projects_plans/roads/smith-crossing-pedestrian-bridge-replacement).

### **Budget/Financial Implications**

Funding for this project was approved under the Transportation: Bridge & Auxiliary Structures - Renewal capital profile (CM-24-0000) as part of the 2019-2022 Capital Budget. The current construction cost is estimated to be \$3.0 million.

### **Legal Implications**

The North Saskatchewan River Valley Area Redevelopment Plan - Bylaw 7188 requires that the Smith Crossing Pedestrian Bridge Environmental Impact Assessment be approved by City Council before the proposed development can proceed to construction.

## **COMMUNITY INSIGHT**

During the planning and design of the project, stakeholders, including environmental groups, community groups, recreation groups, immediate adjacent landowners, and the Smith family, were contacted via email, letter mail or one-on one virtual meetings to raise awareness of the project and gather initial feedback.

A web page shared information with the public and surrounding communities about the project and feedback was sought through an Edmonton Insight Community survey that was open to all residents of Edmonton. The online survey was made available on the City's website (Edmonton Insight Community) in December 2020/January 2021 and received 85 responses: 81 of the respondents used the pedestrian bridge and represented 36 communities in Edmonton.

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Both the stakeholder meetings and the survey sought input about bridge use, access to the site, important elements of the existing bridge, wildlife sightings, and knowledge about potential sensitive environmental sites within the immediate area.

An on-line information session was held in May 2021 that provided details about the preliminary design of the pedestrian bridge replacement. Topics discussed included: project scope and timeline, preferred bridge design, environmental impact assessment information, anticipated construction activities, and adjustments in design that resulted from the feedback heard in both the meetings and survey.

### **GBA+**

A high-level stakeholder analysis ensured that the project team would hear from people of different ages, genders and needs. The project team communicated with the adjacent residents, people who use the bridge, and anyone who was interested to weigh in through the Edmonton Insight Community and direct email to the project manager. The stakeholder meetings, online survey, information session, and website were designed to accommodate people with varying technological capabilities. Multiple channels were used to communicate, including, email, mail, one-on-one virtual meetings, live verbal presentation, recording of the presentation for offline use, a question and answer document, and a publicly accessible website. Project information is updated on the website for any citizen who is interested to know more.

In order to mitigate or remove barriers to equity and to support equality of outcomes, below are some examples of GBA+ considerations:

- Who is impacted?
  - Pedestrians, recreational users, people who come here for wildlife sightings and photography, etc.
- Why are they impacted?
  - Construction-related activities, including bridge demolition and securing a worksite, will impact any people who use the area under and near the bridge.
- What is the impact?
  - Users will be unable to access the area under and near the bridge during construction.

The equity measures that have been identified and will be implemented include arranging the pre-construction information session mentioned before to provide information on re-routing and ensuring the safety of all users during construction.

In addition to the above mentioned measures, responses from the online survey assisted the project team in preparing the concept and preliminary design options. The pedestrian handrail of the new bridge will be designed in a way that promotes safety for children by discouraging climbing. The Smith Crossing Bridge is used by pedestrians to access MacTaggart and Larch Sanctuaries within the river valley system for wildlife sightings and photography which was considered during the development of the preliminary design options.

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## **ATTACHMENTS**

1. Smith Crossing Pedestrian Bridge Replacement - Environmental Impact Assessment Pursuant to Bylaw 7188 - Final Report