

Terwillegar Drive Stage 2 Expansion

Environmental Impact Assessment and Site Location Study

RECOMMENDATION

That Executive Committee recommend to City Council:

1. That the Terwillegar Drive Stage 2 Expansion Environmental Impact Assessment and Site Location Study as outlined in Attachments 1 and 2 of the March 9, 2022, Integrated Infrastructure Services report IIS00839, be approved.
2. That the location of the proposed pedestrian/cyclist bridge, as outlined in Attachment 2 of the March 9, 2022, Integrated Infrastructure Services report IIS00839, be deemed essential and approved pursuant to Section 3.4.1 of the North Saskatchewan River Valley Area Redevelopment Plan, Bylaw 7188.

Report Purpose

Council decision required.

This report requests City Council's approval for the Environmental Impact Assessment and Site Location Study for upgrades within River Valley, planned as part of Stage Two of the Terwillegar Drive Expansion.

Executive Summary

- This report requests City Council's approval of the Environmental Impact Assessment included in Attachment 1 for the planned Terwillegar Drive - Stage Two upgrades within the River Valley. These upgrades include the rehabilitation and widening of the Rainbow Valley bridges, a new pedestrian/cyclist bridge, new drainage infrastructure and a new transit-only lane (the Project).
- The report also requests City's Council's approval of the Site Location Study included in Attachment 2 for the new pedestrian/cyclist bridge and that the planned location of the bridge in the River Valley be deemed essential by City Council.
- The Environmental Impact Assessment describes that the project has potential environmental impacts on groundwater, surface water, fish and fish habitat, soils, vegetation, and wildlife. The Environmental Impact Assessment concludes that negative

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residual impacts are anticipated to be negligible from the project, given the implementation of mitigation measures through design and construction.

- The Site Location Study concludes that the pedestrian/cyclist bridge is dependent on the proposed location as it addresses connectivity needs specific to this location. If proposed at another location outside the River Valley, the bridge would achieve a different purpose. The separated bridge will provide improved access and active transportation opportunities in alignment with the City Plan and the Bike Plan. Therefore, the location in the North Saskatchewan River Valley Area Redevelopment Plan, Bylaw 7188, boundary is considered essential.
- Approval of this report demonstrates the City's commitment to environmental reviews, environmental permitting, environmentally sound design, and ensuring the City's environmental stewardship objectives are met during the construction of this Project.

REPORT

Stage Two of the Terwillegar Drive Expansion Program is planned to include the rehabilitation and widening of the Rainbow Valley Bridges. This project includes a new pedestrian/cyclist bridge over Whitemud Creek, a new transit only-lane along southbound Whitemud Drive between Fox Drive and Terwillegar Drive, upgrades to Whitemud Drive between the Terwillegar Drive interchange and 122 Street, upgrades to the Whitemud Drive/Terwillegar Drive interchange, and supporting work which include many retaining walls and new drainage infrastructure.

As shown in Figures 4-1 and 4-2 in Attachment 1, components of Stage Two fall within the boundaries of the City's North Saskatchewan River Valley Area Redevelopment Plan, Bylaw 7188 and, therefore, trigger the requirement for an Environmental Impact Assessment pursuant to that Bylaw. The components within the River Valley include:

- Rehabilitation and widening of the Rainbow Valley bridges (Whitemud Creek area)
- New separated pedestrian/cyclist bridge. The bridge will be located approximately 5 metres north of the westbound Rainbow Valley Bridge and is planned to be a 4.2 metres wide bridge with three spans built to a height comparable to the existing Rainbow Valley Bridges.
- New transit-only lane (Fort Edmonton Park area, north of 60 Avenue)
- Two new stormwater management facilities to manage the increased stormwater flows from the project: one south of the existing Whitemud Park parking lot, and one beneath the existing Snow Valley overflow parking lot.
- Temporary construction laydowns, access roads and temporary crossing(s) of Whitemud Creek

The new pedestrian/cyclist bridge is also subject to a Site Location Study that details the cost, social, environmental and institutional constraints which make a River Valley location essential. The proposed bridge's location is shown in Figures 2-1 in Attachment 2.

The enclosed Environmental Impact Assessment (Attachment 1) outlines current conditions in the project area and identifies adverse environmental impacts and how they can be eliminated, minimized, or mitigated through design, compensation, or construction measures.

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The Environmental Impact Assessment describes that most of the land in the project area consists of existing transportation infrastructure, which is primarily surrounded by non-maintained grass and shrubs with scattered trees. Most of the lands in the project area are of moderate environmental sensitivity, with areas in the River Valley near Whitemud Creek and the Fox Drive interchange noted as being high to extremely high in terms of their environmental sensitivity. Key environmental features include Whitemud Creek and vegetated/treed areas that provide bird nesting and wildlife passage habitats.

Some of the potential adverse impacts and mitigations identified in the Environmental Impact Assessment include:

Groundwater, surface water and fish habitat

- Potential impacts include degradation of groundwater and surface water quality from contamination and sedimentation and temporary disturbance of fish/fish habitat from instream construction activities in Whitemud Creek.
- Mitigations include designing permanent run-off control, minimizing the instream work footprint, following all regulatory requirements, following recommendations of the Qualified Aquatic Environment Specialist in regards to instream work, requiring the contractor to develop an Environmental Construction Operations Plan that includes mitigation measures outlined in the Environmental Impact Assessment and applicable regulatory requirements for mitigating potential environmental impacts due to construction.

Soil and salt contaminated soils

- Potential impacts include removal of native topsoil, loss of soil through erosion, contamination of soils, exposure of unknown contaminated soils and transfer of salt contaminated soils from the roadway to less impacted areas.
- Mitigations include designing permanent erosion controls, developing plans for the handling of soils, incorporating the recommendations of the project's Contaminated Soil Management Strategy in the project tender, requiring the contractor to develop a Contamination Management Plan and an Environmental Construction Operations Plan to mitigate potential environmental impacts due to construction.

Vegetation

- Potential impacts include loss of native/landscaped vegetation, including removing a treed area northwest of the existing Rainbow Valley Bridges. Impacts also include incidental damage during construction and the introduction or spread of weeds.
- Mitigations include minimizing the footprint associated with the planned upgrades, developing a landscape and restoration plan that include the appropriate species, requiring the contractor to develop a Tree Preservation Plan for construction, and following protocols to reduce the spread of weeds.

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Wildlife

- Potential impacts include restrictions to wildlife movement, temporary and permanent loss of bird nesting habitat, incidental damage to nests during construction, and sensory disturbance to wildlife.
- Mitigations include maintaining the existing space for wildlife passage under the bridges, designing lighting to minimize intensity and disruption to natural areas, restoring temporarily disturbed areas with vegetation, accommodating wildlife passage around construction areas, and scheduling vegetation removals outside of the general bird nesting period. The proposed bridge widening and new pedestrian/cyclist bridge will maintain similar conditions for wildlife passage as exist today and do not significantly inhibit wildlife passage.

Historic Resources

- Potential impacts include disturbing unanticipated historic resources, particularly palaeontological resources.
- A Historical Resources Impact Assessment for paleontology was completed and the project has received conditional Historical Resources Act Approval. A monitoring program must be implemented for excavations in the Whitemud Creek ravine.

The Site Location Study (Attachment 2) contains a summary of the location analysis and justification and a review of financial, social, environmental, and institutional constraints that make the proposed pedestrian/cyclist bridge location inside the River Valley essential. The Site Location Study highlights that the bridge is dependent on the proposed location as it addresses current and planned active transportation connectivity needs specific to this location, particularly users from the current east/west sidewalk on the westbound Rainbow Valley bridge that it will replace. If the bridge were constructed at another location outside of the River Valley, the bridge would achieve a different purpose. The bridge will enhance user safety and comfort at this location and provide improved accessibility and active transportation opportunities in alignment with the North Saskatchewan River Valley Area Redevelopment Plan, Bylaw 7188 , Breathe: Edmonton's Green Network Strategy, the City Plan and the Bike Plan.

Considering financial, social, environmental and institutional constraints, the Site Location Study highlights that a River Valley location is essential because:

- Funding is tied to Stage Two of Terwillegar Drive Expansion;
- Social and institutional benefits of the bridge are largely tied to its proposed location in the River Valley; and
- Adverse environmental impacts are limited to an extension of the existing Rainbow Valley Bridges footprint, which can be mitigated through design, compensation, and mitigation measures during construction.

If the bridge were proposed outside the River Valley, it could not be funded as part of the Terwillegar Drive expansion. The bridge would achieve different objectives outside of the River Valley and create potential environmental impacts within an entirely new study area.

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Budget/Financial Implications

Stage Two of the Terwillegar Drive Expansion is funded through Capital Profile 19-22-9006 (Terwillegar Drive Expressway Upgrades - Alternate Staging) as part of the 2019–2022 Capital Budget. The profile includes funding from the Province of Alberta through a one-time grant. The renewal component of the planned rehabilitation and widening of the Rainbow Valley bridges is currently unfunded and will be requesting funding through the City's Bridge Renewal Program (CM-24-000) as part of the 2023–2026 Capital Budget.

Legal Implications

Section 3.4.3 of the North Saskatchewan River Valley Area Redevelopment Plan (Bylaw 7188) requires City Council to approve the attached Environmental Impact Assessment (Attachment 1) for the planned Terwillegar Drive - Stage Two upgrades that are within the River Valley before the proposed upgrades can proceed to construction.

Section 3.4.1 of the North Saskatchewan River Valley Area Redevelopment Plan (Bylaw 7188) requires City Council to approve the attached Site Location Study (Attachment 2) for the new pedestrian/cyclist bridge and that the location of the new pedestrian/cyclist bridge be deemed essential by City Council.

COMMUNITY INSIGHT

Public and focused stakeholder engagements were conducted to share the preliminary design and currently anticipated construction plans for Stage Two of the project and gather input to be considered as the design and construction plans are finalized. These engagement opportunities included a virtual information sharing session and a series of stakeholder group meetings with a focus on sharing project information and gathering feedback within the group's area of interest.

- Public information session: The virtual information sharing session was open to all members of the public. The event included an online presentation with project information followed by a live question and answer session. A total of 60 members of the public attended.
- Focused stakeholder engagement: Eighteen stakeholder groups were contacted. These groups included Community Leagues, community organizations, institutions, major attractions and schools. The project team met with eight stakeholders as of the time of writing this report.

Following the online event, and for the general duration of the stakeholder meetings, an online survey was open for members of the public and stakeholders to share feedback related to the proposed upgrades for transit and active transportation.

The following key information was shared with members of the public and stakeholders:

- Terwillegar Drive Expansion program purpose, background, scope and schedule.
- Terwillegar Drive - Stage Two objectives.
- Planned project components including upgrades planned within the River Valley and anticipated tree/vegetation impacts.

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- Currently anticipated construction plans.

The Terwillegar Drive Stage 2 Expansion builds on the comprehensive engagement conducted as part of the broader Terwillegar Drive Expansion project. Public and stakeholder input for Stage Two was gathered at the “advise” level of engagement, with the intent that it will be considered alongside City plans and policies, technical requirements and funding availability. The key themes from continued engagement will provide the project team with local and contextual knowledge that will be considered when completing the detailed design.

The project team is committed to ensuring communications and information sharing continue with members of the public, area residents and stakeholders during construction. A pre-construction information sharing event, to outline what Edmontonians can expect during construction, is currently planned for summer/fall 2022.

GBA+

The planning process for the Terwillegar Drive Stage 2 Expansion identified a diverse range of stakeholders including area residents, roadway users, and community organizations potentially impacted by the project. This work included providing a diverse range of communication tactics and developing public engagement strategies with multiple opportunities for stakeholders and members of the public to learn about the project and share input. Opportunities included an online event, one-on-one stakeholder meetings and direct contact with the project team. This allowed the project team to gather feedback from different perspectives to identify additional design considerations to mitigate or remove barriers to equity and support equality of outcomes; such as connection points for active transportation.

The new separated pedestrian/cyclist bridge design incorporates design elements that ensure barrier-free access for users.

ATTACHMENTS

1. Rainbow Valley Bridges Renewal & Widening, Terwillegar Drive Stage 2 Upgrades - Environmental Impact Assessment
2. Rainbow Valley Bridges - Terwillegar Drive Stage 2 Upgrades - Site Location Study 2021-3981