

# REPORT

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## City of Edmonton

### Edmonton/Strathcona Footbridge Site Location Study 2020-3925



AUGUST 2021

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## EXECUTIVE SUMMARY

The City of Edmonton, Strathcona County, and the River Valley Alliance (RVA) have identified the need for a footbridge across the North Saskatchewan River between northeast Edmonton near 167 Avenue and the Riverside Nature Trail in Strathcona County. The RVA Strategic Plan aims to complete full end-to-end trail connectivity from Devon to Fort Saskatchewan (River Valley Alliance 2021). The proposed footbridge is part of the Capital Program Expenditures for the River Valley Alliance identified in their Strategic Plan 2021- 2024.

The footbridge meets numerous goals and objectives under the following City of Edmonton plans and policies:

- Natural Area Systems Policy C531;
- Breathe: Edmonton's Green Network Strategy;
- Ribbon of Green SW + NE;
- ConnectEdmonton: Edmonton's Strategic Plan 2019-2028;
- The Way We Green, Edmonton's Environmental Strategic Plan;
- The Way We Live, Edmonton's People Plan; and
- For the Love of Winter, WinterCity Strategy Implementation Plan.

During design and construction, mitigation measures will be taken to limit effects on the environment and wildlife inhabiting the area. For example, the recommended bridge location was selected to minimize the footprint, use minimal piers, and to avoid Class A fish habitat. The bridge design includes a naturalized bench under the bridge for wildlife passage through this important movement corridor.

The footbridge will improve the connectivity of trail networks in Edmonton and Strathcona County, provide opportunities for recreation, and expand year-round enjoyment of the North Saskatchewan River Valley.

The North Saskatchewan River Valley Area Redevelopment Plan (Bylaw 7188/18889; City of Edmonton 2020a) requires a Site Location Study (SLS) and for all proposals to develop a major facility on public land (i.e., river valley lands). This report is intended to fulfill the SLS requirement using the City's Guide to Completing a Site Location Study. Construction will not commence until the Edmonton City Council has approved the SLS and Environmental Impact Assessment per Bylaw 7188/18889.

## TABLE OF CONTENTS

SECTION	PAGE NO.
Executive Summary	i
Table of Contents	ii
1 Introduction	1
1.1 Northeast Edmonton and Strathcona County Footbridge	1
1.2 Regulatory Trigger	1
2 Project Description	1
3 Project Scope	3
4 Location Analysis and Justification	3
4.1 Alternative Location Review	3
4.2 River Valley Dependencies	6
4.3 Overview of Bylaws/Plans/Policies	6
5 Constraints Analysis	11
5.1 Financial Constraints	11
5.2 Social Constraints	12
5.3 Environmental Constraints	13
5.4 Institutional Constraints	13
6 Conclusion	14
Closure	
References	

# 1 INTRODUCTION

## 1.1 Northeast Edmonton and Strathcona County Footbridge

This Site Location Study (SLS) is for the construction of a new footbridge over the North Saskatchewan River between northeast Edmonton and Strathcona County. The City of Edmonton, Strathcona County, and the River Valley Alliance (RVA) retained Associated Engineering Alberta Ltd. to undertake the concept planning, preliminary design, detailed design, construction and post-construction services for the new footbridge between the City and County. The proposed footbridge will enhance local and regional connectivity, improve access to the North Saskatchewan River Valley, and provide an opportunity to celebrate the area's ecological, recreational, and cultural value.

## 1.2 Regulatory Trigger

Pursuant to the North Saskatchewan River Valley Area Redevelopment Plan (Bylaw 7188/18889; City of Edmonton 2020a), all proposals for the development of a major facility that is publicly owned or is developed on public land shall be subject to a SLS detailing financial, social, environmental, and institutional constraints which make the river valley location essential. This SLS outlines the constraints of the Edmonton/Strathcona County Footbridge for review and approval by Edmonton City Council. An Environmental Impact Assessment (Associated Environmental 2021a) has also been prepared to meet the requirements of Bylaw 7188/18889.

# 2 PROJECT DESCRIPTION

The City of Edmonton, Strathcona County, and the RVA are collaborating to provide a new footbridge over the North Saskatchewan River to connect northeast Edmonton to western Strathcona County and integrate the trail systems on both sides of the river (Figure 2-1). The integration of trail systems will link Edmonton to Strathcona County and connect the trails within the North Saskatchewan River Valley. The northeast end of Edmonton lacks a connection to Strathcona County.

The TransCanada Trail is the largest in Canada and connects over 15,000 communities (TransCanada Trail 2021). The TransCanada Trail will connect to this pedestrian bridge through the existing trail systems in Strathcona County. These trail systems and the newly proposed pedestrian bridge over the North Saskatchewan River are outlined in the River Valley Alliance Strategic Plan 2021-2024 (River Valley Alliance 2021). The project is currently in conceptual and preliminary design stages for a 3-span bridge.

The footbridge will be on the bed and banks of the North Saskatchewan River in SE-4-54-23-W4M and NE-33-53-23-W4M. The west side of the bridge will be in the City of Edmonton and the east side of the bridge will be in Strathcona County. The access and abutments of the bridge on the west side are zoned under Bylaw 12800 as "metropolitan recreation" and "agricultural" zones (City of Edmonton 2017a). Work in the river valley on the west side of the bridge will be reviewed under the North Saskatchewan River Valley Area Redevelopment Plan (ARP), Bylaw No. 7188/18889 (City of Edmonton, 2020a).



### 3 PROJECT SCOPE

The footbridge will be a three-span multi-use pedestrian bridge with two instream piers (Figure 2-1). Only the bridge and direct trail connections are currently included in the design scope of work; however, additional amenities are being considered by the owners. The areas adjacent to the bridge may in the future include amenities such as washrooms, additional parking, benches, waste receptacles, picnic tables, barrier-free non-motorized watercraft launch, fishing platforms, and educational signage.

The bridge will have a concrete substructure and a steel superstructure. The project is currently in the preliminary design phase; therefore, many of the details are being developed. The following design criteria apply:

- Clear span width along bridge: 4.5 m.
- Design speed (cyclists): 30 km/hr.
- Horizontal Alignment: minimum horizontal radius: 17 m.
- Vertical Alignment: Longitudinal grade between 0.6-5.0%
- Cross-Slope: minimum 2%.

Extensive recreational trails are in place on both sides of the river. The East Trails System (on the west side of the river but on the eastern edge of the City) is on City of Edmonton land; the trail system starts at 167 Avenue and descends to the riverbank by stairs and a paved pathway. A parking area on the City side has seven parking stalls for access to the East Trails. The County Riverside Nature Trail, part of the Trans-Canada Trail, extends north from Twp Rd 540. The County is considering expanding the trail system in the area and incorporating trails along Twp Rd 540. An undeveloped roundabout parking area along Twp Rd 540 is currently utilized by trail users on the County side of the river. Nearby landowners have requested additional parking solutions to accommodate increased traffic; this will be considered following bridge design and operation, depending on the type of users and transportation choices.

EPCOR operates a utility line (wastewater transmission) that crosses under the river at the footbridge location; this is being considered in bridge design, and the piers will strategically avoid impacts to the utility line. Bridge construction will require a proximity agreement with EPCOR.

## 4 LOCATION ANALYSIS AND JUSTIFICATION

### 4.1 Alternative Location Review

**Q: What other locations were considered for this project, including other river valley and non-river valley locations?**

The RVA determined that a crossing at this approximate location was needed (Figure 4-1). Three potential locations in the river valley were considered for this project (Figure 4-2). Non-river valley locations were not considered because a river crossing is the only viable way to connect trails on opposite sides of the river. The nearest bridge is the Anthony Henday near Clover Bar but it provides limited and unsafe opportunities for recreational/pedestrian/cyclist use.



Figure 4-1 Site Location for Proposed Bridge (Associated Engineering 2021)

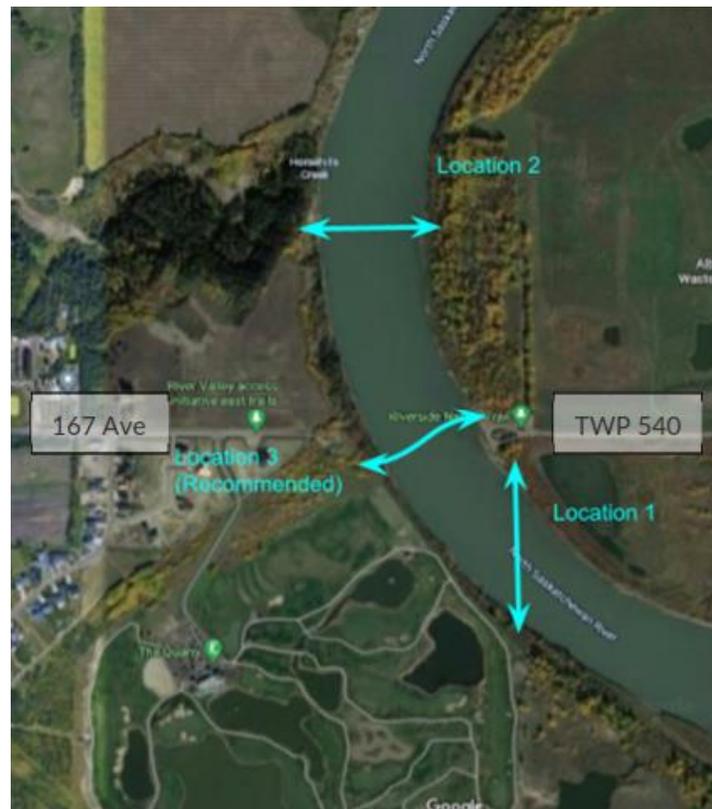


Figure 4-2 Bridge Locations Evaluated in Feasibility Study (Associated Engineering 2021)

Location 1 was not favourable due to increased costs resulting from the substantial span length, close proximity to the Class A fish habitat upstream of the site, and land acquisition required on both sides of the river. Figure 4-3 shows the Class A habitat in relation to the approximate project site (project site marked with an orange star). Furthermore, Location 1 is not feasible because it would involve abutments constructed at/beside wetlands and stormwater ponds.



Figure 4-3 Class A Habitat Near Project Location

Location 2 was not suitable due to active slope failures and land acquisition required on the west side of the river. Construction access for Location 2 is limited and would disrupt environmentally sensitive areas on both sides of the river.

Location 3 was recommended as the most suitable option for a bridge crossing because it requires no property acquisition, provides favourable connectivity to existing river valley trails, avoids high-value fish habitat, and has relatively good access for construction.

Two alignments were considered at Location 3: a straight alignment and an S-shaped curve. The main constraint in determining the most suitable alignment is the EPCOR utility crossing under the river. The S-shaped curve was recommended due to its ability to limit the length of the central span while ensuring that pier locations do not impact the structural integrity of the EPCOR utility tunnel.

## 4.2 River Valley Dependencies

**Q: Could the proposed project reasonably function at a location outside of the North Saskatchewan River Valley Area Redevelopment Plan boundary?**

The proposed footbridge could not be located outside of the North Saskatchewan River Valley Area Redevelopment Plan boundary because the purpose of the bridge is to connect the two sides of the river so that trail users can more easily enjoy a larger range of local trails.

**Q: Is the project dependent on either the river valley and ravine location or the users of the park system?**

Yes. This project is dependent on the river valley location. Several parameters were assessed as part of the Feasibility Study (Associated Engineering, 2020) and Concept Planning Study (Associated Engineering 2021). The current land use and existing utilities, along with environmental, geotechnical, and hydrotechnical information influenced the potential locations for a footbridge. The well-used trails will benefit by connecting both sides of the river valley from Edmonton to Strathcona County.

## 4.3 Overview of Bylaws/Plans/Policies

The following bylaws, plans, and policies apply to the development of the proposed Edmonton/Strathcona County Footbridge.

### 4.3.1 North Saskatchewan River Valley Area Redevelopment Plan, Bylaw 18889 (Amendment to 7188)

Bylaw 7188/18889 protects the ecological value of the North Saskatchewan River Valley and regulates works conducted within it (City of Edmonton 2020a). The Plan is “based on the fundamental philosophy that a continuous open system, interspersed with recreational activity nodes, can meet the diverse demands for recreation in an urban setting and yet protect the river valley environment.” It is a policy of this Plan that major public facilities shall not be constructed or expanded unless their location within the river valley is deemed essential and approved by City Council (this report). The major goals and the project-specific considerations are summarized in Table 4-1.

**Table 4-1 Major Goals of Bylaw 7188/18889**

Goal	Project Specific Considerations
To ensure the preservation of the natural character and environment of the North Saskatchewan River Valley and Ravine System.	Although there would be some disturbance of vegetation and aquatic life during bridge construction, disturbance will be limited as much as possible. The EIA outlines several measures to mitigate adverse environmental effects and steps to preserve or restore the natural character and environment during construction. After construction, the effects on the environment are anticipated to be minimal. The bridge with the shortest span was recommended, in part to limit the disturbance and natural character of the area.
To establish a public metropolitan recreation area.	The footbridge would help connect communities on either side of the river and establish another way for people to visit the communities on the opposite side of the river.

Goal	Project Specific Considerations
To provide the opportunity for recreational, aesthetic, and cultural activities in the Plan area for the benefit of Edmontonians and visitors of Edmonton.	The project would integrate existing trails on either side of the river, thus expanding the length of trails available to Edmontonians and visitors of Edmonton. Barrier-free design considerations could help more people access the river valley. Recreational activities may include walking, running, cycling and rollerblading. There will be more opportunity for cultural activities and inclusion of more people after the bridge is installed.
To ensure the retention and enhancement of the Rosedale and Cloverdale communities in the River Valley.	Not applicable.
To consider environmental factors when planning for use in the River Valley.	The EIA details several mitigation measures for construction of the footbridge, including a naturalized bench under the bridge for wildlife, avoiding Class A habitat disturbance, and limiting vegetation removal.
To control the expansion and construction of major facilities and minimize the adverse impacts of major facilities on the natural environment and park development.	The footbridge has been designed with the minimal footprint and piers possible to reduce disturbance to aquatic life and wildlife. Additional features such as waste receptacles and washrooms are being considered to help reduce adverse impacts.

### 4.3.2 Drainage Bylaw, Bylaw 18093

Bylaw 18093 regulates surface drainage on public and private land and fosters the well-being of the environment by prohibiting the release of dangerous or hazardous materials into the sewerage system (City of Edmonton 2021).

Releases of water into storm sewers and watercourses must adhere to the requirements for restricted wastes in Schedule B of this Bylaw. Mitigation measures, including erosion and sediment controls, are to be incorporated into the ECO Plan to maintain compliance with this Bylaw during the construction phase of the project.

**Project Specific:** During construction, mitigation measures must be in place to prevent releases of prohibited wastes and control releases of restricted wastes into the sewerage system and/or watercourses in accordance with this Bylaw.

### 4.3.3 Corporate Tree Management, Policy C456C

Edmonton’s tree canopy, including all ornamental trees and natural treed areas on City property, will be procured, maintained, protected, and preserved by the City. Projects must take necessary steps to protect and preserve City trees impacted by construction activities (City of Edmonton 2020b).

**Project Specific:** The removal of trees will be minimized wherever possible; however, the project will require the removal of trees on the west ravine slope, primarily for construction of the abutments. Works are not anticipated to be within 5 m of any ornamental tree. Where impacts to City Trees or Natural Stands on City-owned property are required, a Tree Preservation Plan is required under the Corporate Tree Management Policy (C456) and must follow the Tree Preservation Guidelines, providing protective measures for natural tree stands within 10 m of the project location.

Vegetation clearing will minimally reduce the tree canopy cover within City-owned lands. The City's Urban Forestry Department will be involved throughout design to review construction plans and tree protection. The contract and tender packages' "special provisions" will include requirements for contractors to comply with the Tree Preservation Guidelines and with the Corporate Tree Management Policy. Any trees marked for removal to accommodate project work will be coordinated through Urban Forestry, including a monetary fee for removal and compensation.

#### 4.3.4 Community Standards Bylaw, Bylaw 14600

The Community Standards Bylaw 14600 (City of Edmonton 2020b) regulates noise within the City. Under this Bylaw, construction is restricted to between 7 a.m. and 9 p.m. other than Sundays and holidays when construction is restricted to a timeframe between 9 a.m. and 7 p.m.

**Project Specific:** Construction will be planned within the timeframes described in this Bylaw.

#### 4.3.5 Parkland Bylaw, Bylaw 2202

This Bylaw regulates the conduct and activities of people on Parkland in order to promote the safe, enjoyable and reasonable use of such property and to protect and preserve natural ecosystems for the benefit of all citizens of the City.

**Project Specific:** Access onto Parkland will be required for construction. Access within areas covered under the Parkland Bylaw will require a Parkland Access Permit.

#### 4.3.6 Natural Area Systems Policy C531

This policy is implemented to safeguard the City of Edmonton's natural capital and associated ecological services through conserving, protection, and restoring our natural uplands, wetlands, water bodies, and riparian areas as an integrated and connected system throughout the city (City of Edmonton 2007). The purpose of this plan is to:

- Enhance and sustain the quality of life for Edmontonians;
- Conserve, protect, and restore biodiversity throughout Edmonton, recognizing the urban context that we work within;
- Ensure consistent, uniform, and equitable conservation practices that are based on the best available science;
- Direct administration to:
  - Plan our city so that ecological systems will function effectively at neighborhood, city, and regional scales;
  - Conserve natural area systems in discharging their duties; and
  - Require ecological information to support planning and development applications.
- Conserve, protect, and restore natural area systems through the physical planning and development process; according to the provisions of municipal, provincial, and federal policy and legislation;
- Encourage voluntary conservation and corporate and private sponsorship of natural areas;
- Promote the awareness and participation of landowners, the general public, and non-government organizations in conserving, preserving, and restoring natural areas; and
- Incorporate the local ecological knowledge of Edmonton's citizens and organizations in our decisions.

**Project Specific:** The project will enhance the quality of life for Edmontonians by providing greater access to natural areas in the river valley. Conservation and protection of natural areas were considered during the project location planning. The bridge location recommended in the Concept Plan (Associated Engineering 2021) was based on the smallest footprint and favourable environmental, economic, and social considerations compared to the other locations considered. The bridge design will be optimized with the minimum number of instream piers (2 anticipated).

#### 4.3.7 Breathe: Edmonton's Green Network Strategy

Edmonton's green network is an integrated system of open spaces, municipal parks, and connects areas that provide value to residents and the environment (City of Edmonton 2017b). Breathe: Edmonton's Green Network Strategy is a transformative strategy, meant to grow and adapt as the City grows, to ensure that neighborhoods are supported by a network of open space for the next 30 years. It sets the direction for sustainable care and expansion of our open spaces and how to preserve the integrity of our open space environment in the City.

**Project Specific:** A new footbridge between northeast Edmonton and Strathcona County would improve the connection of open spaces and municipal parks. It not only provides a more integrated trail system for Edmontonians but also for citizens in Strathcona County.

#### 4.3.8 Ribbon of Green SW + NE

The Ribbon of Green provides strategic direction to guide the protection and responsible use of Edmonton's River Valley and Ravine System over the next 20 years (City of Edmonton 2020d). Previous versions of this document were developed in 1990 and 1992 and are now being consolidated into an updated version that can be used moving forward. Throughout these revisions, the goal remains the same: to conserve the natural features of the River Valley (wildlife, vegetation, and cultural resources) for future generations to prevent exploitation, destruction, or neglect. The vision for Ribbon of Green is:

"The North Saskatchewan River Valley and Ravine System is a protected, connected landscape that supports ecological resilience and promotes healthy living through opportunities for recreation, active transportation, learning, and gathering in the tranquility of nature."

#### **Project Specific:**

The project area is a key wildlife corridor with naturally vegetated areas that provides habitat for many species. Wildlife Passage Engineering Design Guidelines (City of Edmonton 2010a) are being incorporated into bridge designs. A winter track survey of the riverbanks was undertaken in winter 2021 (Associated Environmental 2021b). No large mammals were detected during the snow tracking survey; however, the footbridge is being designed to accommodate the passage of large terrestrial wildlife through the river valley corridor. This will include an openness ratio greater than or equal to 1.5, a minimum of 10 m of terrestrial bank from the ordinary high-water level, a naturalized bench for wildlife passage (3.1 x 3.1 m). The current concept plans indicate openness ratios of 15 and 13 on the east and west sides of the bridge, respectively. Additionally, ecologically sensitive periods will be avoided as much as possible during construction. Tree and other vegetation removal will be limited when possible, and compensation will be made where applicable.

By connecting the trail systems on both sides of the river valley, the footbridge also supports the vision of healthy living through recreation and gathering in nature.

### 4.3.9 ConnectEdmonton: Edmonton's Strategic Plan 2019-2028

This Strategic Plan provides the collective vision for a future Edmonton and provides focus as the city grows (City of Edmonton 2019). The four strategic goals which focus on transformational change required in the next ten years include:

1. **Healthy City** – Edmonton is a neighborly city with community and personal wellness that embodies and promotes equity for all Edmontonians
2. **Urban Places** – Edmonton neighborhoods are more vibrant as density increases, where people and businesses thrive and where housing and mobility options are plentiful.
3. **Regional Prosperity** – Edmonton grows prosperity for our Metro Region by driving innovation, competitiveness and relevance for our businesses at the local and global levels.
4. **Climate Resilience** – Edmonton is a city transitioning to a low-carbon future, has clean air and water, and is adapting to a changing climate.

**Project Specific:** The project aligns with all four of the strategic goals.

1. **Healthy City** – a new footbridge in the river valley provides numerous recreational and personal wellness opportunities for Edmontonians.
2. **Urban Places and Regional Prosperity** – the project is located near the Marquis and Evergreen neighbourhoods. The development concept in the Marquis Neighbourhood Structure Plan includes residential, commercial, office, institutional, civic, parks and open space (City of Edmonton 2018). By improving the trail connections, it may bring more people to the nearby neighbourhoods and existing golf courses.
3. **Climate resilience** – the recommended bridge location uses the shortest span resulting in less materials and a lower carbon footprint. The design team is cognizant of the east side which is on the inside bend of the river in a lower floodplain area. The bridge will be designed for 1:100 year flood levels to accommodate various potential river flow conditions in the future. Additionally, by connecting the trails on either side of the river, there is greater opportunity for people to visit Edmonton and Strathcona County using low-carbon travel methods.

### 4.3.10 The Way We Green, Edmonton's Environmental Strategic Plan

The City of Edmonton protects, preserves, and improves the North Saskatchewan River Valley and Ravine System as an accessible year-round place for recreation and activity for people of all ages (City of Edmonton 2011).

**Project Specific:** The project directly improves the connections within the river valley and makes it more accessible for recreation and activity year-round.

### 4.3.11 The Way We Live, Edmonton's People Plan

The City of Edmonton provides for the well-being of its citizens through outstanding parks, natural, green, and public spaces (City of Edmonton 2010b).

**Project Specific:** Improving the connectivity of the trail system helps improve the natural, green, and public spaces on both the Edmonton and Strathcona County sides of the North Saskatchewan River. Depending on the owner's priorities, amenities such as washrooms, waste receptacles, benches, educational signage, and parking may be included as part of the project.

### 4.3.12 For the Love of Winter, WinterCity Strategy Implementation Plan

A strategy and implementation plan for transforming Edmonton into a world-leading winter city by focusing on four Winter Pillars – life, design, economy, and story (City of Edmonton 2013).

**Project Specific:** The project meets all four of the winter pillars including the following goals:

- Make It Easier to Go Play Outside: Provide More Opportunities for Outdoor Activity;
- Improve Winter Transportation for Pedestrians, Cyclists and Public Transit Users;
- Incorporate Urban Design Elements for Winter Fun, Activity, Beauty and Interest;
- Design Our Communities for Winter Safety and Comfort;
- Increase the Capacity and Sustainability of Edmonton’s Winter Festivals;
- Enhance the Social and Economic Vibrancy of Our Streets and Public Places;
- Celebrate the Season and Embrace Daily Living in a Cold Climate; and
- Kickstart and Lead Implementation of Edmonton’s Winter City Strategy: Apply a ‘Winter Lens’ to Our City.

## 5 CONSTRAINTS ANALYSIS

### 5.1 Financial Constraints

**Q: What are the financial constraints that limit the feasibility of locating the project outside of the river valley?**

Given that this is a joint effort between the City of Edmonton, Strathcona County, and the River Valley Alliance, it is unlikely to get funding if the project was not at the recommended location between northeast Edmonton and Strathcona County because this specific location is one of the goals of the RVA. The Strategic Plan states that the planned expenditure for the footbridge by the RVA is \$16 million and is subject to 1/3 funding approval by municipalities (RVA 2021).

The Concept Planning Study assessed three different locations for the footbridge, all within the river valley between Edmonton and Strathcona County. The final design has not been decided upon; however, cost estimates for a preferred option have been identified based on the location in the river valley (Table 5-1). The preferred Sustainable Urban Integration (SUI) option was developed from an evaluation of the three options initially developed to identify open space and recreational upgrades. This recommended strategy has been influenced by initial public, stakeholder, and Indigenous engagement, as well as ongoing feedback from the project team. This recommended concept plan will continue to be refined and developed in the preliminary design phase (Associated Engineering 2021).

Table 5-1 Concept Level Cost Estimate: Total Project (Associated Engineering 2021)

Bridge	Cost-Estimate	
Bridge Structure	\$17,700,000	
Bridge Lighting	\$400,000	
Lookouts	\$1,600,000	
<b>Total Bridge</b>	<b>\$19,700,000</b>	
SUI: Parks, Open Space and Recreation (Preferred Option)	Proposed Components	Proposed and Potential (Deletable) Components
West Riverside (City of Edmonton)	\$620,000	\$740,000
East Riverside (Strathcona County)	\$622,000	\$1,207,000
<b>Total SUI</b>	<b>\$1,242,000</b>	<b>\$1,947,000</b>
<b>Project Total</b>	<b>\$20,942,000</b>	<b>\$21,647,000</b>
Contingency (30%)	\$6,282,600	\$6,494,100
<b>Estimated Total (including Contingency)</b>	<b>\$27,224,600</b>	<b>\$28,141,100</b>

## 5.2 Social Constraints

**Q: What are the social constraints which limit the feasibility of locating the project outside of the river valley?**

The North Saskatchewan River Valley is a very attractive location for Edmontonians, people in Strathcona County, and outside visitors. It is a well-known natural attraction for people to recreate and enjoy nature in various ways. Currently, the river valley has very high usage and naturally draws people. If the footbridge were placed somewhere outside of the Edmonton River Valley, the usage would likely be reduced. By improving the connectivity of the trail system, it increases the network and adds even more spaces for local people, especially people with limited disposable income, to access. The physical recreation connection between Edmonton and Strathcona County will encourage greater community connection. Furthermore, mental health benefits may result from providing both communities with more locally accessible natural space. Exposure to nature helps reduce blood pressure, heart rate, muscle tension, and stress hormones (River Valley Alliance 2021). Author Richard Louv has linked the rise in obesity, attention disorders, and depression to the lack of nature in children's lives today (Richard Louv 2005). Nature deficit disorder is a disconnection from one's natural surroundings (North Vancouver Recreation & Culture 2017). Youth are recommended to spend 60 minutes per day doing physical activity, and it is estimated that only 7% of Canadian children meet this. Spending time in nature encourages physical activity, which in turn results in better motor skills, stronger immune systems, and a decreased risk of chronic disease.

Many people use the North Saskatchewan River for various forms of navigation, including rescue boats and recreational watercraft. The navigation requirements were carefully considered, and a minimum navigable clearance of 3.0 m air draft was recommended (Associated Engineering 2021). The current bridge design would have a navigable clearance of 5.83 m.

The project will be a key link in the River Valley Alliance and Partners – Capital Region River Valley Park system (Big Valley Area), offering a major regional connection between the City and County, and to other surrounding communities (e.g., Fort Saskatchewan).

### **5.3 Environmental Constraints**

**Q: What are the environmental constraints which limit the feasibility of locating the project outside of the river valley?**

The North Saskatchewan River Valley already provides over 70 km of connected trails where people can appreciate the natural environment. Although there will be some impacts to the natural environment during construction, the EIA includes mitigation measures to limit the impacts to fish and wildlife during construction. Following bridge construction, operational environmental impacts should be minor.

### **5.4 Institutional Constraints**

**Q: What are the institutional constraints which limit the feasibility of locating the project outside of the river valley?**

Adding connectivity to an already highly used existing trail network is much more economical and efficient than building a footbridge at a lesser-known site. Adding a footbridge to connect northeastern Edmonton with Strathcona County will only improve the value of the current trail network.

## 6 CONCLUSION

After assessing the financial, social, environmental, and institutional constraints, **the proposed project would have an overall benefit to the communities in Edmonton and Strathcona County and other potential visitors of the North Saskatchewan River Valley.** The project aligns with the goals and policies of the North Saskatchewan River Valley Area Redevelopment Plan, Bylaw 18889 (previously 7188), the River Valley Alliance's Plan of Action, as well as other City of Edmonton plans and policies. It will improve access to the river valley, connect people with nature, and provide an opportunity to celebrate the area's ecological, recreational, and cultural value.

An EIA was completed for the project to review the potential environmental sensitivities and outline mitigation measures and best management practices to be implemented during construction of the project. Construction will not commence until the Edmonton City Council has approved the SLS and EIA as per the direction provided in the North Saskatchewan River Valley Area Redevelopment Plan.

## CLOSURE

This report was prepared for the City of Edmonton for approval under the North Saskatchewan River Valley Area Redevelopment Plan.

The services provided by Associated Environmental Consultants Inc. in the preparation of this report were conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions. No other warranty expressed or implied is made.

Respectfully submitted,  
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PERMIT STAMP



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