



100 Street Pedestrian Bridge

Concept Design |
What We Decided Report

SHARE YOUR VOICE
SHAPE OUR CITY

Edmonton

Project Introduction

The 100 Street Pedestrian Bridge will connect the energy of downtown Edmonton with the vibrancy of the river valley! This new iconic bridge will become the latest addition to Edmonton's skyline and create a continuous circuit along the edge of downtown.

The City of Edmonton is in the process of executing the Capital City Downtown Plan and the Downtown Public Places Plan. Identified within these plans is the need and desire to enhance the river valley edge, making it accessible and providing a safe passageway over McDougall Hill Road for pedestrians and cyclists between McDougall Hill Lookout, MacDonald Drive Promenade, and the Funicular.

For more information about the project and the selected option, visit edmonton.ca/100StreetPedBridge.

Project Objectives

- + To provide a critical connection
- + To become a signature destination
- + To promote activation and placemaking
- + To maximize user experience and aesthetics

Report Purpose

This report shares how the City of Edmonton arrived at a preferred concept design for the 100 Street Pedestrian Bridge that will advance to preliminary design. It describes when and how the City used policy and program information, public engagement input and technical requirements to make project decisions. The report also illustrates how the project decisions align with the City of Edmonton Policies and Programs.

Making Project Decisions

The City makes decisions using a combination of policy and program information, public engagement input, and technical requirements. This process helps to ensure that the decisions we make are fiscally responsible, align with best practices, consider the existing infrastructure and activities in the neighbourhood, and result in the best outcomes for our city.

Alignment with Policies & Programs

This bridge was strategically identified in the following City plans:

- + Capital City Downtown Plan
- + Capital City Downtown Community Revitalization Levy Plan
- + Bike Plan
- + Downtown Public Places Plan

The Downtown Public Places Plan calls for space improvements to create a greener, healthier and more family friendly downtown. It also provides recommendations for a network of interconnected spaces that enhance downtown's vibrancy and accessibility.

Public Engagement Input

The Concept Design phase of engagement included:

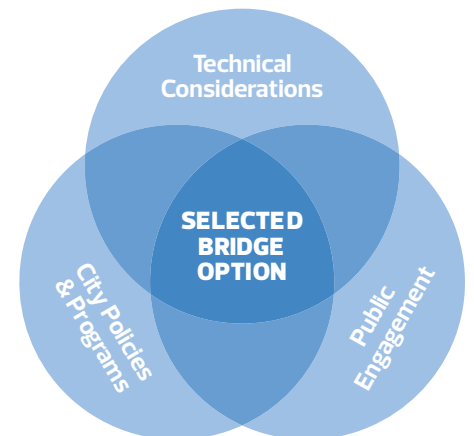
- + Stakeholder engagement to identify initial issues and opportunities
- + Public engagement (with 900 survey participants) to understand community priorities

See the *Concept Design What We Heard Report* for more information about the public engagement.

Technical Considerations

As a highly technical project, engineering factors were the primary driving forces within the decision-making process, including:

- + Bridge alignment and position
- + Foundation placement (to avoid the steep slope and underground utilities)
- + Accessibility for all ages and abilities
- + Crime prevention through environmental design (CPTED)
- + Complete Streets Design and Construction Standards



Selected Option: Suspended Bridge

The Suspended Bridge has a mast with tension cables that uniquely wrap under the south side of the bridge.

Decision Rationale

The Suspended Bridge was selected as the recommended concept, as it responds to the unique site conditions and project priorities most effectively:

- + Unique structure that extends further over the river valley creates a statement experience as a signature destination
- + One-sided cables provide unobstructed views of the river valley on the bridge
- + Asymmetrical suspension bridge design reduces disruption to the City skyline and views of downtown
- + "Underslung" cable design creates a structure that minimizes its touch points on the river valley slopes
- + Gentle pathway curve will help the bridge feel comfortable and safe

The table to the right provides more information about the decision inputs.

Next Steps

Preliminary Design is expected to begin Summer 2022. Construction of the 100 Street Pedestrian Bridge is pending funding approval during the 2023-2026 budget deliberations.

CITY POLICIES & PROGRAMS

Alignment with City Plans

Why this bridge? While all three bridge options were designed in alignment with City plans, the Suspended Bridge provides a new connection with the most prominent lookout experience and best supports the goal of a signature downtown destination. As a point of interest, it has the most unique views on the bridge with the least impact on obstructing views from MacDonald Drive.

PUBLIC ENGAGEMENT

Important Factors

Why this bridge? The most important factors indicated by respondents was for the bridge to be easily accessible for all users, provide scenic views, and positively impact the skyline. This input was used to validate that the selected concept was in alignment with the public's values and priorities.

Concept Options

Why this bridge? Participants indicated a high level of agreement with all three bridge options. This input was used in the evaluation process to inform how desirable/acceptable each option is.

The Suspended Bridge was determined to have the greatest alignment with the most important factors noted by the public (accessible for all users, scenic views, and positive impact to the skyline).

TECHNICAL CONSIDERATIONS

Design Features

Why this bridge? The Suspended Bridge will eliminate the need for structural support on the south side of the road, creating a structure that is visually striking yet minimally disruptive to the river valley.

This design supports the project objectives in a number of ways, including:

- + **Aesthetic:** The most unique of the design options, creating a new signature experience for the city of Edmonton.
- + **Attraction/Destination:** Design is more open to the river valley, bringing visitors further out above the slope for an immersive viewpoint experience.
- + **Environmental Sensitivity:** Expected to have less impact on the environment, as the majority of the structure is to be suspended over the river valley.
- + **Urban Fit:** The slender build has the best fit along the slope and is the most transparent against the downtown backdrop with the minimal use of cables, while still creating a notable addition to the downtown skyline.
- + **Structural Efficiency:** Responds to the complex site with the most structurally efficient solution to best achieve the project's performance objectives.

Evaluation Process

Why this bridge? Evaluation criteria provided a measurable process to select a preferred bridge option and to ensure alignment with the project objectives and public priorities. Each option was evaluated to consider the expected performance, including financial, environment, user benefits, community sustainability, economy, public input, and deliverability. The Suspended Bridge best met these criteria.

