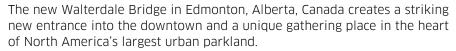


WATCH: Walterdale Bridge - The Design Story <a href="https://youtu.be/EFiz3Lw1Bxl">https://youtu.be/EFiz3Lw1Bxl</a>



The bridge is a gracious, single span, twin through-arch steel structure, spanning 206 m (greater than the length of two football fields) from bank to bank across the North Saskatchewan River in the heart of Edmonton. It carries three lanes of northbound vehicle traffic, a sidewalk to the west of the roadway and a separated footbridge or shared-use path for pedestrians and cyclists to the east. The project also included the realignment of two major roadways to connect to the new river bridge alignment. The result is a signature structure that blends with its natural setting and creates a landmark gateway to the city's downtown.

The new bridge creates a public space on the river at a pivotal location where the duality of the city and nature are experienced and celebrated. The approaches to the bridge on the north and south banks reinforces the signature quality of the bridge through evocative land form and planting. Though it is a bridge for both cars and pedestrians, the experience of each mode is separate and enjoyable in its own way.

The curved shared use path on the downstream, more pastoral, side of the bridge arcs away from traffic, where pedestrians and cyclists feel closer to nature. The path narrows at its middle and widens as it gets closer to both river banks. The entrances to the shared use path include a wooden boardwalk adding warmth and connection to its river valley setting. Along



the west side of the shared use path, a continuous high-back bench softens the prevailing winds and noise from traffic. The pedestrian experience is welcoming and enjoyable. There are places on the bridge and banks to linger and watch the river go by.

For cars, the approach to the bridge is dramatic. As cars approach, there is a wonderful procession down the hill through the river valley's forest, then a dramatic reveal of the iconic bridge and Edmonton's downtown skyline. The arches announce that you're going somewhere special. They draw you in and frame views of the river valley and the downtown.

The bridge is designed to last for at least 100 years and was the most complex infrastructure project ever completed in Edmonton. Not only is it an incredible feat of engineering to design, the construction process was challenging as well, requiring close collaboration between designers, builders, and the City of Edmonton.

This is so much more than a transportation project. Seamless integration between engineering, architecture and the public realm is considered at all levels of scale, from the overall global level of the structure and roads down to the pedestrian experience. The people of Edmonton have embraced it as a destination gathering place, a highlight in their daily commute, and a backdrop for meaningful moments like engagements and wedding photos. It has quickly become a signature part of Edmonton's identity and will continue to define the city for decades to come.

#### **ELEVATION DIAGRAM AND PROJECT FACTS** The bridge arches span 206m and are 56m tall. That's two football playing fields long, and about as tall as the High Level Bridge. 206m 12m 12m There is enough space inside the arches for maintenance workers to walk all the way from one end to the other. 43m Trail users no longer need to cross The bridge deck is supported by 32 hangers. traffic to continue along the river It used 65 tonnes of reinforcing steel and valley trails in any direction. 1600m3 of concrete. DELTA PIER TO SUPPORT SHARED USE PATH 13m HIGH WATER LEVEL AVERAGE WATER LEVEL RIPRAP SLOPE PROTECTION EXISTING RIVERBED THRUST BLOCK FOUNDATION During construction of the thrust blocks, enough material was excavated from the cofferdams (temporary watertight Large thrust blocks provide a foundation enclosures) to fill two Olympic-sized for the arches, which carry the bridge load. swimming pools. Each thrust block is made of about 600m<sup>3</sup> The shared use path bridge is designed of concrete and are as deep as a six-storey for people to enjoy crossing the river underground parking garage. away from traffic. The bench along the side has a high back that blocks prevailing winds and traffic noise.

### **CONSULTANT TEAMS AND THEIR SCOPES**

#### DIALOG

Bridge design and structural engineering team leader, architecture, landscape architecture and electrical design

# ISL Engineering and Land Services Ltd.

Prime consultant, project management, roadway design

#### **COWI North America Ltd.**

Bridge design sub-consultant

## Al-Terra Engineering Ltd.

Roadway design sub-consultant

### Thurber Engineering Ltd.

Geotechnical and materials testing

### **Spencer Environmental Services**

Environmental assessment and permitting

# Turtle Island Cultural Resource Management

Historical resources impact assessment and aboriginal consultation

# **HLB Lighting Design**

Lighting design

For media inquiries, please contact: Gillian Thomson, DIALOG Communications Specialist (Edmonton) | gthomson@dialogdesign.ca | 780-917-4697

