WALTERDALE BRIDGE REPLACEMENT PROJECT

2016 YEARBOOK

SECOND ARCH LIFT - APRIL 2016

This year the Walterdale Bridge Replacement Project reached its most spectacular milestone: lifting the massive arches into place with two complex manoeuvres in January and April. The gleaming white arches are an eye-catching addition to Edmonton's river valley.

The remainder of 2016 was spent installing the bridge deck and cable hangers and beginning concrete deck work.

The Walterdale Bridge is a complex and ambitious project that requires careful planning and attention to detail. Due to the time consuming nature of this work, the bridge opening has been delayed until 2017. Although it is disappointing, the delay means that the $155 million project will be completed to the City's high standards, and at no additional cost to the taxpayer.

edmonton.ca/walterdalebridge

Edmonton

2016 CONSTRUCTION TIMELINE

FIRST ARCH LIFT

SECOND ARCH LIFT

JANUARY-MARCH

The first of two arch lifts took place January 19, with the 950 tonne central arch raised 15 m over six hours using large hydraulic jacks. The arch was connected to steel pieces already in place on temporary towers located on the river berms.

The steel for the shared-use path arrived from Korea at the end of March.

APRIL-JUNE

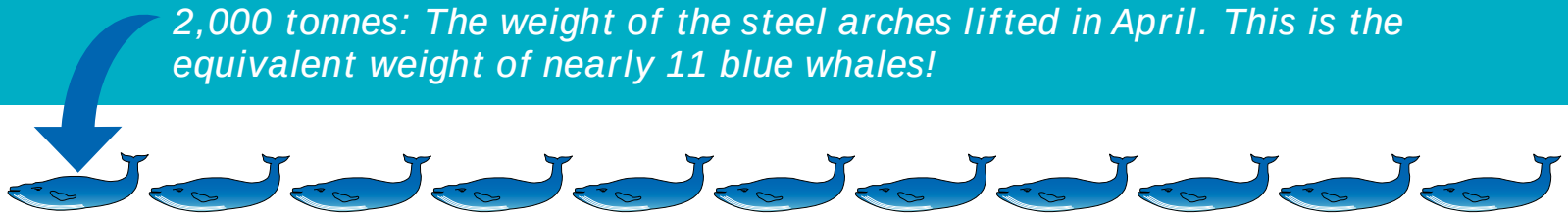
The second arch lift took place on April 12. The lift took eight hours and was so finely detailed that the new arch segments had to line up to the existing structure within 15—25 mm. The 2,000 tonne arch segment was lifted 20 m and attached to the permanent arch structures built into the river banks. The arches attained their full 54 m height and final span of 206 m from bank to bank.

With the arches in place, crews began welding and bolting the final arch structure into place.

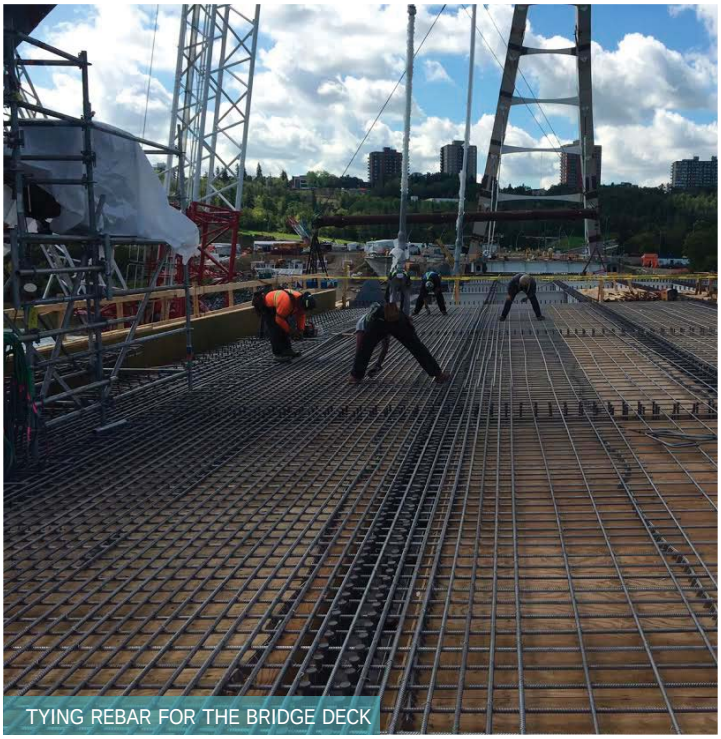
BY THE NUMBERS

- **1,600 m^3: amount of concrete used for the deck**
- **32: bridge hangers**
- **14: shared-use path hangers**
- **365,000 kg: reinforcing steel (rebar) used for the deck**

2,000 tonnes: The weight of the steel arches lifted in April. This is the equivalent weight of nearly 11 blue whales!



BRIDGE DECK CONSTRUCTION



TYING REBAR FOR THE BRIDGE DECK

JULY-SEPTEMBER

Assembly of the shared-use path began in the City's west end. The bridge design will be 4.2 m at the centre and will widen to 9 m at each end. The path will be made up of 25 segments that will be trucked to the Walterdale site in 11 segments to be installed.

Construction began on the bridge deck in July with the installation of deck's edge support girders. These were followed by steel floor beams and stringers. The support steel was attached to 32 steel hangers lifted into place by massive cranes. Fourteen additional hangers were installed to support the shared-use path when it arrives.

OCTOBER-DECEMBER

Once the deck support steel was completed, crews began concrete deck form work, installing approximately 400,000 kg of reinforcing steel (or rebar).

The concrete deck pours were completed in October; however the final deck waterproofing and paving were not completed due to winter weather.

The final deck will use approximately 1,600 m^3 of concrete.

Stringer: A bridge girder that runs lengthwise between the floor beams to support the bridge deck.

Hanger: A steel cable from which the deck is suspended, transferring the weight of the deck to the arch.

COMING UP IN 2017

- Installation of the shared-use path.
- Final deck waterproofing and paving.
- Utility relocation.
- Road tie-ins.
- Landscaping.
- Demolition of the old Walterdale Bridge.

INSTALLATION OF CABLE HANGERS

INDIGENOUS CONSULTATION

The City of Edmonton continues to work closely with the Indigenous Relations Office to keep First Nations and Métis communities up-to-date on the latest project developments. The project team has complied with Indigenous consultation requirements for *Historical Resource Act* clearance as set out by Alberta Culture and Tourism.

Indigenous groups were invited to carry out ceremony prior to construction, and continue to monitor pertinent excavation and in-river construction activities.