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Acrow Restores Traffic Flow After Bridge Collapse

Accelerated construction aids in restoration after over-height truck strikes bridge

An over-height tractor-trailer combination hit the I-5 bridge over the Skagit River in Burlington, Washington on May 23, 2013. The impact caused an entire 160-footlong (48.77m) segment to plunge into the water, along with the truck and two cars. Fortunately there was no loss of life.

The financial impact caused by the loss of a vital crossing illustrated the need for a swift solution. The Washington State Department of Transportation (WSDOT) awarded Atkinson Construction the emergency contract, and Acrow became part of the team to engineer a rapid solution for the bridge section. Two 160-foot-long (48.77m) by 24-foot-wide (7.35m) Acrow bridges were designed to be installed using a full cantilever launch, as a crane-assisted launch would have created an obstruction during the placement of the bridge. The Acrow bridges were formally opened just 24 days after the collapse. They remained in place for four months, restoring traffic flow, while a permanent bridge was constructed.

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Specifications

Bridge length:

Acrow supplied two 160' (48.77m) clear spans.

Roadway width:

The Acrow bridge has a 24' (7.35m) clear travel way between the guide rails.

Guide rails:

A test level 4 guide rail system was supplied by Acrow for the bridge.

Deck surface:

Asphalt overlay

Bridge erection method:

Full cantilever launch

Design load:

The bridge was designed in accordance with AASHTO LRFD bridge design specifications second edition to HS25 vehicular.

Standard Acrow bridge finish:

- All major components galvanized to AASHTO M111-ASTM A123
- All bolts are hot-dip galvanized
- All pins are electrogalvanized

Standard Acrow bridge specification:

- (A) Panel chords, diagonals, verticals, reinforcing chords, rakers to AASHTO M223 GD 65
- (B) Raker braces, transoms, top chord braces, swaybraces, transom braces, diagonal chord braces, decking to AASHTO M223 GD 50
- (C) Panel pins to ASTM A 193 GD B7
- (D) Bolts to AASHTO M164M A325

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