



## Bridges

## Reference Details:

**Owner** The Jacques Cartier and Champlain Bridges Inc. (JCCBI), Longueuil, Québec, Canada +++

**Construction Time** 2001 - autumn 2002

+++ **Design Consultant and General**

**Contractor** SNC-Lavallin Montacier Demathieu & Bard (SMDB), Longueuil, Québec, Canada +++

**Subcontractor** ACIER AGF Inc., Longueuil, Québec, Canada, SNC-Lavallin Montacier Demathieu & Bard (SMDB), Longueuil, Québec, Canada

**DSI Services** Supply of over 6,300 anchorages for 4,5 and 7 strands 0.6" with accessories, 40,000 m flat plastic ducts, 45,000 m round steel ducts; Rental of stressing equipment and Technical assistance.

**DYWIDAG Post-Tensioning System for repairs and improvements to a bridge deck****New prestressed concrete deck slabs for the Jacques Cartier Bridge, Montréal, Québec, Canada**

The Jacques Cartier Bridge was built in 1925 and spans over the St. Lawrence River and the navigation channel towards St. Helen's Island. Including 40 approach bridge spans the overall length of the structure is 3.4 km. After more than 78 years the existing deck had to be replaced by new precast concrete segments. The entire work had to be carried out at night after the bridge had been closed, since it was necessary to keep the bridge open for traffic during daytime. The strict overall schedule for the necessary construction and post-tensioning work presented a special challenge. DSI's services included the provision of the required material "just in time" and execution of the necessary post-tensioning work on the precast concrete segments.

The services included the supply of epoxy-coated anchorages with flat plastic ducts. The newly built superstructure segments had very thin plates and ribs incorporated. For this reason, the superstructure segments had to be handled very carefully, in order to guarantee best positioning and tensioning of the tendons. In 1,600 precast concrete plates (7.5 m x 6.0 m) DYWIDAG Flat Anchorages 4 x 0.6" were used in the plates and 5/7 x 0.6" multiplane anchorages were used in the ribs.

The project was successfully completed in autumn 2002.