BendTec
FABRICATION & BENDING

# NORTH AVENUE BRIDGE

Architectural Structure > Chicago, Illinois

# NORTH AVENUE BRIDGE

The 430-foot crossing was built to replace Chicago's historic, but aging North Avenue Bridge. The new bridge features an unusual hybrid cable-stay/suspension design.

BendTec fabricated the bridge's four sets of steel anchor pylons, each 45 feet tall and weighing 95,000 lbs. The pylons rest on 10 smaller micropiles, extending into the bedrock. From the pylons, 24 cable-stays support the approach spans and the ends of the center span. A suspension cable supports the center of the main span.

Designed for light to pass through at night, a decorative center section was fabricated and installed between the structural oval weldments in each pylon.

The pylon tower elliptical pieces were formed in a large press brake. Consistency in their shape was critical to making them fit together.

The finished piece, awaiting shipping, weighed approximately 95,000 lbs.

Stay cables secure the pylon towers to the deck.

Decorative stainless steel cones fit into the concrete approach walls at each corner.

Side plates were created to hold the bridge lights.

The combination suspension and cable-stay bridge was developed to meet its site parameters, which is too short for a pure suspension bridge and lacking the height clearance for a pure cable-stay design.

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