ACROW

Acrow Bridge Provides Safe Passage in the Himalaya

Major floods destroyed crossing on critical route to remote temple

In June 2013, rains centered on the north Indian State of Uttarakhand caused devastating floods and landslides. In addition to a great loss of life, the event caused extensive property damage, including the destruction of a bridge at Sonprayag, a critical crossing on the route taken each year by hundreds of thousands of Hindu pilgrims on the trek to the Kedarnath Temple. Although a temporary bridge was quickly installed at the site, it was washed away twice by floods, so a more robust Acrow bridge was selected by the Uttarakhand Disaster Recovery Project team to serve as a permanent solution, with funding provided by the World Bank.

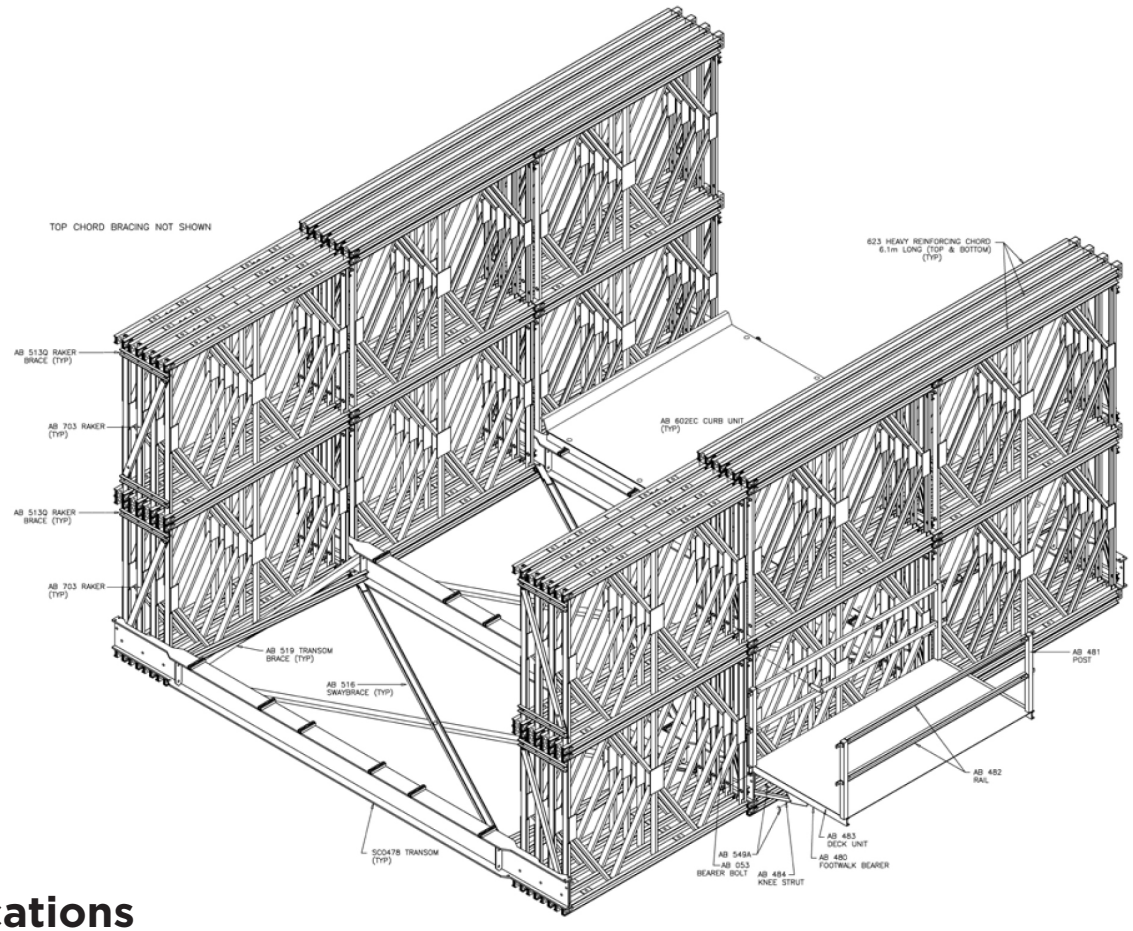
The Acrow solution, which sits 2,600 meters above sea level, is a 60.96 meter (200′) clear span bridge, customized to address local conditions. Unlike previous crossings, the new structure can accommodate two lanes of traffic, allowing far more capacity for pilgrims and local residents.

In remote locations such as this, modular steel solutions are often the best option; substandard road conditions can make it difficult to transport lengthy steel beams or heavy prefabricated concrete structures to site. In contrast, the modular steel components used for the Sonprayag bridge were shipped in standard ocean containers then delivered to site on compact, easily-maneuverable 6.5-meter-long (21.3′) trucks. Additionally, while a traditional bridge would have taken more than three years to build, the Acrow steel structure was completed in 45 days, and installed using minimal construction machinery and local labor.

For over 60 years, Acrow has restored and rehabilitated critical infrastructure assets all over the world, replacing bridges lost to natural disasters and providing safe and secure crossings to restore connectivity.

acrow.com
bridges@acrow.com
+1.973.244.0080

ACROW



Specifications

Bridge length:

Acrow supplied 60.96m (200′) of bridging to build one clear span.

Roadway width:

The Acrow bridge is 5.5m (18′) to support two lanes of traffic and pedestrians.

Deck surface:

Asphalt overlay

Bridge erection method:

Rolling/launching method to temporary stone and steel pier of 12 meters

Design load:

India Class 70R loading;
pedestrian load = 5 kN/m^2

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

acrow.com
bridges@acrow.com
+1.973.244.0080