

# RAPID BRIDGE REPLACEMENT SYSTEM

*Replace bridge spans in one day!*



Engineered Rigging's Rapid Bridge Replacement System enables railroads and their maintenance contractors to remove and replace a railroad bridge span in a single day — a substantial time reduction. The system also provides a safer method for bridge replacement than traditional hydraulic cylinder approaches. It is proudly engineered and manufactured with domestic materials in the U.S.A.

## Unique Design

Engineered Rigging's 250-ton Rapid Bridge Replacement System is comprised of four mechanically engaged lift columns (two at each end), a horizontal lift girder connecting the columns, drivable trolleys that guide the bridge span along the lift girder, and transport carts to carry away removed spans and deliver replacements.

**Top-of-Rails Design:** installs on top of the rails, rather than under, eliminating the need for extensive below-rail modifications to adjacent sections

**Enclosed Lift Girder:** doubles as a safe passageway, enabling crews to cross from one side of the bridge to the other once the span is removed

**Modularity:** eases handling, shipping and setup

## Easy Transport & Rapid Assembly

By setting up the system on a nearby spur, rail service is not interrupted during assembly.

- Assembles in three to four shifts
- Ships to rail spur on four to five legal flatbed trailers
- Requires no wide load or heavy load permits



## Safe, Fast Operation

Railroads can use the Rapid Bridge Replacement System to safely exchange a bridge span **in just one day**, significantly less time than hydraulic cylinder methods. Depending on the number of spans, railroads can safely and efficiently replace a complete bridge in days rather than months.

**Mechanically Engaged Lifting:** no cable drums or strands that can fail or hydraulics that leak

**Self-Locking Lift Columns:** perfectly synchronized lifting and positive mechanical engagement 100% of the time

**Power Failsafe:** lift columns that maintain stability during power outage

**Remote Operation:** lifting and transport controlled from a safe distance

## Standard Configuration

The Rapid Bridge Replacement System features a 250-ton lifting capacity and is capable of replacing most railroad bridge spans. Engineered Rigging can customize the system to meet unique customer requirements. Components include:

- Four 30-foot lift columns
- Two lift column connector beams
- One central span box girder
- Two adjustable ladders
- Two trolleys and drive systems
- Lift system transport carts
- Bridge section transport carts
- Synchronized control system with power unit

## Compliance

Engineered Rigging's Rapid Bridge Replacement System proudly complies with the applicable sections of the following standards:

- AISC Manual of Steel Construction, 9th Ed. and 13th Ed.
- ASCE 7-10, Minimum Design Loads for Buildings and Other Structures
- AWS D1.1, Structural Welding Code
- 29 CFR 1926, OSHA Construction Industry Regulations

The Rapid Bridge Replacement System is available for sale or lease (operated rentals). Mock-up and load test can be viewed at Engineered Rigging's Arkansas facility. Please call with inquiries.

