# MODULAR STEEL BRIDGES

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# ABOUT ACROW

- World leader in the design, engineering and manufacture of prefabricated modular steel bridges
- Established in 1951; 300+ team members; Headquartered in Parsippany, NJ
- Manufacturing Facilities in Milton, PA, and Lydney, Gloucestershire, UK
- Staging yards in NJ, TN and WA
- Home to world-leading Acrow and Mabey brands
- Proprietary, proven steel technology derived from Bailey Bridge
- Worldwide project experience in over 150 countries worldwide


PERMANENT


TEMPORARY


MILITARY


EMERGENCY


DEVELOPMENT PROGRAMS

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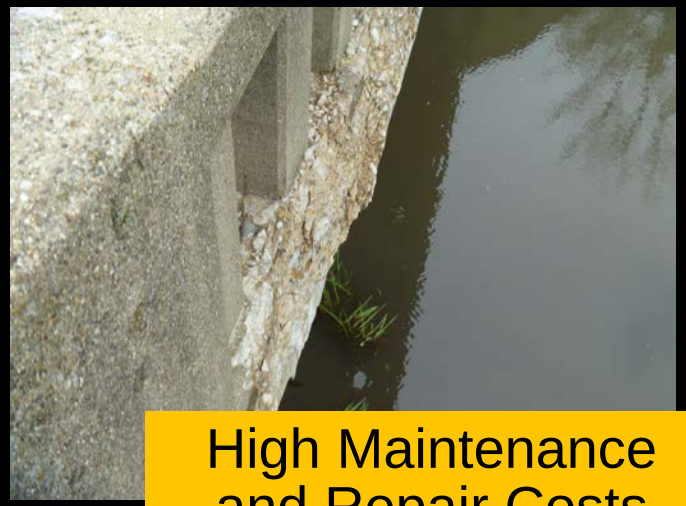
# THE CHALLENGE

Aging Infrastructure

Bridge Closures & Traffic Disruption

Functionally Obsolete



High Maintenance and Repair Costs

Rapid Response to Natural Disasters

Remote Access

# ABOUT ACROW

## ACCELERATED BRIDGE CONSTRUCTION

PERMANENT

TEMPORARY

MILITARY

EMERGENCY

DEVELOPMENT PROGRAMS

## THROUGH
## COST-EFFECTIVE, RAPID-BUILD, SUSTAINABLE MODULAR BRIDGING

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# PHASING VS ACCELERATED BRIDGE CONSTRUCTION

## PHASING ADDS 30-40% to PROJECT COSTS

- Phasing costs are dependent on many factors but 30 to 50% is the figure designers use to estimate costs
- Safety is compromised when vehicles are next to workers
- Night-work is less efficient and more dangerous
- Contractors mobilize equipment twice to compensate for road use during construction
- Detour Bridges:
  - ✓ Cost-effective in many applications
  - ✓ Faster project completion
  - ✓ Safer work areas
- Read more: www.shortspansteelbridges.org

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# BENEFITS OF STEEL VS. CONCRETE

- Significantly less time on site due to prefabrication
- No forms to build, and strip
- Better quality control
- No negative impact caused by weather, lighting, etc.
- Fabrication in precision jigs and robotic welding
- Lighter in weight, therefore less expensive substructure required
- Steel is almost 100% recyclable
- Easier to modify
- Historically proven that steel bridges outlive concrete bridges
- Easier maintenance and inspection
- Achieve longer spans, so less expensive if you can eliminate piers
- Rehabilitate to extend life span
- Quicker installation times

# FEATURES AND BENEFITS

- Made in the USA from high-quality, high-strength, 100% American steel
- Easily customizable solutions to desired length, width and strength
- Precision-engineered and full-scale tested for safety and durability
- Hot-dip galvanized to eliminate corrosion and minimize maintenance
- Rapid installation with minimal labor and equipment
- Installed with support from a team of experienced site technicians
- Delivered in partnership with key stakeholders

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# QUALITY ASSURANCE

ISO 9001
CERTIFIED

AISC CERTIFIED FABRICATOR

MADE IN USA

SHORT SPAN STEEL BRIDGE ALLIANCE™

CE

NSBA

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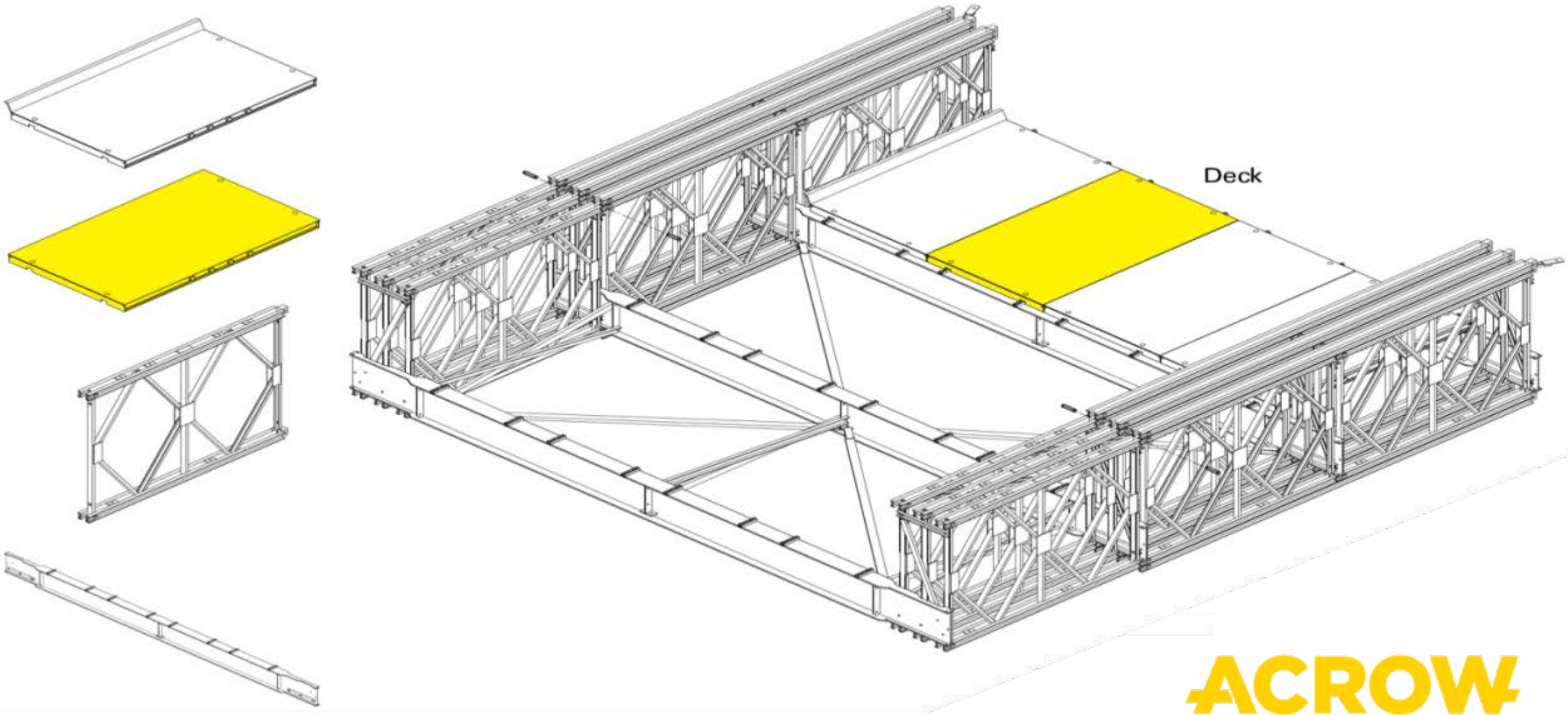
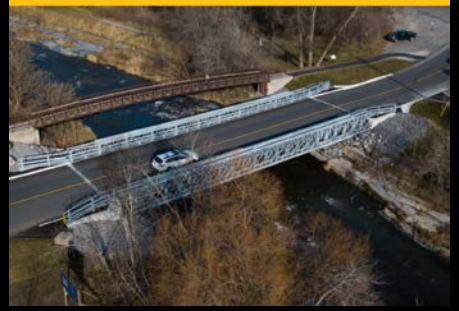
# ACROW 700XS®



# OUR APPLICATIONS

VEHICULAR



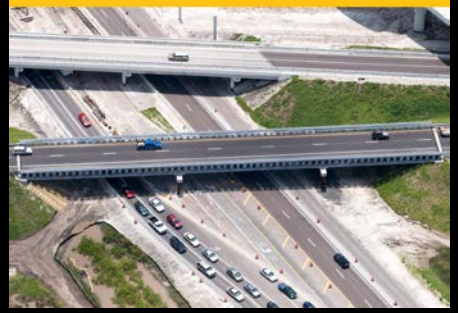
LONG SPAN

SHORT SPAN

PEDESTRIAN

RAIL

DETOUR RENTAL



MOVABLE

UTILITIES

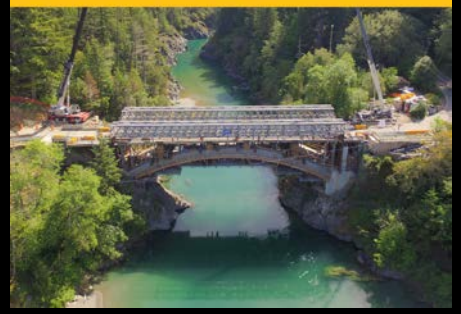
EXTRACTIVE


HEAVY HAUL

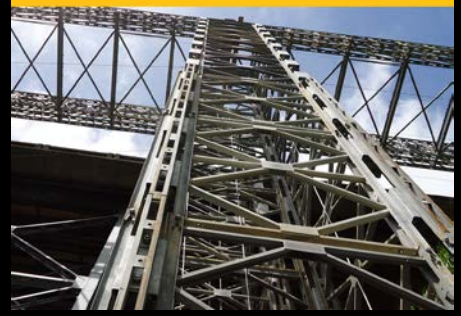
EMERGENCY

MILITARY

OTHER APPLICATIONS



SHORING SYSTEMS



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# OUR SOLUTIONS

- Made from high-quality, high-strength steel
- Precision-engineered for safety and durability
- Hot-dip galvanized to minimise maintenance
- Rapidly installed with minimal labor and equipment
- Clear-span and multi-span solutions available
- Full highway loading capabilities
- Various deck options
- Expert technical assistance

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# TEMPORARY BRIDGE, HAMSHIRE, TX

Only detour route was 30+ miles, creating a major access problem

Temporary structure kept local traffic and commerce uninterrupted

Rental solution reduced project costs and construction time

- Length: 130’
- Width: 30’
- Design Load: HL-93

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# TEMPORARY DETOUR BRIDGE, NJ

Intersection of I-295 with I-76 and Route 42 in Camden County

Supported continuous travel and utility services

- Length: 450’ with span lengths of 240’ and 210’
- Width: 24’
- Design Load: HL-93 plus pedestrian and utility loads

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# TEMPORARY DETOUR CHEQUESSETT NECK IN WELLFLEET, MA

Providing access in Wellfleet during the estuary restoration of the Herring River

Critical access route maintained during tidal flow restoration project

- Length: 320’
- Width: 13.78’ plus 5’ footwalk
- Design Load: HL-93

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# TEMPORARY DETOUR INDEPENDENCE, OH

Kept vehicles moving safely and avoided economic impact in the community while the new bridge was built

- Length: 200’
- Width: 24’ with 5′ brackets for gas line on one side
- Design Load: HL-93 plus OH Permit Trucks

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# TEMPORARY DETOUR BRIDGES, MI

Four bridges-maintained traffic during the I-94 modernization project

The bridges were rented to the two contractors who were awarded the job

- Length:
  - 380’ of bridges rented to Anlaan Corporation
  - 340’ of bridges rented to C.A. Hull
- Width: from 18 to 30 feet
- Design Load: HL-93

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# DETOUR BRIDGE, WATERTOWN, NY

Epoxy/aggregate non-skid decks

In place on Arsenal Road for 2 winters

- Length: Twin 180’ bridges
- Width: 24’ wide each
- Design Load: HS-20

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# PERMANENT BRIDGES ISLAND OF OAHU, HI

Steel modular bridges selected to replace structurally deficient bridges

Clear-span avoids intermediate piers and improves flood resilience

- Length:
  - Bridge No. 3: 130’
  - Bridge No. 3A: 100’
- Width: two 11’-wide lanes plus 7.5’ shoulder
- Design Load: HL-93

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# PERMANENT HEAVY HAUL BRIDGE, AZ

Heavy vehicle access in the Patagonia Mountains

Improved access during advanced mine development

- Length: 140’
- Width: 30’
- Design Load: HL-93 and customer-defined vehicles used on mining operations

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# CAMBERED VEHICULAR BRIDGE

Division St., Chicago, IL

Cambered main span required to match original profile and provide clearance for water traffic

Decorative pedestrian railing

Expected use 15 + Years

- Length: 3 spans (50’, 140’,50’)
- Width: 36’
- Design Load: HL-93

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# EMERGENCY BRIDGE CIBOLA COUNTY, NM

Heavy rains destroyed a key concrete bridge over Seboyeta Creek

Restored vital access for school buses and emergency services

- Length: 80’ each
- Width: 30’ each
- Design Load: HL-93

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# EMERGENCY BRIDGE BOYNTON, PA

Rapid modular detour restored Route 219 after severe flooding

Quick installation reopened critical corridor in under two weeks

- Length: 100’
- Width: 30’
- Deck paved with a crowned asphalt overlay
- Guardrail system designed to meet the demands of TL-4 loading.

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# EMERGENCY BRIDGE SKAGIT RIVER, WA

Acrow provided 2x 2-lane bridges within a week following I-5 Bridge Collapse

Completed in 15 days

- Length: 2 spans, each 160’
- Width: 2 Lane – 24’
- Design Load: HL-93

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# EMERGENCY BRIDGE JEFFERSON PARISH, LA

Hurricane Ida destroyed the community’s only access route

Initial floating bridge couldn’t meet long-term needs

Modular two-lane solution quickly restored safe connectivity

Lift-in spans enabled fast installation within six weeks

- Length: 100’
- Width: 24’
- Design Load: HL-93

# MOVABLE BRIDGE
# QUINCY, MA

Fore River Bridge

In place 14 years

2 – 2L bridges side by side

20 approach spans also provided

Vertical lift of 90’ to provide clearance for large ships

- Length: 210’
- Width: 2 x 2 Lane – 24’
- Design Load: HS 20

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# MOVABLE BRIDGE MARTHA'S VINEYARD, MA

Bascule/draw bridge

Acrow provided the approaches and the bascule

Full package, including mechanical, electrical and control systems

- Spans: 80' / 60' / 90'
- Width: 2 Lane – 24'
- Design Load: HS-20

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# MOVABLE BRIDGE WESTCHESTER COUNTY, NY

Temporary Bascule Bridge to maintain access to Glen Island Park during rehabilitation of historic structure

Five-span bridge

- Overall length: 490’
- Three approach spans (100’ each, a 110’ back span, and an 80’ bascule span.
- Width: Two-lane 24 feet’ with walkway the full length of the bridge.
- Design load:HS20-44

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# SITE ACCESS, NEVADA, FL

Las Vegas F1

Acrow’s modular bridges served as temporary flyovers at key locations.

- 4 Bridges
- 700’ Multi-Span bridges
- Design Load: HL93

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# RAIL BRIDGE, CSX RAILROAD, OH

Changes in horizontal and vertical clearance requirements and roadway capacity necessitated a replacement of the bridge to provide a safer environment for motorists.

Installed in 6 days

- Length: 125’
- Width: 18’
- Design Load: Cooper E-80

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# EMERGENCY WORLD TRADE CENTER 9/11

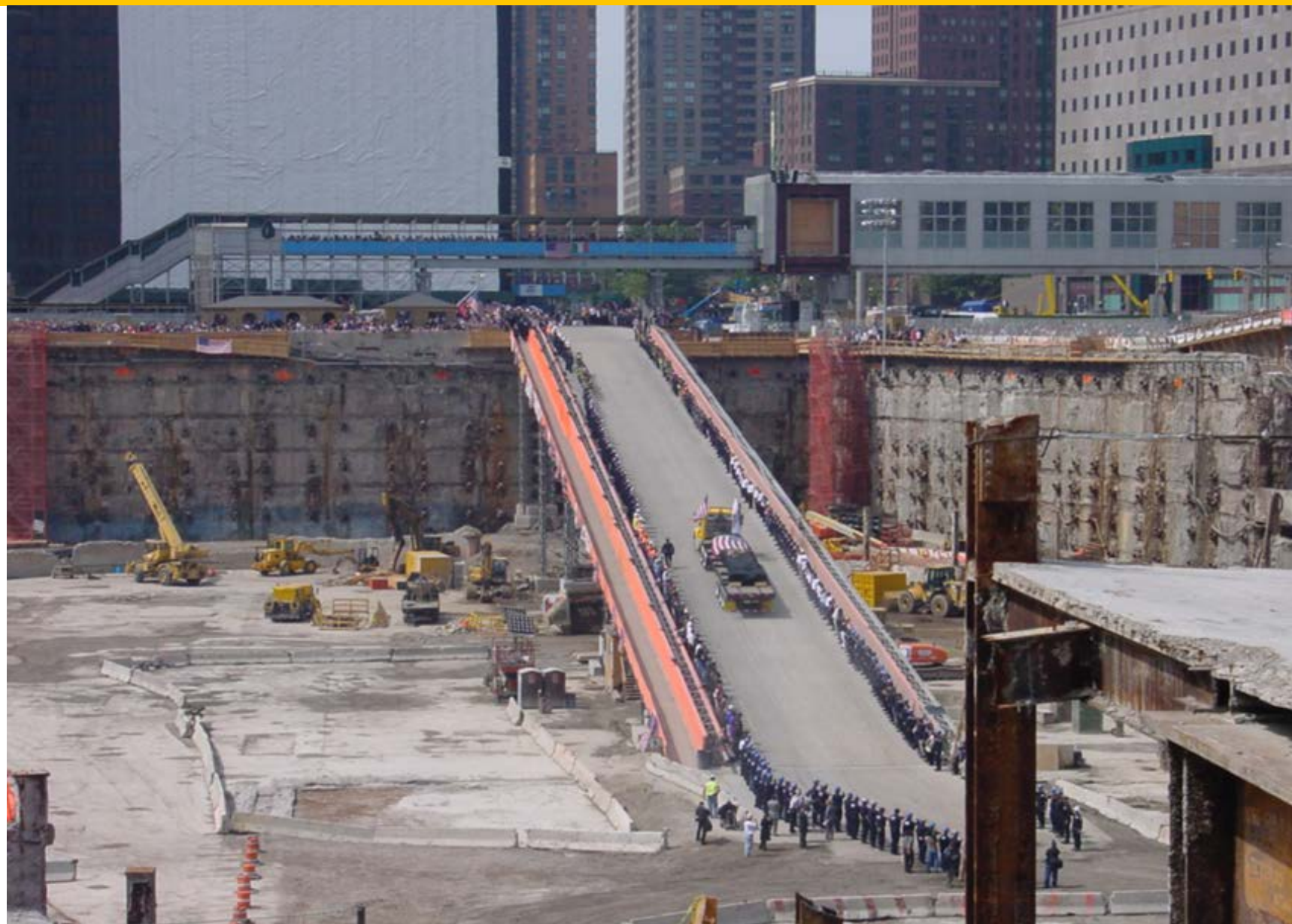
Acrow solution provided worker access sidewalk and five support piers.

Solution featured cantilevered walkway and epoxy deck.

Utilized for several years.

- Length: 460’ long
- Width: 30’ wide

Photo shows final 80 ton column transported between honor guard.



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# TEMPORARY UTILITY BRIDGE, TUCSON, AZ

Modular aerial bridge enabled safe wastewater rerouting over river

Provided cost-effective alternative to underground pipeline drilling

Supported three HDPE pipes across the Santa Cruz River

- Length: 270’
- Width: 13.78’
- Design Load: Live and Utility Load = 360 lb/ft

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# BEAM BRIDGE EASTERN CT

Cost-effective temporary solution installed without touching existing bridge as unique overbridge solution

Reusable structure defers replacement costs and future relocation planned

- Length: 45’
- Width: 12’

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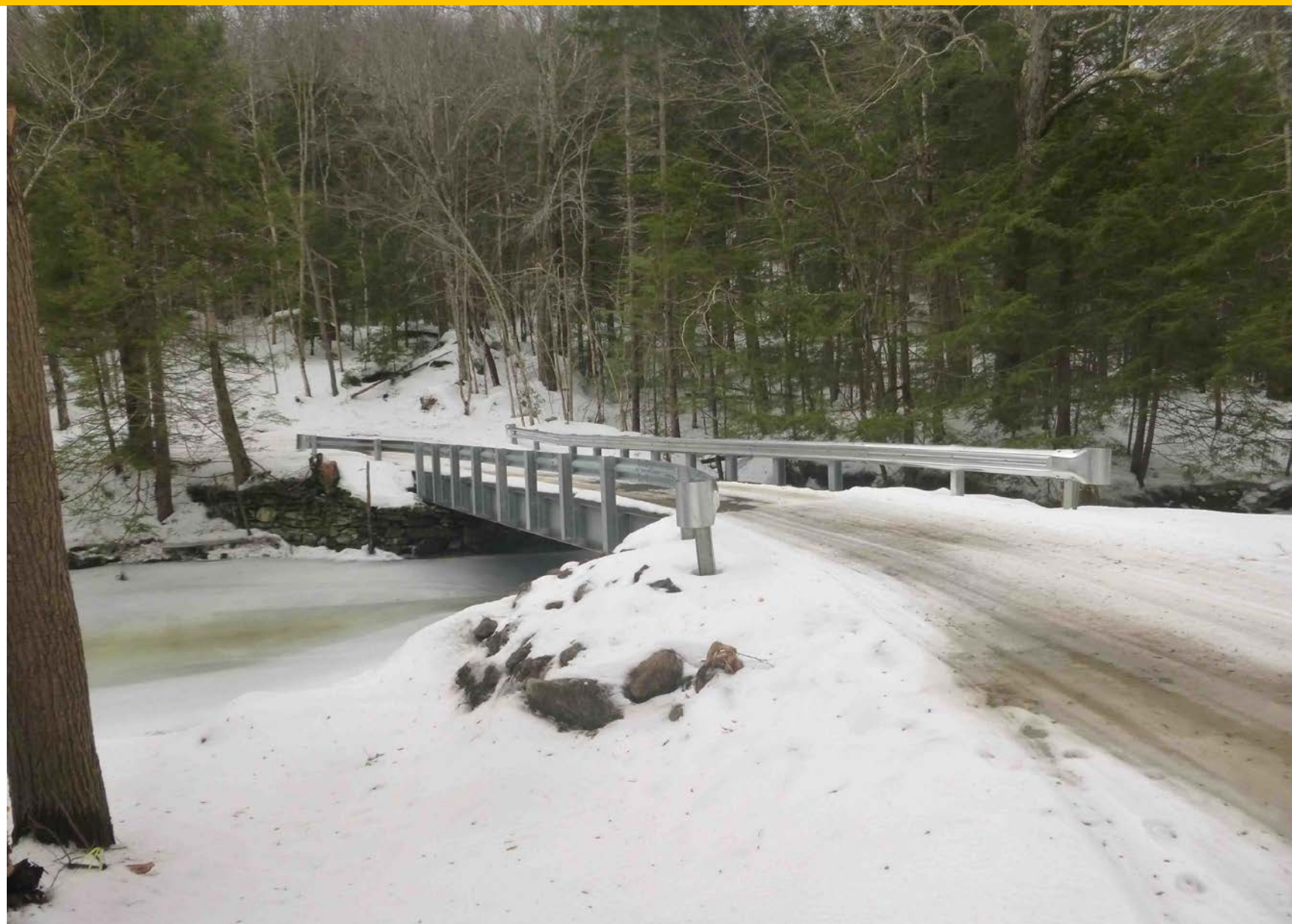
# BEAM BRIDGE, MONROE, MA

Monroe State Forest

Rapid installation ensured year-round access before winter conditions

Single-day beam-bridge install met urgent project timeline

- Length: 45’
- Width: 12’
- Design Load: HL-93



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# PEDESTRIAN BRIDGE, SEATTLE, WA

Enabled safe pedestrian passage during Seattle waterfront construction

Purchased by the Washington State Department of Transportation (WSDOT) and delivered to contractor

Bridge reusable for future emergency or detour needs

- Length: 270’
- Width: 24’
- Design Load: 90 PSF Pedestrian Load

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# PERMANENT TRAIL BRIDGE, BUCKLEY, WA

Spiketon Ditch Bridge had to be closed due to structural deficiencies

Replacement bridge restored a vital link to the Foothills Trail

- Length: 160’
- Width: 12’
- Design Load: HS15
- Features camber and handrails

# WHY ACROW?

- Proprietary, proven, advanced modular steel technology
- Expertly manufactured in the USA using high-quality, high-strength steel
- Easily customizable solutions to desired length, width and strength
- Precision-engineered and designed for safety and durability
- Hot-dip galvanized to eliminate corrosion and minimize maintenance
- Rapid installation with minimal labor and equipment
- Engineering support from start to finish
- Delivered in partnership with key stakeholders

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# THANK YOU FOR YOUR TIME!
# ANY QUESTIONS?

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