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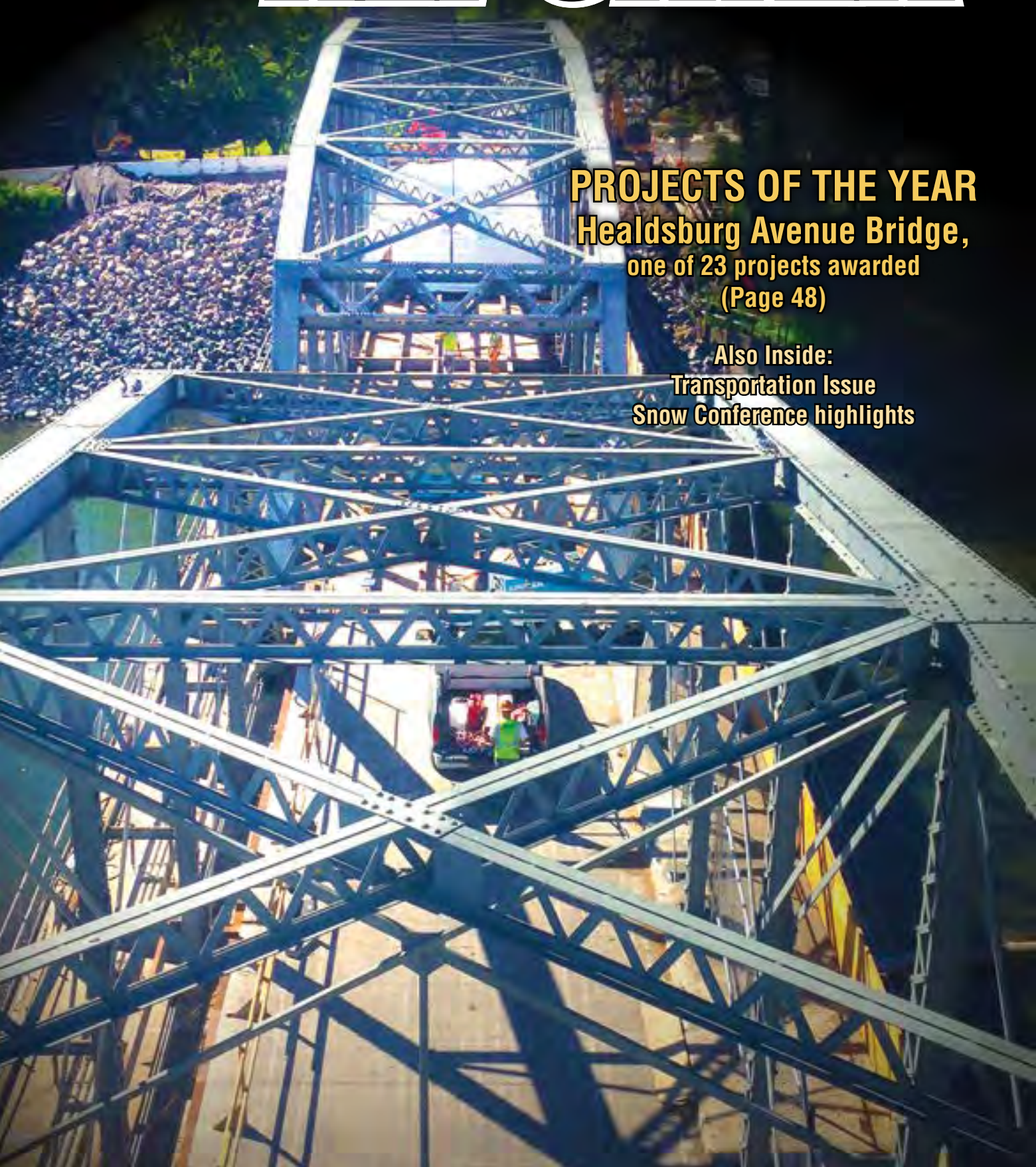

PROJECTS OF THE YEAR

Healdsburg Avenue Bridge,
one of 23 projects awarded
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SMALL CITIES/RURAL COMMUNITIES PROJECT OF THE YEAR:
HISTORICAL RESTORATION/PRESERVATION

Healdsburg Avenue Bridge over Russian River

Managing Agency: City of Healdsburg, California
Primary Contractor: Granite Construction
Primary Consultant: Omni-Means, Ltd.
Nominated By: Northern California Chapter

The Healdsburg Avenue Bridge over the Russian River in Healdsburg, Calif., is a beautiful and rare two-span steel Parker Truss bridge that was built in 1921. The bridge is listed on the National Register of Historic Places and holds a special place in the hearts and minds of the local community. The bridge served the growing community of Healdsburg well for over 90 years. After the 1989 Loma Prieta Earthquake, however, the bridge was determined to be seismically vulnerable and was slated by the California Department of Transportation (Caltrans) for a seismic retrofit. In addition to the seismic vulnerabilities, the bridge center pier was also determined to be susceptible to failure due to scour (underwater erosion) from the fast-flowing waters within the Russian River. Thus began the uncertainty of the future of the bridge, with proposals for the demolition and replacement of the bridge on the table for several years.

One of the more unusual challenges with saving this bridge began when the City undertook ownership of the bridge from Caltrans in 1980. At this time, Caltrans provided a structural rating that found the bridge unable to support heavy loads. Mel Amato, longtime Healdsburg citizen, acting only as an interested citizen with an engineering background, was requested by Healdsburg's Mayor in 2007 to review a consultant's bridge option report. In the review process, he discovered and reported to the City that the basic Caltrans structural calculations contained some errors. This discovery and eventual correction made the possibility of rehabilitation of the structure a more viable option.

Intersection sight distance for turning movements from Front Street immediately west of the bridge had long been a problem. Prior to rehabilitation, a chain link fence had been installed on the bridge to prevent jumping from the bridge deck into the river below. The unintended consequence of this addition was that it blocked the view of vehicles turning onto and off of the bridge from Front Street. Additionally, the existing steel lattice pedestrian railing did not meet current design standards for railings and required replacement with a modern railing system. In order to resolve these issues, several railing concepts were developed including an innovative new steel cable railing that preserved the historic lattice railing, while simultaneously opening up oblique sight lines to improve sight distance. After review of 3D visual simulations prepared by Omni-Means, SHPO concurred with the selection of the new cable railing system. The intersection was also reconstructed to improve turning radii and a signal was added to provide for protected turning movements onto and off of the bridge, further improving the safety of the intersection.