



For Immediate Release

## CHECKERED HOUSE BRIDGE WINS 2014 AMERICAN COUNCIL OF ENGINEERING (ACEC) VERMONT GRAND AWARD

Tallahassee, FL (June 27, 2014). The Checkered House Bridge Design-Build Project wins the 2014 American Council of Engineering (ACEC) Vermont Grand Award.

Built in 1929, the Checkered House Bridge, located in Richmond, Vermont, is a 350 ft.-long steel truss bridge placed on the National Register of Historic Places in 1990. This bridge needed to be widened 12 ft., 6 in. to allow for two vehicles to safely cross the bridge simultaneously in opposite directions and to accommodate modern traffic loads.

This project is only the second design-build project undertaken by the Vermont Agency of Transportation and this rehabilitation widening project had to satisfy Section 106 of the National Historic Preservation Act of 1996 and Section 4(f) of the U.S. Department of Transportation requirements.

The design-build of Harrison & Burrowes Bridge Constructors, Inc. and CHA Consulting, Inc. brought in FINLEY early in the bid process to do the conceptual design. FINLEY realized that traditional construction methods could not be used on this project so the incremental launch method was selected. FINLEY developed an extensive and detailed launch analysis to include all critical load cases and conditions (ice flows, wind loading-30mph average gusts/daily wind speeds, aesthetics, preservation requirements and environmental protection) and designed a unique jack and roller side-launching system allowing the team to save 80% of the original truss, preserving the bridge as much as possible. Innovative materials were used to reduce dead load while providing a lightweight, strong and durable deck.

FINLEY designed the falsework and jacking system which enabled the north truss to be moved with lateral support provided from the south truss system. Ten specially designed 18-in. stroke capacity hydraulic ram systems were placed on the top/bottom chords and at each abutment, and provided carefully monitored constant pressure to nudge the 65-ton north truss on the rollers to its new location. Movement had to be carefully orchestrated, and the team had to advance the support brackets for the jacks with every 12 in. of movement. FINLEY's Engineer was on-site during the launch to monitor 10 critical connection points that, when cut free, would expose the truss to potential distortion and twisting.

The project was completed on-budget and on-schedule. The design-build team worked closely together to provide an innovative engineering preservation solution to widen the bridge, meet the owner's needs in the most effective and safest manner, and provide the optimum financial and historic value to the traveling public.

*"This was the first time that I had worked with FINLEY and I was very impressed with the innovative thinking that went into the bridge widening. During the widening, FINLEY was onsite providing technical support which proved to be critical in keeping the launch on schedule. FINLEY's expertise in both design and construction engineering was invaluable for this "first of its kind" project."*

**Carolyn W. Carlson, P.E. PDD/Structures Section Vermont Agency of Transportation**



LEFT TO RIGHT: Phil Scott, Vermont Lt. Governor; Dale Gozalkowski, P.E., CHA Vice President & Project Manager; David Mears, Vermont DEC Commissioner; Ann Schiola CPSM, Finley Engineering Group, Inc. Marketing Director; Jim Shields, CHA Project Engineer; Carolyn Carlson, P.E., VTrans Structures Project Manager; Jeff DiStefano, Harrison and Burrowes Bridge Constructors, Inc.; Vice President Sue Minter, VTrans Deputy Secretary



Completed Bridge



*"The Checkered House Bridge ... has served as the focal point of the US Route 2 west entrance to Richmond....this stately structure, with the Green Mountains as its backdrop, is what catches and impresses one's eye. A modern concrete structure would not have that ability. The engineering expertise and manpower that it took to widen it in place and maintain its graceful appearance saved this impressive structure for future generations of Richmond residents and Vermont travelers. The Richmond Historical Society is thankful for and appreciative of that effort."*

**Fran Thomas, President, The Richmond Historical Society**

**About Finley Engineering Group, Inc. (FINLEY)**

FINLEY is recognized nationally and internationally as a leading design, engineering and construction consulting firm specializing in complex bridge projects of all kinds. FINLEY's expertise includes concrete segmental, steel box, arches and trusses, and long span cable-stayed bridges. FINLEY focuses on large Contractor-driven projects, such as design-build, D/B/F/O/M, Public-Private Partnership (P3) and value engineering/alternative design. More project information can be found at [www.finleyengineeringgroup.com](http://www.finleyengineeringgroup.com)

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