

# Fixing Access to Rural Missouri (FARM) Bridge Program

Jefferson City, Missouri



The Missouri Department of Transportation (MODOT) set an ambitious goal to replace dozens of rural county bridges within a budget of \$26 million – a daunting task in today's economic landscape. All the bridges being replaced were weight-restricted, supported by timber piles, in poor condition, and were one lane carrying two-way traffic.

Despite these challenges, MODOT successfully replaced 31 bridges, including 27 steel-supported structures, all fabricated by DeLong's, Inc., a leading bridge fabricator based in Missouri. The

FARM Bridge Project's total bridge weight was 527 tons, with all components hot-dip galvanized for durability.

One standout of the projects was a bridge spanning Hoover Creek in Macon County on Missouri Route Y. This 115-foot bridge, weighing 21 tons, featured 12 main girders and 15 channel diaphragms. Located roughly 100 miles north of DeLong's headquarters in Jefferson City, this project underscores the regional impact of the FARM Bridge initiative.

Infrastructure corrosion remains a persistent nationwide challenge, despite significant funding

through the Bipartisan Infrastructure Law (BIL). State Departments of Transportation (DOTs) are tasked with optimizing limited resources to address urgent infrastructure needs. MODOT's FARM Bridge Project exemplifies how strategic planning, and innovative approaches can overcome these obstacles. By adopting the Simple for Dead Load and Simple for Live Load (SDCL) bridge design method, MODOT not only simplified construction but also maximized material ➔

**DeLong's distinguished itself by exclusively using hot-dip galvanizing, ensuring superior corrosion resistance and longevity—ideal for rural infrastructure with limited maintenance budgets.**

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## Bridge & Highway



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efficiency, reduced costs, and enhanced durability with hot-dip galvanized steel—while minimizing commuter disruptions by maintaining access to vital bridgeways during construction.

To execute this project, MODOT partnered with DeLong's, Inc., leveraging their expertise from the early planning stages. DeLong's Vice President of Engineering, Gary Wisch, and his team addressed MODOT's key concerns about corrosion protection and long-term durability. While competing proposals included combinations of steel and concrete or all-concrete designs, DeLong's stood out by using only hot-dip galvanized steel. This approach guaranteed superior resistance to

corrosion and significantly extended the life of the structures, making it an ideal solution for rural infrastructure, where long-term maintenance budgets are often tight.

The partnership between DeLong's and their galvanizer was crucial to the project's success. Together, they optimized designs for galvanizing, achieving a uniform coating and masking specific steel surfaces to facilitate safe and efficient field welding. Meticulous planning of material staging and delivery also played a critical role, ensuring MODOT could maintain access to half of each bridge during replacement or repair. This seamless coordination allowed DeLong's to meet project timelines and minimize commuter disruption.

The completion of the FARM Bridge Project exceeded expectations and has since become a model for other DOTs. It demonstrates how innovative design methods like SDCL, combined with strategic partnerships and durable materials, can maximize budgets and deliver reliable infrastructure solutions. The use of hot-dip galvanized steel not only extended the life of the bridges but also reduced long-term maintenance costs, ensuring the project's sustainability.

MODOT's success has garnered widespread recognition, with invitations to present their approach at industry conferences and share

their lessons learned with other DOTs across the country. By embracing hot-dip galvanized steel and the SDCL method, MODOT, DeLong's, and their galvanizer have set a new benchmark for rural infrastructure projects, proving that thoughtful planning, strong partnerships, and cutting-edge engineering can bridge the gap between funding constraints and long-term infrastructure needs. ■



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