



Local Operational Research Assistance (OPERA) Program

Retrofitting Bridge Approach Transition Curbs

Washout erosion along the wing walls of bridges has been a persistent problem for many local agencies. To address the problem, the Jackson County Public Works Department developed a bridge approach transition curb that has been included on all new bridge construction for the last 10 years. The extended curb design protects the area immediately behind the wing walls by reducing the intensity of storm water runoff and gradually channeling it further away from the structure to a less erosion-prone area.

The success of the bridge approach transition curb on new bridges inspired Jackson County public works staff to adapt the design for the many bridges in the county older than 10 years. Jackson County received a \$5,000 grant through the Local OPERA Program to develop a process for adding the feature to existing bridges, including the design and fabrication of reusable custom metal forms for each corner of a bridge.

Jackson County views the process of retrofitting the curb to existing bridges as a good short-term, fill-in project for maintenance staff. They estimate retrofitting one bridge takes five maintenance workers one full day and two subsequent half-days. Each curb extension uses about 1 yard of concrete, for a total of 4 yards per bridge. The cost for labor, equipment, and materials for these improvements to each bridge total approximately \$7,500 using the specialty metal forms made as part of the OPERA grant.

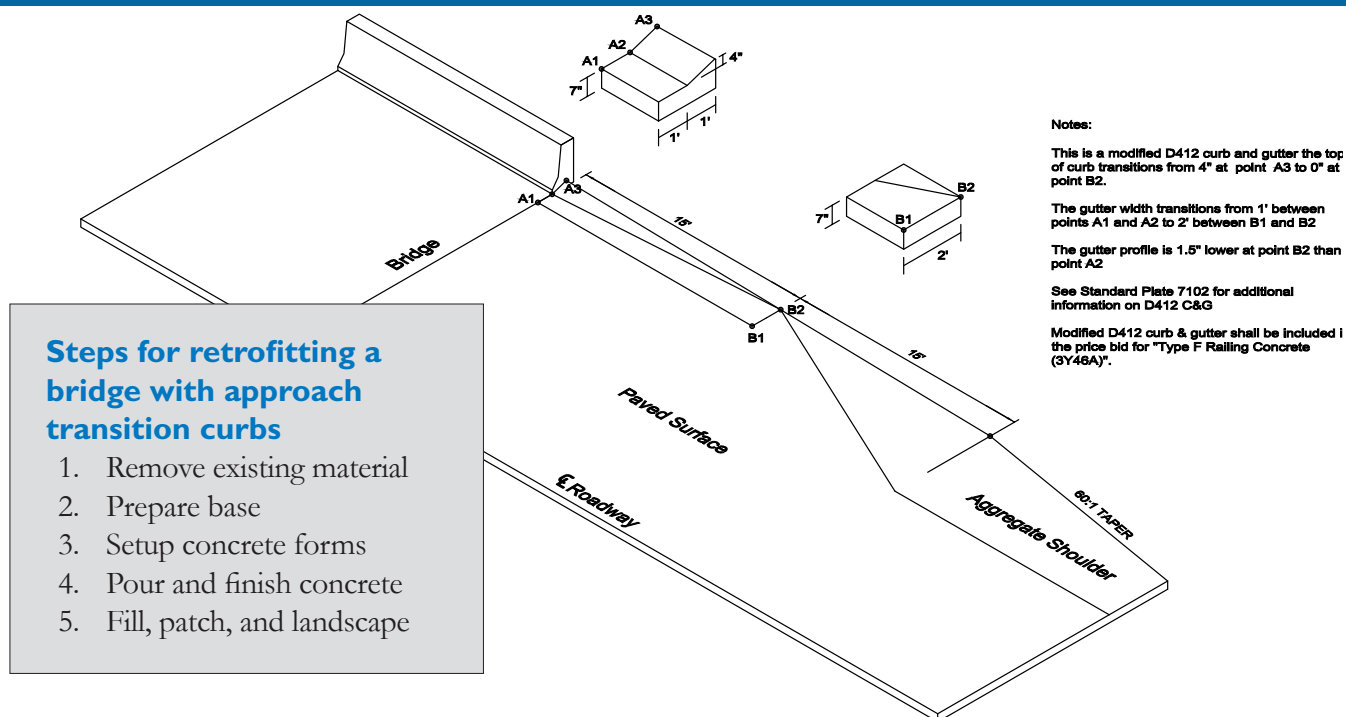
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OPERA Funding
\$5,000





So far, Jackson County has retrofitted two bridges with the approach transition curb. The county plans eventually to retrofit all bridges on paved roadways, prioritized by worst condition first. Public works staff continue to monitor the performance of the improvements for any needed adjustments.

Jackson County intends to share the process and the specialty forms for retrofitting bridges with approach transition curbs with other local agencies upon request.

The Local Operational Research Assistance (OPERA) Program encourages maintenance employees from all cities and counties to get involved in operational, "hands-on" research. OPERA helps to develop innovations in the construction and maintenance operations of local government transportation organizations and share those ideas statewide.

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