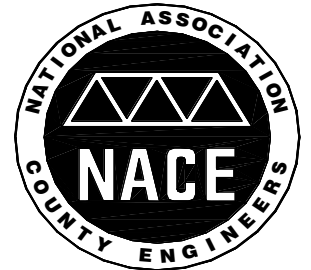


# *IOWA COUNTY ENGINEERS ASSOCIATION*



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## **NEWS RELEASE**

### **County innovation: Vibratory pile driving**

**Posted on: October 09, 2017**

Iowa's Secondary Roads network contains around 18,500 bridges, and nearly one in four needs to be replaced in the near future. Rebuilding shorter structures can be significantly more expensive, on a per square foot basis, than larger ones because contractor mobilization costs don't vary in proportion with bridge size. To keep such costs down, county road departments often maintain their own bridge crews to do part or all of the work on short structures.

But a number of issues have converged to make it harder for counties to drive their own piling, a necessary first step for every structure. Crane replacement costs have risen beyond what local governments can afford; safety requirements mandate extensive operator training and the equipment cannot be easily transported. This motivated several Iowa Counties to seek out and implement a new method for installing piles: via use of a vibratory pile driver. These drivers consist of a special, vibratory clamp that can both hold a pile and supply the high-frequency shaking needed to allow the pile to penetrate soil layers underlying the worksite. It mounts, via industry standard clips, on a hydraulic backhoe excavator.

The vibrator/clamp device is easy to use, simple to transport and allows a small crew to drive a far larger number of piling per day than was possible using crane and pile-driver assembly. Plus workers are finding that they can drive the piling into correct position much faster and with greater safety with the hydraulic excavator. They have found that this new piece of equipment is equally able to drive new piling for bridge replacement and to insert replacement piles when performing structural repairs in place.

The result is that counties can repair / rehabilitate more bridges per year, at a lower cost than could be realized with use of a full size crane. This maximizes the benefits achieved per road-use-tax dollar spent and helps maintain the unimpeded circulation that modern agriculture operators need in order to produce crops and livestock efficiently and profitably.

Vibrator/Clamp unit



Loading a pile



Pile driving in process



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