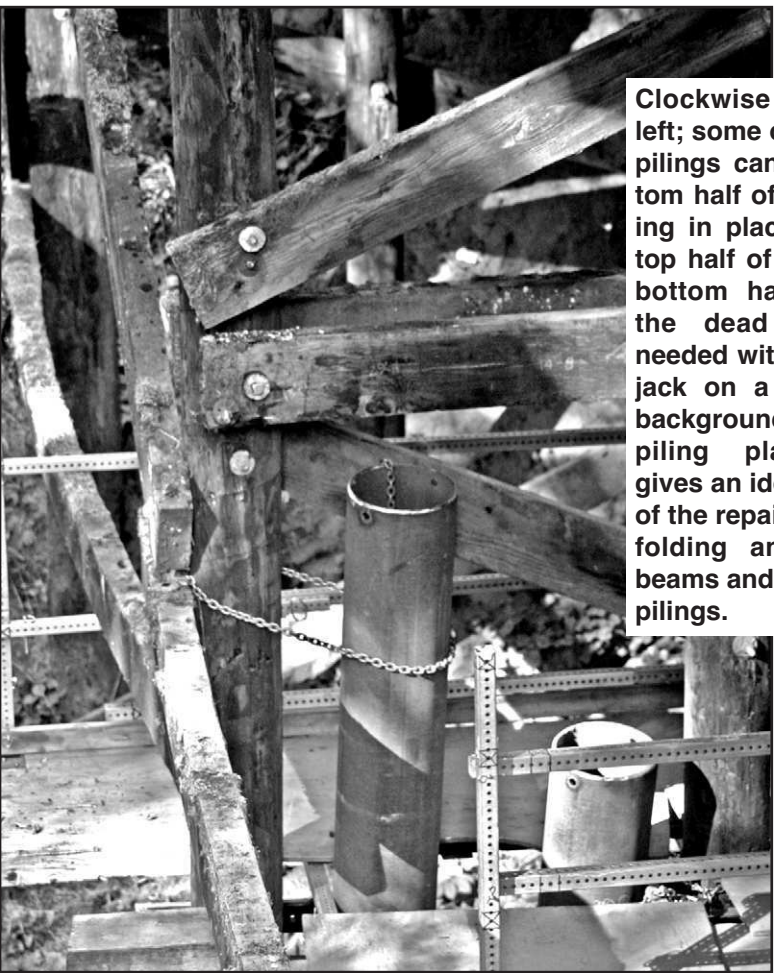
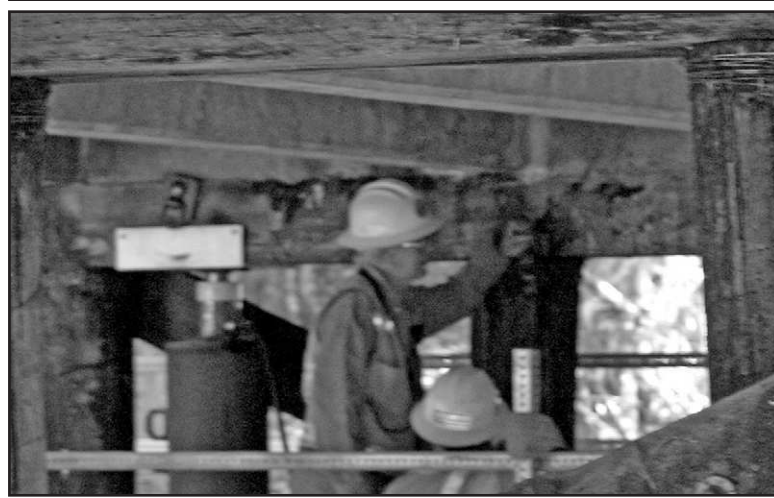
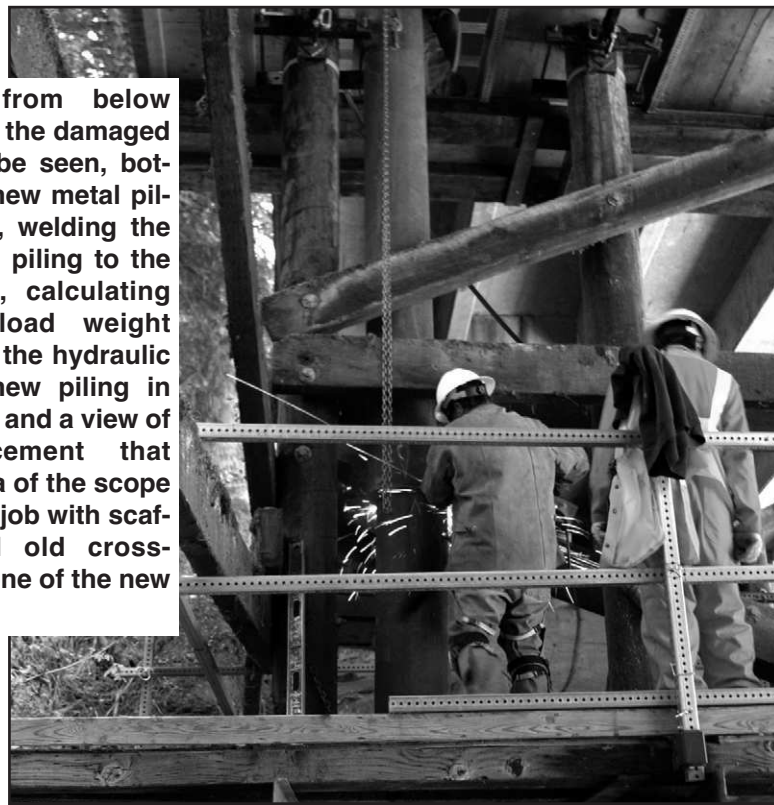


Bridge on Pebble Creek Road gets new pilings in unusual repair



Clockwise from below left; some of the damaged pilings can be seen, bottom half of new metal piling in place, welding the top half of a piling to the bottom half, calculating the dead load weight needed with the hydraulic jack on a new piling in background, and a view of piling placement that gives an idea of the scope of the repair job with scaffolding and old cross-beams and one of the new pilings.



Columbia County Road Department recently called in the experts at the Linn County Road Department to help with repairs to state bridge 13681A, known locally as the Pebble Creek Road bridge in Vernonia.

The bridge has been weight restricted for some time, since the county found that traffic on the bridge had caused some of the supports to bow out, indicating a weakening of the bridge.

Rather than replace the bridge, Linn County Road Dept. was called upon to use their award-winning process for adding new support pilings to existing bridges. The Linn County crew, six including supervisor Martin Harding, worked on the bridge with two people from the Columbia County road crew, starting August 29 and finishing the week of September 4.

The crew augmented the exterior side wooden pilings on both sides of the bridge farthest from Vernonia. Using a two piece metal piling with an inner lining, they place the two pieces of piling, weld them together, then place a 55-ton hydraulic jack on top. After calculating the dead load weight of the bridge (with no vehicles on it) they determine the weight needed on top to allow them to jack the piling into the ground without lifting the bridge. The goal is to drive the piling into the ground anywhere from three to 13 feet deep, to anchor the new piling, while keeping the top at the right level for the bridge to rest upon it.

Some of the challenges are to get scaffolding with railings into place, putting the new piling (larger diameter than the old wooden ones) into place without creating more problems, figuring out how much weight to put on the bridge to keep the bridge from lifting while they drive the piling, then not knowing how deep they'll be able to drive it.

It all worked out and they finished the repairs. Now, it's up to the engineers to decide if the weight restrictions can be lifted. Meanwhile, the Linn County crew has gone on to the next bridge challenge.



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