

Innovation Showcase 2025 "Outstanding Innovation" Winner

Steel H-Pile Top Repair Clamp

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Describe your innovation:

A common deficiency on bridges with steel H piles is decay or section loss at the top where the pile meets the bottom of the cap. The repair for this deficiency is to bolt steel repair sections to the top of the pile through the web and flanges as well as up against the bottom of the existing cap. The repair sections vary in length but each piece can exceed 100 pounds. Additionally, the top of the pile being worked on may be 10 to 15 feet above ground. The D4 Bridge Maintenance Steel H-Pile Top Repair Clamp allows the repair sections to be lifted and held into place in a secure manner without the need for additional help or standard screw type clamps until the holes are drilled and the repair sections are bolted in place.

Describe how your Innovation benefits the SCDOT:

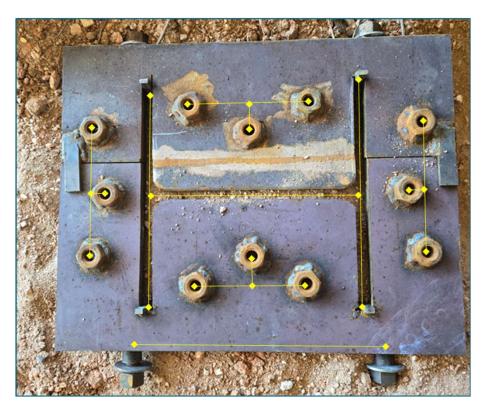
In tighter working conditions like on the inside of a pile or from a man lift, it is hard to get clamps in place and adjusted while temporarily holding the steel repair sections. The D4 Bridge Maintenance Steel H-Pile Top Repair Clamp is a safer alternative and requires less crew members than standard clamps. Also, using this clamp speeds the installation time allowing for more repairs to be placed in a single day with fewer employees. Lastly, using this clamp creates a more uniform product throughout our bridges than if each repair was installed without it.













Video Link: https://youtu.be/Mcxkj23Jz Q