



A Mile Long Boardwalk is Supported by *ECP Helical Torque Anchors*[™]

Lake Bentonville, Arkansas



This mile long boardwalk project was originally designed for cast concrete piers. A problem developed when a family of six beavers built a dam in the upstream creek that feeds into Lake Bentonville. The beavers vigorously constructed a series of dams that caused flooding of the adjacent flat lands making installation of a conventional drilled concrete pier boardwalk impossible.

Representatives of the owners of the property looked for alternate solutions that would be minimally disruptive to the environment and not destroy the beaver's lifestyle along the creek.



Atlas Piers of Atlanta was contacted to provide a project concept using helical screw piles as an alternate foundation support system. The new design used a pair of vertical helical piles at each ten foot span of the boardwalk. In addition, *ECP Torque Anchors*[™] were installed at downward angles in alternating directions at every second support span. These battered anchors provided lateral stability to the structure.

In addition to constructing the mile long boardwalk, eight small fishing docks, two observation platforms and a kayak launching dock were also constructed where future lake expansion would extend navigation into the existing Lake Bentonville.



There were a total of 902 vertical *ECP Torque Anchor*[™] compression piles and 228 helical anchors installed for lateral support on the project. The large number of placements and short time frame dictated that Atlas Piers of Atlanta team up with SEMO Mudjacking and Piering, a high quality Torque Anchor[™] installer from Cape Girardeau, Missouri. These two crews, totaling ten workers, were able to complete the project in only four weeks.



Atlas Piers of Atlanta faced some serious challenges. Governmental agencies were highly involved. EPA allowed a wetlands easement that was only 10 feet on each side of the boardwalk centerline. This made logistics and staging of materials very difficult. Nearby airports requested the FAA monitor and enforce a 12 foot height limit for the equipment in all areas near the runways. The fine for encroachment was \$20,000.00.

One half of the *ECP Torque Anchors™* were installed in five foot deep lake water. An assembly line system was set up that permitted no back tracking or encroachment upon forbidden areas. A Marsh Master machine was used along with a sled for staging materials about every 100 feet along the path of the boardwalk. A second wetlands excavator was used with a three worker crew for helical pile installation.



After pile installation, benchmarks were set by the surveyor at 100 foot intervals. A rotating laser was attached on one of the helical pile shafts. This provided accurate cut off elevations for two workers in chest waders who cut and capped the piles.

Although this was a challenging project, it was also a great success. The teams were recognized by the General Contractor for doing an exemplary job. The project was completed on time and under budget.



Project Summary	
Project:	Lake Bentonville Boardwalk Foundation
Installing Contractor:	Atlas Piers of Atlanta, Inc. Alpharetta, GA (www.atlaspiers.com)
Products Installed:	ECP TAF-288L-84 10-12 Torque Anchors™ Piles 2-7/8" Dia. x 0.203" Tubular Shaft - 12" & 14" Dia. Plates ECP TAH-150-84-12" Torque Anchors™ Lateral Anchors 1-1/2" Sq. Solid Shaft - 12" Dia Plate
Terminations:	ECP Custom ZTAB Timber Bracket Assembly ECP TAT-150 Transition, Custom Bracket and Back Plate
Average Production:	40 placements per day
Number of Placements:	902 Qty: 2-7/8" Dia. Tubular Piles 228 Qty: 1-1/2" Solid Square Bar Anchors



Earth Contact Products, LLC
ECP Helical Torque Anchors™
"Designed and Engineered to Perform"