

# PROJECT PROFILE

**Project:** Columbia Bottom Conservation Area, Exploration Station Boardwalk, St. Louis County, Missouri  
**Contractor:** Engineered Construction Systems, Inc., St. Louis, MO (ECS)  
**General Contractor:** MJC Constructors Co., Inc.  
**Engineer:** Missouri Dept. of Conservation Design/Development, Jefferson City, MO  
**Classification:** Commercial  
**Total Piers Installed:** 74 piers and construction tieback brackets  
**Project Completion:** March 2004 - 5 Days to complete

When the Missouri Department of Conservation designed the observation deck for the confluence of the Missouri and Mississippi Rivers in St. Louis, it was concerned the rivers would be out of their banks on occasion, given recent history. As in the past years, the existing confluence of the rivers run together at the Columbia Bottoms in St. Louis County. Flooding and silting at the confluence was considered and uplift was the Conservation District's concern. ECS bid, per plans and specification, for the designed loads and required stabilization including the concentric layout.

Installing seventy-four (74) new piers and construction tieback brackets was the designed solution. ECS produced an angled guide sleeve to aid in the installation that allowed the crew to install the pier at a consistent angle in the field. From the non-linear layout and the alternating angle bracing, ECS needed to keep production downtime minimal while providing an attractive finished project. The boardwalk was elevated 4-6 feet above the terrain. The 3½”

steel shafts were utilized, as were single helix configurations. The only power equipment needed for installation was a Bobcat-mini excavator and a hydraulic drive head. Project length for preparing for the deck and handrail was five days. The project was completed in time for the Two Hundred-year anniversary of the Lewis and Clark Expedition ceremony crossing the Missouri River.



Home Office: 1154 Reco  
St. Louis, MO 63126  
1-800-536-5880