

HIH400 Hydraulic Hammer on Jacksonville Project



APE/J&M has sold an HIH400 to Hal Jones, shown at work on the Trout River Bridge test pile program near Jacksonville, Florida, on Monday May 9, 2005. **PDI** was present to operate and instruct the contractor on the E-Saximeter, and **GRL** was on site to instrument the pile. Observers included FDOT personnel and Parsons Brinkerhoff employees. The pile was 54" OD, 39" ID prestressed concrete (bed-cast, not spun). It was set into a template (as shown). The bell adaptor arms were set at 55" (dia), and a 38" (dia) inner guide was employed.

Florida DOT is expected to increasingly use this type of pile for bridge foundations rather than drilled shafts.

The hammer has the 80,000 lb forged ram, 12" thick (13,500 lb) striker plate and uses a new, all-hydraulic, J&M style spool valve control system (no electrics or timers). Operating and working on this hammer is very similar to a J&M 115 -> 275. Plywood cushioning rings were used to protect the pile head.

Thanks to the efforts of all, the hammer and E-Sax performed very well. The pile was driven about 50 feet into the ground stroking it about 50 times at 1 ft, and about 60 times at 2 ft. Blow rates were about 40-50 per minute, with maximum energy of ~150,000 ft-lbs. (Hammer will stroke 4.5 ft max.)

This marks an important milestone; a reasonably simple, easy-to-operate, and familiar control system has been adapted onto a large, US-made hydraulic hammer.