

## **Deep River Outfall Sewer** High Point, NC



## **PROJECT OVERVIEW AND CHALLENGES**

This project involved the utilization of two tunneling methods: hand mine drill & blast, and a TBM capable of mining through hard rock conditions. For the most part the 1,000' TBM run was self-supporting, but some of the weaker zones required rock bolts, roof channels, and even liner-plates for a short reach. Two drill and blast road crossings totaling 400' were completed on this job. Both drill and blast tunnels used horseshoe rib and board supports, with a 96" vertical ID. The TBM launch shaft was 30' in diameter & 50-feet deep and excavation support consisted of rib & board. The lower half of the shaft was drilled and blasted. The final lining consisted of 60" of Hobas pipe which was blocked in place and backfilled with fly-ash cement grout. Ground conditions primarily consisted of hard, crystalline metamorphic and igneous rock (gneiss and granite).





## **PROJECT INFORMATION - 430**

OWNER: City of High Point, NC Greg Hall 336.883.3168

ENGINEER: DMP Robert Davis, Project Manager 336.886.4821

**CONTRACTOR:** Thalle Construction Co., Inc.

**COMPLETION DATE:** 9/30/2005

**GEOLOGY:** Hard Gneiss, Granite Rock

EXCAVATION METHOD: Jarva TBM 82" Ø Hand Mine: Drill & Blast

MINING DIMENSIONS: 1,000' x 82" Ø; 400' x 96" Ø

**FINAL LINING:** 60" Hobas

## FOR MORE INFORMATION:

Eric Eisold, Vice President 410.970.8300 eeisold@bradshawcc.com Refer to Project 430