Carson Loop Water Main Replacement Phase VI-B
Leeds, AL

PROJECT OVERVIEW AND CHALLENGES

Bradshaw Construction Corporation completed a microtunnel drive crossing under an interstate and state highway in Birmingham, Alabama. The project consisted of 1,174 feet of 59 inch jacked steel casing for a 36 inch ductile iron water main. Ground cover under the highways ranged from 10 to 100 feet while shafts were an average of 22 feet deep. Mining conditions began with a mixed face of sticky clay and very soft shale all below the water table. The tunnel transitioned to a full face of sandstone with unconfined compressive strength (UCS) up to 19,470 psi. The biggest challenges of this project included microtunneling a long drive with small diameter casing through mixed-face and mixed-reach ground conditions.