



UNITED STATES

Fayetteville Outer Loop Fayetteville, NC

**Owner**

North Carolina Department of Transportation (NCDOT)

Engineer

NCDOT

General contractor

Balfour Beatty

Dates of work

2020/06 2020/06

Main figures

Wick drains

5,179 EA.



Description

Interstate 295 and North Carolina Highway 295, also known as the Fayetteville Outer Loop, is a partially completed Interstate-grade planned 34-mile bypass around the western side of Fayetteville, NC. The extensive, multi-phase, \$1 billion project (which commenced in 2003) is expected to be completed in 2026. The freeway improves connectivity between the US Army's Fort Bragg and I-95, as well as providing a new commuter route between the base and the city of Fayetteville.

The under-construction loop has been described by community leaders as vital in improving regional mobility and reducing traffic congestion in the region. The North Carolina Department of Transportation (NCDOT) is awarding design-build contracts on the project in phases.

Due to the compressible nature of the soils at the site, USW, a subsidiary of Menard Group USA, was contracted to provide wick drains for a proposed embankment in Phase 5 of the project.

Ground conditions

The soils consisted of silty clay, sandy clay and clay containing mica.

Solution

USW installed the wick drains through the silty and sandy clay. The wick drains served to reduce the amount of time required for the consolidation settlement to occur and also accelerate the strength gain of the clays as they were undergoing consolidation. More than 5,000 drains were installed, for a total of 116,779 LF.

To minimize the amount of post-construction settlement of embankment fills for a roadway in Fayetteville, NC, USW installed more than 5,000 wick drains. Work was completed in two weeks and met the client's requirement for quality, safety and schedule.