



Project Turnstile Data Center New Albany, OH

UNITED STATES



Owner
FaceBook

Engineer
Terracon Consultants, Inc.

General contractor
Turner Construction Co./George J. Igel & Co., Inc.

Dates of work
June 2020 August 2020

Main figures

Wick drains
21,275 EA.



Description

As part of a \$1 billion investment in New Albany, OH, Facebook proposed the construction of five new data centers. This construction project – known as Project Turnstile – is, by far, the largest in New Albany history. When complete, the built-out data campus, which is located 18 miles from state capital Columbus, will employ more than 150 people.

Having purchased more than 440 acres of land in the city's business park, further expansion by Facebook is possible in the future.

For the proposed, 500,000 sq-ft NAO56 building – the third to be built at the site – Menard USA was contracted to install wick drains that would accelerate consolidation of compressible clays beneath the fills settlement.

Ground conditions

The site consists of fill soils, some chemically stabilized, and cohesive overburden soils which were generally lower in strength at the lower site elevations.

Solution

Due to compaction requirements for newly placed fill, the general contractor chemically treated the fill with kiln dust to reduce moisture content. Pre-drilling was required prior to wick drain installation to ensure the drains would effectively penetrate the fill.

A total of 21,275 wick drains were installed to an average depth of 21 ft and a maximum depth of 40 ft. The wick drains were installed in order to expedite construction and limit long-term consolidation of the underlying clays that would result from the newly placed fill. Menard coordinated with the wick drain designer to determine the limits and depth of the wick drains. The ground improvement design – which also included aggregate columns (installed by others) – provided for 1 in of post-construction settlement, meeting the performance criteria of the new facility.

For the construction of a proposed, 500,000 sq-ft data center in New Albany, OH, Menard USA successfully installed 21,275 wick drains to accelerate consolidation of fill soils and to expedite construction and limit long-term settlement of the new facility.