Roads

IDOT Weber Road

Romeoville, IL

UNITED STATES

Owner
Illinois Department of Transportation/R.W. Dunteman Co.

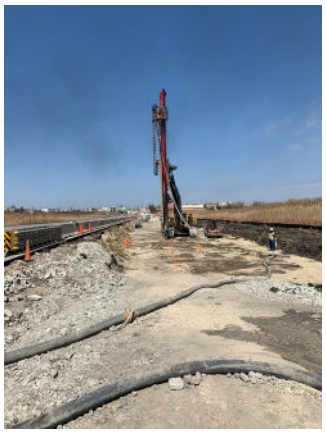
Engineer
Knight Engineers and Architects

General contractor
Judlau Contracting

Dates of work
2020/03 2021/03

Main figures

Controlled Modulus Columns
2,181 EA.



Description

Weber Road in Romeoville, IL, has the highest traffic volume in Will County, with more than 40,000 motorists using it daily. Will County's population has more than doubled during the past 35 years, and it is now the fourth most populated county in Illinois.

Given the region's steady growth, the Illinois Department of Transportation (IDOT) embarked on plans to update and upgrade Weber Road by constructing a new bridge and by adding a third lane in each direction between 135th Street/Romeo Road and 119th Street/Rodeo Road. The project also includes the creation of free-flow on- and off-ramps, updates to existing interchanges and ensuring safer travel for pedestrians and bikers. Completion of work is scheduled for 2024.

Due to the highly compressible nature of the soils at the site, Menard USA was contracted to provide ground improvement on the roadway approaching the I-55 bridge and ramp – the selected technique was Controlled Modulus Column (CMC)® rigid inclusions.

Ground conditions

The site is in a wetland area where runoff occurs from many directions. The soil contains organic material with a moisture content of more than 200 percent in some areas. The soil consists of weight-of-hammer clays, with organics 12-18 ft from the working surface followed by a limestone bedrock.

Solution

Menard provided an economical and timesaving solution by installing 2,181 CMCs in multiple phases to an average depth of 15 ft and a maximum depth of 40 ft. The design provided for 3 in of post-construction settlement, meeting the performance criteria of the new roadway.

A unique aspect of the project was that it passed through a broad, flat wetland called the Lily Cache Slough. The General Contractor deployed dewatering pumps throughout the site to establish a sufficient working platform. For Menard, it relied on previous experience with IDOT for its CMC rigid inclusion, work platform and load transfer platform designs to address concerns pertaining to the wetland and its potential effects. The site work area was very tight and access and equipment movement was limited.

This was the fourth project Menard has completed for IDOT in the last five years.