

Knox Borough needed to replace the wastewater treatment plant to comply with the Pennsylvania Department of Environmental Protection.

A variety of precast concrete products served as the optimal solution for the Borough.

The design for the new extended aeration plant called for two 45-foot (outside diameter) circular clarifier tanks and a 153-foot by 76-foot rectangular tank subdivided into chambers for aeration, digester, flow-splitter and return-activated sludge. Precast caps on the wall tops create a walkway around the tanks.

Mack Industries produced the precast concrete for the treatment plant, built it and installed the tanks and equipment.

Timing was a big challenge to meet DEP imposed deadlines. Using precast concrete products helped general contractor Global Heavy Corporation successfully navigate on-site space constraints while also allowing for a quicker installation.

Because the original plant remained operational during construction workers had to contend with space constraints. And making a safe conversion from the old system to the new one involved some logistics.

Mack Industries fabricated 130 precast wall panels, each measuring slightly more than 17 feet high and weighing about 10 tons. The 32 precast caps, which measured 4 feet 6-inches wide by 12 inches thick, were various lengths, depending on the chamber size.

Due to their large storage yard, Mack Industries has the capability of producing precast components ahead of time. With the number of slabs, panels and caps required for this project, there were several months of production, but everything was delivered, installed and completed within the project time frame.

TAKE A NEW LOOK AT PRECAST

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PRECAST CASE STUDY

PROJECT:
KNOX BOROUGH WASTEWATER
TREATMENT PLANT

LOCATION:
CLARION COUNTY, PA.

PRECAST MANUFACTURER
MACK INDUSTRIES, INC.
www.mackconcrete.com



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