Project Spotlight

Canton Viaduct I-895 over I-95 - Baltimore, MD

Foaming Agents and Technical Support Provided By Aerix Industries

Owner: Maryland Transportation Authority
Engineer: Whitman, Requardt & Assoc., LLP
General Contractor: Tutor Perini
Installer: Geo-Cell/Midwest

Background Information

Construction that involves mechanically stabilized earth structures present unique challenges, especially when a heavily trafficked interstate is involved. In 2019 the Maryland Transportation Authority (MDTA) broke ground on a reconstruction of the Canton viaduct bridge, which routed I-895 over I-95 in Baltimore, Maryland. This reconstruction would require high-performing products, skilled craftsmanship, and adherence to a tight construction timeline of 12 months.

Project Details

Given these challenges, the design team knew this project required a backfill product light weight enough to reduce the load placed on the soft subsoils, and strong enough to provide long-term stability and eliminate the need for compaction. With this in mind, they chose to use AERLITE-iX™, a non-permeable, Low-Density Cellular Concrete (LDCC) product manufactured by Aerix Industries™, to complete the backfill of the mechanically stabilized earth wall.

A three-person crew from Geo-Cell Midwest, LLC installed more than 20,000 cubic yards of LDCC at a density of 25-35 pcf per project specifications. The crew used 30-inch lifts to complete the installation, placing the LDCC over previously driven micropiles with a slab of traditional concrete. Due to the cold winter temperatures, the Geo-Cell Midwest crew used special care in mixing the LDCC, making sure to adjust the mixture as needed to facilitate a speedy and effective installation.

Aerix Added Value

The use of Aerix Industries non-permeable AERLITE-iX for the backfill portion of this project enabled speedy construction and provided the support needed for this heavily trafficked bridge. The product reduced the potential for future soil settlement, which ensured long-term stability for I-895. With industry-leading compressive strength and its extreme light weight, Aerix Industries AERLITE-iX is ideal for mechanically stabilized earth.