

# Project Spotlight

## SR 50 FL Lane Expansion - Ocoee, FL

Owner: Florida DOT  
Installer: MixOnSite

Design Engineer: AECOM  
Construction Monitoring: CDM Smith



### Background Information

Spanning the state of Florida just north of Orlando, Florida State Road (SR) 50 is a major thoroughfare for locals and tourists alike. Since it was built, this road has experienced significant settlement and restorative construction because it was placed on top of soft-soil organic deposits. When the Florida Department of Transportation (FDOT) decided to widen portions of SR 50, they knew the project would be unique and require creative engineering on segments to ensure long-term stability of the roadway.

### Project Details

The goal of this project was to widen 2.5 miles of SR 50 from four lanes to six, replace bridge culverts, install drainage ponds, improve intersections and add bike lanes to one of Florida's most heavily traveled roads. One of the unique challenges of this project was the need to reduce future road settlement. In light of this, FDOT chose to use Aerix Industries AERLITE non-pervious, low-density cellular concrete (LDCC) as the backfill product for the roadway.

The utilization of Aerlite LDCC reduced and eliminated the lateral loads upon the newly installed sheet-pile wall for long-term performance and reducing the loads on the soft organic deposits.

The three-person installation crew from MixOnSite installed 2,800 cubic yards of AERLITE LDCC using ready-mix trucks to hold the concrete slurry, which was provided by Prestige Concrete Products. The concrete was installed using 1-to-1 1/2-foot lifts at maximum thicknesses of 6 feet. The crew completed the LDCC installation during the early morning hours in order to reduce disruption to commuters and minimize potential traffic congestion. This schedule enabled the installation to be completed within five days, allowing the final steps of the road construction to begin on time.

### Aerix Added Value

The use of Aerix AERLITE on this project provided a unique solution to mitigate and unexpected conditions for a roadway that had experienced long-term settlement. With AERLITE, Florida SR 50 will provide safe, stable and now more efficient travel for Orlando's commuters and tourists.

