



HUR-99-13.77 Value Engineering

Huron County, Ohio

Client: Mosser Construction

Contact: Mike Ahten (419) 335-3230

Key Personnel:

Dave Traini, PE (PM)

Matt Cornett, PE

Peter Narsavage, PE

Project Cost:

\$1.2 Million Construction

\$26,500 Design

Year Completed:

May 2014 Construction

August 2013 Design

E.L. Robinson's Role:

Prime Consultant

VE Retaining Wall Design

E.L. Robinson Engineering (ELR) designed an innovative retaining wall as a value engineering change proposal for Mosser Construction and their client, The Ohio Department of Transportation - District 3. The original plans called for constructing a drilled shaft soldier pile wall to protect an exposed shale rock face from erosion. The original wall design was socketed into rock and supported by inclined rock anchors. However, the rock anchors were going to be very difficult to install because they were located 12 feet above the bottom of the wall and would require an expensive causeway fill or suspending the drill rig in the air with a crane. Additionally, since the wall would be backfilled, the rock anchors had to be stressed as the backfill was placed.

Working with Mosser Construction, ELR designed a precast concrete cantilever wall with a narrow footing width to stay within the project limits. Vertical rock anchor tie-downs were used to hold down the narrow footing and stabilize the wall. The vertical rock anchors were much easier to install and could be stressed as soon as the footing was cast. The precast wall solution saved 29 days and the total project savings was \$38,070.