35' High One Sided Tieless Forming, WOW!

Maui, Hawaii

Jonathan Corpuz	Project Mgr./Superintendent
Craig Okita	Concrete Superintendent
George Reinhardt	Sitework Superintendent
Glenn Galam	Carpenter General Foreman
Wilson Okamoto Corporation	Design Engineers
KSF Inc.	Structural Engineers
Garrett Holm	EFCO Territory Manager
Jason Thomas	EFCO Engineer
Paul Ford	EFCO Field Supervisor

> ***"The flexibility of EFCO's system allowed us to do it all. We formed one-sided walls, pre-cast forms, jumped retaining walls, and shoring beams. EFCO's flexibility provided us with a lower cost method for the various forming applications we encountered on this project."***

Jonathan Corpuz
Project Manager/Superintendent
Hawaiian Dredging

In the works for over 30 years, the construction for the realignment of the **Honoapiilani Highway** became a reality in hopes of providing much needed traffic relief to west Maui.

After three years of design work, construction began on the realignment of the Honoapiilani Highway or "Lahaina Bypass" in February 2009. The Hawaii Department of Transportation awarded the $77M project to **Hawaiian Dredging Heavy Civil Division of Maui, Hawaii** and the EFCO **E-BEAM**® and **SUPER STUD**® forming system was the forming system of choice for the two massive one-sided abutments.

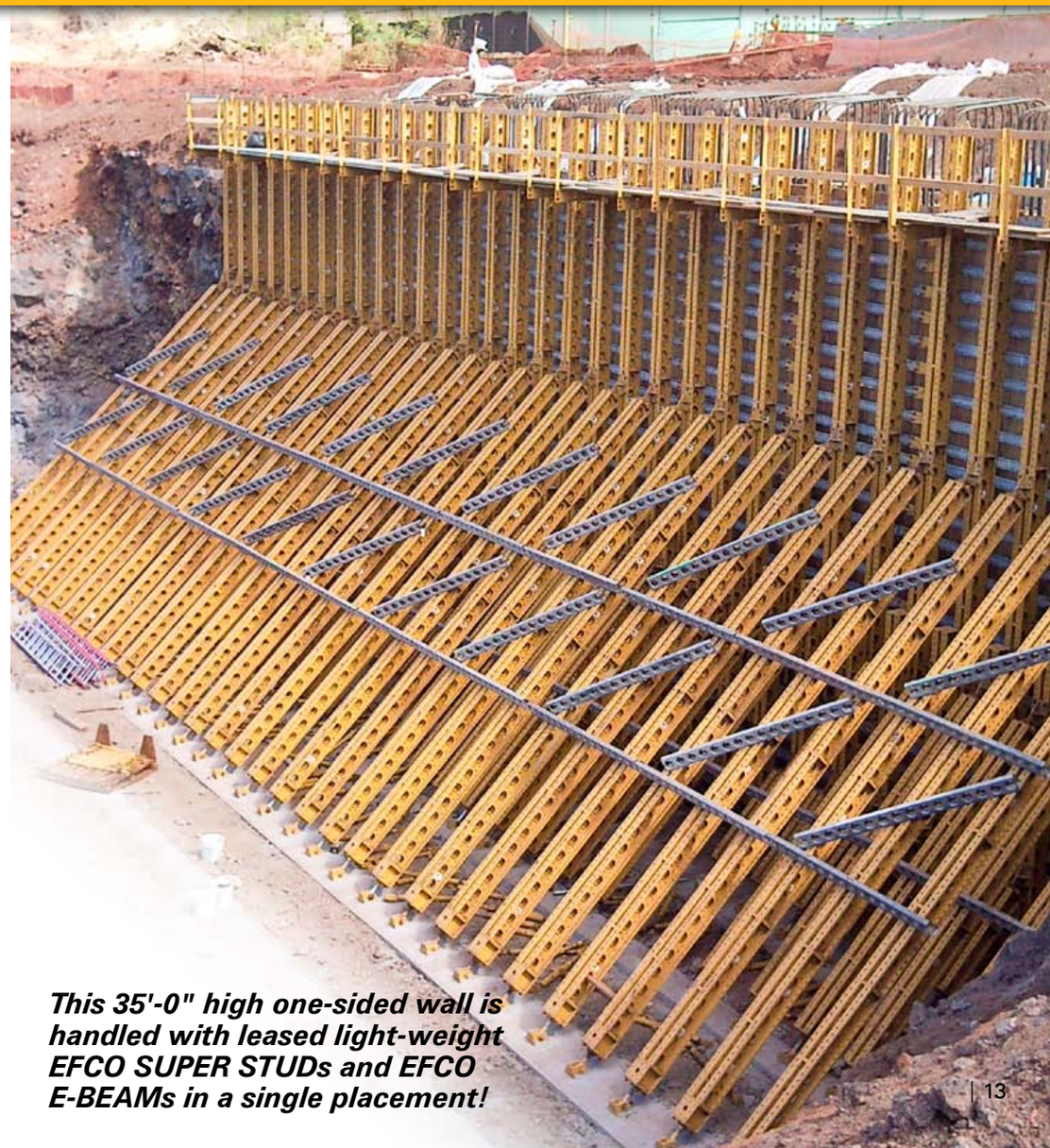
The project posed some very difficult challenges; hostile earth conditions were continuous as well as a requirement to maintain a harmonic balance with and around cultural, archeological, and public obstacles.

The largest abutment wall was 35'-0" (11 m) high x 83'-0" (25 m) long and was constructed against undependable volcanic rock sometimes with voids. EFCO provided a one-sided forming solution using **EFCO E-BEAMS** and **SUPER STUDS** to construct the wall forms with **SUPER STUD** diagonal braces to resist the horizontal and vertical forces as the forms sat on top of the base footing pour. The height of the wall and a barrier rail profile at the base created a large uplift force resisted by anchors installed through SUPER STUD hubs at the base of the wall. **The contractor poured the entire abutment in one day and was very pleased with the performance of the system.** Project Manager, Jonathan Corpuz commented; *"This is the best system I have ever used. I am amazed that at the top of the pour, we only had 1/8 of an inch movement and never needed to make any adjustments during the concrete placement."*

For the poured in place bridge deck portion of the project the EFCO **E-Z DECK**® shoring system with EFCO SUPER STUDS were used to support the precast 128'-0" (39 m) single span post tension split girders during the cross beams and deck structure placement.

The partnership between Hawaiian Dredging and EFCO continues and the success of each project is a testament to a good working relationship.

Bridge deck shoring with EFCO E-Z DECK and SUPER STUDs



This 35'-0" high one-sided wall is handled with leased light-weight EFCO SUPER STUDs and EFCO E-BEAMs in a single placement!