

TRULINE® SYSTEM PROVIDES SOLUTIONS FOR FAA AND ENVIRONMENT

Oakland, CA

PROJECT

Retaining wall to protect wetland at new air traffic control tower located at the Oakland International Airport in California.

ENGINEERS

Williams Simpson & Assoc., Devcon Construction, Inc., and Federal Aviation Administration

GENERAL CONTRACTOR

Devcon Construction, Inc.

RETAINING WALL CONTRACTOR

Foundation Constructors, Inc.

JOB DESCRIPTION

The Federal Aviation Administration needed a retaining wall at their new air traffic control tower at the Oakland International Airport. They faced a few challenges in constructing this wall that sent them searching for a new way to build it. They found their answer with Truline, the innovative hybrid sheet piling system, which provided a better way to build and protect reinforced concrete walls for longer service life.

The new tower was to be constructed adjacent to a protected wetland. The project required a 630 foot long retaining wall to prevent erosion and to contain a bioswale soil mass that would



Installing Truline sheets with vibratory hammer plate.

serve to filter contaminants from storm water runoff, prior to being discharged into the wetland.

The first issue they faced was constructing a wall that would require little or no maintenance due to the difficulty of getting permits in the future to enter the wetland to do so. In addition, they wanted to construct a wall that would last the 50+ years that they expected to use the new tower. Corrosive soil at the site, along with its close proximity to the San Francisco Bay, making saltwater exposure likely, seemed to make vinyl sheet pile the best choice to meet that need.

The second issue involved the limited wall installation space. The FAA intended for the tower to be LEED Gold

certified, which required that they capture, store and use rainwater for irrigation purposes. The plan was to bury large holding tanks behind the retaining wall. Due to the exposed height of the wall, installation of a traditional corrugated vinyl sheet piling wall would require several mid-walers and corresponding layers of earth anchor which would allow no room for installing the tanks. They needed a different solution. The answer was Truline.

OUTCOME

The Truline system consists of a permanent vinyl form that remains in place for the life of the wall and is filled with steel reinforced concrete.



Cast-in-place reinforced concrete wall installation.



JOB STORY

The hybrid system utilized the strength of the reinforced concrete to eliminate the need for the mid-walers and anchors clearing that space for installation of the holding tanks. And, because the Truline form remains a permanent part of the wall, it protects the concrete and steel from exposure to the corrosive soil and marine environment providing a maintenance free and longer service life that was initially desired.

With the strength of concrete and the extended service life of the Truline vinyl form, the FAA was able to implement their plan as designed.

RETAINING WALL CONSTRUCTION

Foundation Constructors installed 16 foot long sheet piles of the Truline 800 series. They were able to install the 630 LF wall within seven business days – averaging 90 LF installed per day. ■



Installing Truline sheets (showing radius).

TRULINE™

The Innovative Hybrid Sheet Piling System

A BETTER WAY TO BUILD AND PROTECT REINFORCED CONCRETE WALLS FOR LONGER SERVICE LIFE

*Efficiently Cast-in-Place Reinforced Concrete Walls
with Protective Truline Vinyl Form System*

PROVEN STRENGTH

Strength of reinforced concrete protected by Truline dual-interlocking vinyl form system

EFFICIENT INSTALLATION

Install as anchored or cantilevered in various soils or pin-pile in rock with standard, light-duty equipment

LONG SERVICE LIFE

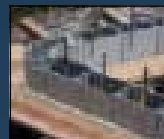
UV-resistant and durable material reduces the corrosive effects of saltwater on reinforced concrete in harsh marine environments

REFINED AESTHETICS

Appealing flat surface and available in three colors



800 Series U-Channel Part
12" wide x 8" deep



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