SUCCESS STORY

DAYTON SUPERIOR

Accubrace® Keeps Control Tower Grounded

The initial crane lift of the form being set.

A panel prior to removing the forms alongside two panels with forms removed.

SUMMARY

In October 2010, Oakland International Airport (OAK) broke ground on the construction of a 236-foot-tall air traffic control tower and a 13,000 square-foot base building. The new tower, funded through a $33.2 million American Recovery and Reinvestment Act (ARRA) grant, will replace the two air traffic control towers previously used by the airport.

The new tower, expected to be fully operational in 2013, improves the efficiency of air traffic control operations while increasing safety factors and providing the air traffic controllers improved visual contact with both private and commercial planes.

Devcon Construction, among California's most active and respected construction firms, was awarded the contract to oversee the construction. Dayton Superior joined the project planning efforts by working with the project's engineering team to develop a wall bracing strategy using Accubrace helical ground anchors and braces.

CUSTOMER

- General Contractor: Devcon Construction
- Concrete Sub Contractor: Berkeley Cement, Inc.
- Forming Sub Contractor: McClone Const. Co.
- **Engineering: Devcon Construction**

PROJECT

Oakland International Airport
Airport (Control Tower)

CHALLENGE

The project required anchoring high capacity braces to 40' tall forms. Using traditional deadmen structures would require more space than the site would allow. In addition, the expense that would be incurred to install and remove the deadmen would strain an already tight project budget.

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SOLUTION

Accubrace helical anchors were used in place of the deadmen. The system consisted of two pieces — a 7' helical anchor, and a connector. This bracing system achieved the loads required to match the wall brace loads up to 12,000# SWL. The helical anchors installed into the soil provided an economical method for support of the wall braces.

"The Accubrace System proved to be the best bracing solution. It saved money and time, yet offered strength and performance that exceeded expectations," said Tom Lutge, a structural engineer with Quake Structural Engineering, who assisted in the installation of the helical ground anchors. "The real test came when during construction, the San Francisco Bay area experienced a wind storm with gusts nearing 100 mph. The next day when we checked the site, the Accubrace system had withstood the significant force. Not one anchor or brace failed."

RESULTS

- Accubrace provided a significant time savings to the contractor by eliminating the need to form and pour a deadman with the required rebar, as well as remove and dispose after the bracing was removed.
- By using helical ground anchors, the contractor saved approximately 75% over the cost of using deadmen.
- **Accubrace offered strength and unparalleled performance, even in harsh conditions.**

RESOURCES

Learn more about Dayton Superior's Accubrace products at: daytonsuperior.com/accubrace

RELATED PRODUCTS FROM DAYTON SUPERIOR

- Accubrace wall and floor plates
- Accubrace standard transition brace connectors

Image courtesy of Transportation Nation (www.transportationnation.org).

Dayton Superior Accubrace Total Bracing System Product Specifications

- The system consists of two pieces — a 7'0" Helical Ground Anchor (HGA), and a connector
- Helical extensions for deeper installations are available
- The HGA brace achieves loads required to match wall brace loads up to 12,000# SWL and 15,000# SWL with the extension
- HGAs are utilized in place of "deadmen"

Additional product information is available online at www.daytonsuperior.com. Contact your Dayton Superior representative at 888-977-9600, or send an email to info@daytonsuperior.com if you would like to discuss how these or other innovative systems can make your construction projects more productive.