



RAM JACK[®]

2014 CASE STUDY

Type: Commercial | Issue: FL201401



TYNDALL AIR FORCE BASE HANGAR ON SOLID FOUNDATION

147 Helical Piles Reinforce
Air Force Hangar Deep in
Hurricane Country

RAM JACK LOCATION:

Ram Jack Solid Foundations

www.ramjacksf.com | 386-454-1920

High Springs, FL

TYNDALL AIR FORCE BASE | REPAIR

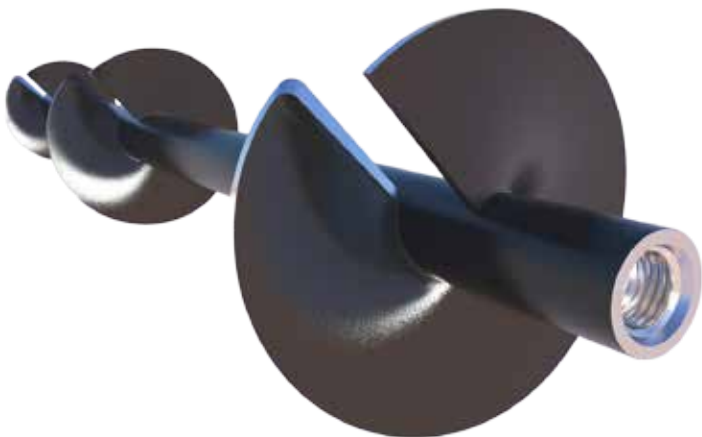
Panama City, Florida

CASE STUDY 2014

Panama City, Florida is hurricane country. Reaching up to 160 mph hour, hurricane winds off the Gulf of Mexico repeatedly damage structures in the region. Tyndall Air Force Base Hangar 4 is no exception. After repeated bouts with extreme weather, the US government called on Ram Jack Solid Foundations to restore and reinforce the foundation of the important government building.

PROBLEM

Originally designed with a hefty 7 ft. by 8 ft. steel reinforced foundation that anchored the structure to the ground, Hangar 4 rested on shallow soil atop ground water at the shallow depth of 6ft. -15 in. In addition to the problem of the shallow ground water, the site was considered contaminated by the Army's engineers due to years of exposure to aviation fuel. The structure, which was suffering from a settling foundation and serious damage, needed repair, but the site would need to be dewatered prior to underpinning the existing foundation. To make the issue even more complicated, all removed water and soil would have to be treated as an environmental hazard.



PROPOSED SOLUTION

Working with Army engineers and environmental specialists, Ram Jack Solid Foundations proposed the use of helical piles to level and stabilize the foundation while doing minimal damage to the environment. In addition, the foundation would be redesigned to counteract the wind loads and rebuilt in a manner that would not require dewatering the site.

OUTCOME

Ram Jack Solid Foundations installed almost 150 helical piles to an average depth of 28 ft. over the course of three weeks. While the installation professionals did encounter a few hiccups along the way that required redesign of the helical pile layout, the job was completed successfully. Tyndall Air Force Hangar 4 now rested on a solid foundation, and it was further fortified against the extreme weather conditions of the region.





- Engineered Foundation Solutions
- Products Manufactured in the USA
- 50+ Locations Nationwide



Recognized as Code Compliant to Meet International Building Codes



HELICAL PILE DESIGN SOFTWARE: FOUNDATION SOLUTIONS™

Create Profiles

- Simulate soil profiles, including peat
- Anchors with varying diameter and helix configurations
- Vertical/battered/tie-back pile design
- Custom pile design

Mobile-friendly

- Web-based software
- Use anywhere, anytime
- Tablet and PC-friendly

Share & Report

- PDF output for submittals
- Share projects with other registered users

RAMJACK FOUNDATION SOLUTIONS™

Helical Pile/Anchor

Estimated Pile Capacity:

Compression Results

Allowable Frictional Resistance:	9.08	kip
Allowable End Bearing Capacity:	25.92	kip
Allowable Pile Capacity:	35.0	kip
Appr. Pile Embedment Depth:	42	ft
Required Min. Installation Torque:	7800	ft-lbs

NOTE: The reported "Appr. Pile Embedment Depth" value to realize the required capacity is based on the assumed soil conditions and is not to be used for construction without approval by a registered user.

www.ramjack.com/FoundationSolutions
888-332-9909

