

Professional and Business Experience for Robert P. Queen:

Robert graduated from NC State University in May 1989 with a BS in Aerospace Engineering. He has been a registered Professional Engineer in NC since February 1994 and in SC since September 2006.



Robert worked as an aircraft structures and systems engineer for the US Navy/Marine Corps at the Naval Aviation Depot at Cherry Point, NC from October 1989 to March 1999. The first five years involved structural and system modifications to the various Navy/Marine Corps C-130 airframes. Modifications included increasing the gross weight carrying capability by removing and replacing the wings and landing gear structure, increasing range by modifying the fuel system to add external tanks and fuselage tanks, and adding JATO (Jet Assisted Takeoff) capability to the Blue Angels C-130 support aircraft. Many other modifications involved pneumatics, hydraulics, and electrical systems.

Robert then spent two years as a rotor system engineer on the V-22 Osprey. His primary responsibilities involved failure modes and effects analysis to create maintenance actions and intervals to prevent those failure modes from happening. Additional duties included finite element analysis of rotor system components.

Robert's final three years with the Navy were spent on the C-130 platform as the lead engineer for structural and system repairs. He supervised or performed numerous engineering investigations (forensic engineering), designed structural repairs, and initiated numerous aircraft safety and inspection bulletins. Robert was the recognized expert for structures and fuel systems for the Navy and Marine Corps C-130 fleet (over 100 aircraft with multiple variants). Robert also had the opportunity to work with a wide range of personnel including working level engineers, mechanics, program management, military officers, and private contractors.

In 1999, Robert started his own business as a custom residential builder in Shelby, NC. He was licensed as a builder in 1996 and completed several side projects before going full time in 1999. Robert built 18 new custom homes ranging from 1400sf to 7500sf and 23 additions or remodeling projects totaling \$7.7 million in revenue. He gained extensive experience in estimating, scheduling, and business practices. Robert left the construction industry in early 2006 due to economic indicators in the housing market.

Robert is now "full time" as a structural engineering consultant on residential projects. He primarily designs framing plans for large custom homes. Most projects are in the Charlotte area including Lake Norman and Lake Wylie. Other projects are located in high wind areas such as the mountains of NC and coastal areas of Charleston, SC. The average house square footage is around 6000sf. The largest project was over 15,000sf located on the beachfront in Charleston with an \$8 million budget for the house. Robert has also provided expert testimony in a home construction dispute.

Due to recent economic conditions, Robert began seeking other opportunities in late 2008 and discovered the diesel fuel additive industry. In his research, he discovered the need for an onboard additive injection system. Further research indicated that there was no "hands free" system available. Robert set out to develop such a system and the results are shown throughout this website.