

StS1 Course Description

The Federal Emergency Management Agency's National Urban Search and Rescue (US&R) Response System, in conjunction with the U.S. Army Corps of Engineers (USACE), schedules the Structures Specialist Training Course (StS1) yearly, usually during the last week in October. It is a 6-day course and is presented at the NASA Ames Research Center, Moffett Field, California. .

This very important training is offered to Task Force Structures Specialist (StS) candidates who have not previously taken StS1. Prerequisites for this course include: must have a current Professional Engineer's License (P.E.) and be practicing in some area of structural engineering. Students must also meet the requirements of his/her Task Force for local training and other participations. Students who are not a licensed P.E., but have been scheduled to sit for their Professional Engineer's exam, and have the support of their Task Force and Task Force StS, may also apply.

This course consists of a series of case studies, lectures, field exercises, and presentations of past rescue incidents. There are exercises and written examinations throughout the course. The StS candidate will be introduced to the concept of Rescue Engineering as compared to the "Normal" practice of Structural Engineering. The Rescue Engineer must act "Offensively" to provide timely information and alternatives to their Task Force, in order to reduce risk during life saving operations. The "Normal" Civil/Structural Engineer needs to act "Defensively", with greater deliberation in order to protect the public, and carefully comply with building codes.

Starting on Day 1 the StS1 student is exposed to the concepts of Rescue Engineering such as; Causes of Collapse, Critical Building Characteristics, Structural Collapse Patterns, and Hazard Identification. Following this we present mitigation methods such as: Monitoring, Shoring, and Rigging. Classroom learning is enhanced by field sessions that teach the use of Total Stations, GPS, Cranes and Rigging, as well as how to build FEMA Shoring.

The StS is also introduced to the personnel accountability system used in the FEMA National US&R Response System, as well as the "StS Forms" that are used to record Rescue Engineering practices.

On the final day the student is asked to evaluate several structures during tabletop exercise, in order to measure their readiness to become Structure Specialists.