

*An Introduction to:*  
**Florida Urban Search And Rescue's  
Structures Specialist Program**





## Florida Urban Search And Rescue's Structural Specialist Program

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### Program Mission Statement

To lend Structures Specialist expertise to situations and/or disasters requiring the immediate evaluation of structures with respect to damage assessment, mitigation systems to prevent failure, and/or extraction.

To maintain a staff of currently trained, FEMA qualified, and fully equipped structural specialists (StS) who stand ready to deploy for the purpose of providing these services.

To make this structural expertise available to municipal, regional, state and/or federal emergency agencies.



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### **Assignment / Responsibilities**

The Structures Specialist is responsible for performing the various structural assessments for the task force during incident operations. The Structures Specialist reports directly to the Planning Team Manager (or) Incident Commander as directed.

### Duties

The Structures Specialist is responsible for:

- Assessing the structural condition within the area of Task Force operations, which includes identifying structure types and specific damage and structural hazards.
- Recommending the appropriate type and amount of structural hazard mitigation in order to minimize risks to Task Force personnel while adhering to all safety procedures.
- Assisting in the development and implementation of Task Force action plans.
- Assuming an active role in implementing approved structural hazard mitigation plans as a designer, inspector, and possibly a supervisor.
- Coordinating and communicating the structural related hazard mitigation with SMT Structures Specialist.
- Monitoring assigned structures for condition changes while rescue and recovery operations are proceeding.
- Cooperating with and assisting other search and rescue resources.
- Providing accountability, maintenance, and minor repairs for all issued equipment.
- Performing additional tasks or duties as properly assigned during a mission.

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### Minimum Program Requirements

Individuals who meet the following requirements and criteria will be eligible to become Structures Specialists in the Florida USAR Response System. The intent of these requirements is to select personnel fully capable of providing competent assessments and advice to task force personnel in the urban disaster environment. The requirements and criteria for the position are identified in the following categories:

#### Knowledge

1. Knowledge of the appropriate types of structural hazard reduction methods for various types of collapsed structures
2. Knowledge of victim access methods, and of safe rescue practices and procedures
3. Comprehensive knowledge of building materials, to include:
  - Design and construction techniques for steel, wood, masonry and concrete (reinforced & unreinforced).
  - Knowledge of the behavior of structures under adverse loading conditions.

#### Skills

1. Currently licensed as a Professional Engineer or Engineering Intern (capable of licensure) specializing in structures or equivalent as sanctioned by both the FEMA US&R Operations Group and the Florida USAR system.
2. A minimum of 5 years experience in structure design and analysis to include evaluation of existing structures, field investigation or construction observation experience.

#### Abilities (see also general requirements)

1. The Structures Specialist must be able to identify features that allow for the determination of the condition of structures subjected to adverse loading from natural and man-made disasters.

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2. The Structures Specialist must be able to identify vertical load and lateral force resisting framing systems and is able to identify the critical elements within those systems.
3. The Structures Specialist must be able to identify failure indications of building materials.
4. The Structures Specialist must be able to identify building features that could provide entry or access to victims such as ducts, shafts, etc.
5. The Structures Specialist must be able to recommend practical solutions for USAR operations in compromised structures.

### Specialty Training

1. ***Must have completed all minimum training requirements as set forth by the respective task force.***
2. Must have completed the FEMA Structural Specialist 1 (StS1) Course.
3. Must have completed the FL-StS Hazards Marking course.
4. Must have completed Basic Rescue Modules consisting of Confined Space (entrant), basic Rope Rescue, Trench Rescue and HAZMAT Ops.
5. Must possess the required physical aptitude.



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### Minimum Training Summary

Title	Min. Level		Hours
<b>REQUIRED</b>			
Confined Space	*	Technician	24
Rope	*	Technician	80
Trench	*	Technician	24
Structure Collapse	*	Technician	40
CPR/AED	*	Professional Rescuer	8
StS		Specialist	40
FL USAR Forms	*	Technician	8
Haz Mat		Operational	24
SCBA		Operational	4
ICS		100, 200 & 300	24
<b>OPTIONAL</b>			
Heavy Lifting		Awareness	8
HERS	*	Technician	40
RIT		Awareness	8

\* May Require Recertification

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### Assignment Requirements

The purpose of this checklist is to define the duties and responsibilities of the Structures Specialist during a mission assignment. The list is intended to be a general summary of actions. It should be understood that:

- 1) Some required actions may not be listed, but must be identified and assumed by this position.
- 2) Some actions may be the primary responsibility of another Task Force position, but may require assistance and coordination from this position.
- 3) The actions are listed in a general chronological order, but may require deviation.

### UPON ACTIVATION / AT TASK FORCE POINT OF ASSEMBLY

- ❑ Gather data on building types, building construction, mode of damage, damage assessments, as well as other relevant data in the disaster area for the purposes of formulating action plans.
- ❑ Brief Task Force personnel on building construction and damage considerations to be anticipated in the affected area.
- ❑ Verify/Coordinate search marking procedures and protocols.

### ARRIVAL AT MOBILIZATION CENTER

- ❑ Identify cache supplies and equipment that should receive priority for initial movement to the assigned area. Assist as necessary in the departure to the assigned jurisdiction or incident site.
- ❑ Brief Rescue Manager, Search Manager, Safety Officer, and Heavy Rigging Specialists on relevant structural concerns.
- ❑ Determine coordination and communication protocol with the SMT Structures Specialist.
- ❑ Conduct training/refresher for Task Force personnel on search and structural marking procedures and protocols.

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### ON-SITE OPERATIONS

- ❑ Conduct structural triage of assigned structures in accordance with the ***StS Field Operations Guide***.
- ❑ Participate in search operations and/or search & reconnaissance deployments as directed. Brief SMT Structures Specialist on structural considerations, concerns and relevant observations.
- ❑ Mark building in accordance with the Structure/Hazards Evaluation and Search Assessment protocols.
- ❑ Gather appropriate building plans, etc. as available and coordinate with building representative and/or building department officials if available and appropriate.
- ❑ Coordinate with other Specialists:
  - Recommendation for areas requiring hazard mitigation with respect to shoring and bracing (using available materials) and/or the removal of structural components, hazards, and debris.
  - Discuss the most productive method of access relative to probable location of victims.
- ❑ Work with search and rescue personnel to determine the most appropriate course of action to gain access to victims. This would include:
  - Most appropriate routes to conduct searches.
  - Determine what structural materials are likely to be found while gaining access.
  - Effects of rescue operations on other building elements.
  - Special precautions required during breaching operations.
  - Special considerations of buildings with basements.
  - Advice on the placement of shoring and bracing material.
- ❑ Make recommendations for, and provide required structure monitoring of the assigned structures for changing conditions.
- ❑ Coordinate and communicate all activities with SMT Structures Specialist per established protocols.
- ❑ Keep the Planning Team Manager apprised of any tactical accomplishments or conflicts, supplies deficiencies, or equipment malfunctions.

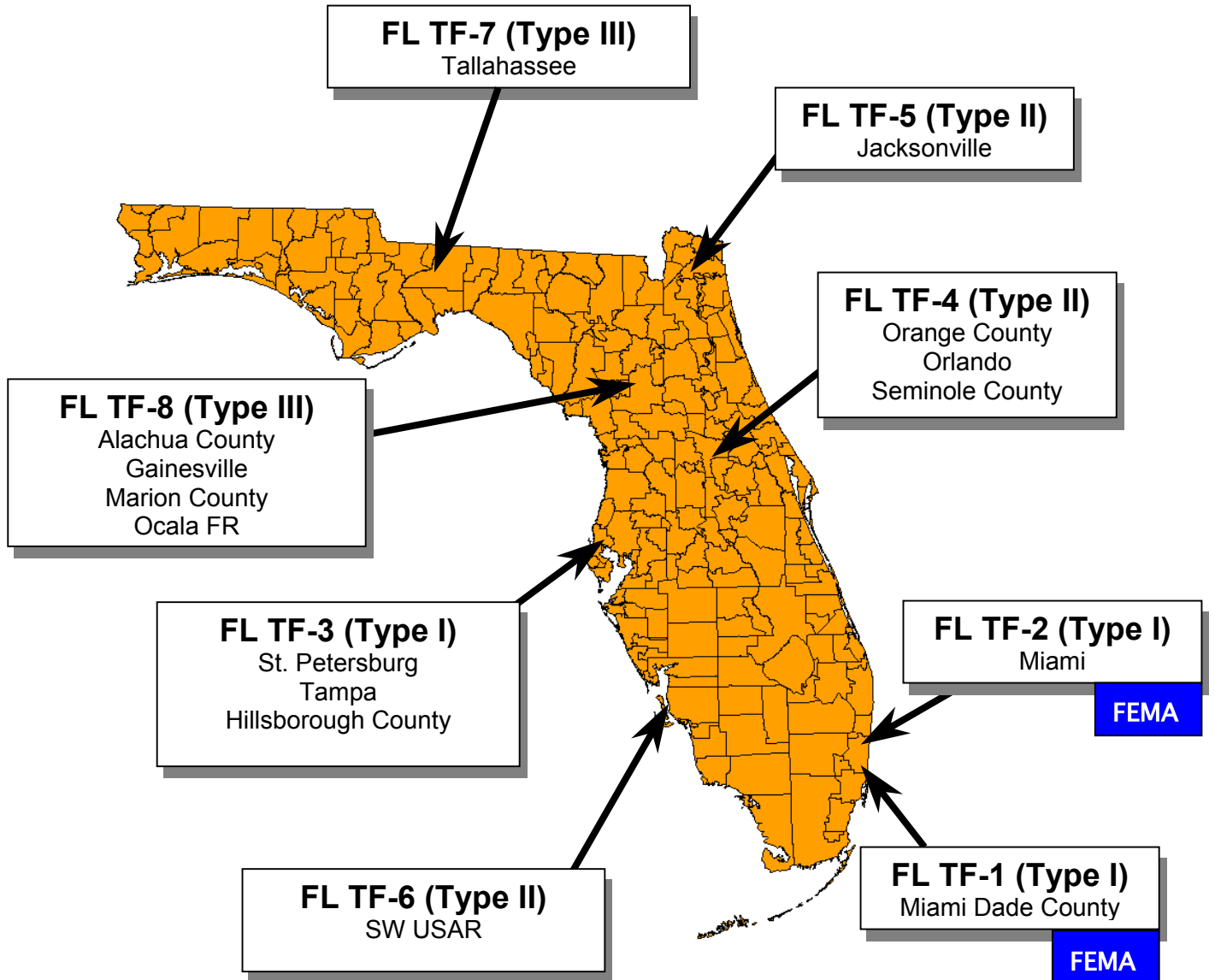
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# Florida Urban Search And Rescue's Structural Specialist Program

## Structures Specialist by Task Force and Affiliation



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