

## STRUCTURAL COLLAPSE RESCUE TEAM

<b>DESCRIPTION</b>	A Structural Collapse Rescue Team conducts rescue in collapsed structures and debris fields, both natural and human-caused.		
<b>RESOURCE CATEGORY</b>	Search and Rescue	<b>RESOURCE KIND</b>	Team

**OVERALL FUNCTION**

The Structural Collapse Rescue Team performs the following functions:

1. Provides rescue in a structural collapse environment for unaccounted individuals
2. Conducts search, rescue, and recovery in structural collapse technical rescue environments
3. Team provides medical care to include Basic Life Support (BLS)
4. Operates in environments with and without infrastructure, including those with compromised access to roadways, utilities and transportation, or medical facilities; and with limited availability of food and water
5. Operates within the Incident Command System (ICS)
6. Operates primarily for rescue and recovery to the nearest safe area for air rescue, ambulance or other transportation

**COMPOSITION AND ORDERING SPECIFICATIONS**

1. The mission location and operational environments such as size of structure and type of structure must be specified
2. This team is intended and equipped to conduct primary rescue of humans and animals from a structural collapse environment and deliver them to safe refuge
3. Type of animal rescue (e.g. livestock/equine, companion, avian, and non-domestic/exotic animals) must be specified
4. The need for additional specialized personnel (e.g. medical, animal, logistics, advisors, or helicopter support) must be specified
5. Operations in SAR environments may be recognized as immediately dangerous to life and health (IDLH), per ASTM International (ASTM) F2890 Standard Guide for Hazard Awareness for Search and Rescue Personnel. The requesting authority must consider the need for additional capabilities or endorsements
6. The need for additional vehicles, trailers, equipment, or supplies (fuel) must be specified
7. Equipment (hardware, software, ropes, victim evacuation devices, personal protective equipment (PPE), etc.) needed to accomplish operations must be specified
8. Specify heavy, medium or light operations when ordering:
  - a. Heavy is capable of rescue operations in heavy floor construction, pre-cast concrete construction, reinforced concrete, steel frame construction, and mass transportation rescue
  - b. Medium is capable of rescue operations in heavy wall construction, high angle rope rescue (not including highline systems), confined space rescue (permit required), non-reinforced concrete, trench, and excavation rescue
  - c. Light is capable of rescue operations in light frame, ordinary construction
9. The need to order heavy equipment such as cranes, aerial lifts (booms) and industrial style forklifts must be specified
10. Teams can work up to 12 hours per shift, are self-sustaining for 72 hours, and deployable for up to 14 days
11. The Agency Having Jurisdiction (AHJ) and resource must address, prior to deployment, certain needs, including:
  - a. Communications beyond the resource's intra-team communications (such as programmable inter-operable communications with Command, Logistics, military, etc.)
  - b. Contaminated environments, and related PPE, respiratory protection, clothing, and equipment
  - c. Logistics support needs for this resource (security or force protection, lodging, transportation, meals, etc.)

RESOURCE TYPES			TYPE 1	TYPE 2	TYPE 3	NO TYPE 4
COMPONENT	METRIC/ MEASURE	CAPABILITY				
Per Resource	Per Resource	Construction Type	Heavy	Medium	Light	Not Applicable
			<b>NOTES:</b> Not Specified			
Personnel	Per team	Total Minimum Personnel Quantity	6	6	5	Not Applicable
			<b>NOTES:</b> Not Specified			
Personnel	Per team	Management/ oversight quantities and job titles	Same as Type 2	1 - NIMS Type 1 Structural Collapse Rescue Team Leader	1 - National Incident Management System (NIMS) Type 1 Structural Collapse Rescue Team Leader	Not Applicable
			<b>NOTES:</b> Not Specified			
Personnel	Per team	Operations and Support	Same as Type 2	5 - NIMS Type 1 Structural Collapse Rescue Technicians	4 - NIMS Type 2 Structural Collapse Rescue Technicians	Not Applicable
			<b>NOTES:</b> Not Specified			

RESOURCE TYPES			TYPE 1	TYPE 2	TYPE 3	NO TYPE 4
COMPONENT	METRIC/ MEASURE	CAPABILITY				
Personnel	Per team	Specific Function/Capabilities	Same as Type 2 PLUS Conducts Rescue in Light, Medium, and Heavy construction, consistent with the UN INSARAG's US&R categories of structures: 1. Heavy floor construction	Same as Type 3 PLUS Conducts Rescue in Light and Medium construction, consistent with the UN INSARAG's US&R categories of structures: 1. Heavy wall construction 2. Concrete construction 3. Steel frame construction	Conducts Rescue in Light construction, consistent with the United Nations (UN) International Search and Rescue Advisory Group's (INSARAG) Guidelines and Methodology for Urban Search and Rescue (US&R) categories of structures: 1. Light frame construction 2. Performs thermal, optical, acoustical and audio search 3. Provides First Aid to include cardiopulmonary resuscitation (CPR) and automated external defibrillator (AED) 4. Confined space (permit -required, non-cave, non-mine)	Not Applicable
<b>NOTES:</b> Not Specified						

RESOURCE TYPES			TYPE 1	TYPE 2	TYPE 3	NO TYPE 4
COMPONENT	METRIC/ MEASURE	CAPABILITY				
Personnel	Per team	Common-Area Functions	Same as Type 3	Same as Type 3	1. Provides for the basic Incident Command System (ICS) functions: <ul style="list-style-type: none"> <li>a. Safety of their personnel and operations</li> <li>b. Medical care of their personnel and subjects</li> <li>c. Logistics: small repairs of small equipment and incident logistics support</li> <li>d. Plans team level tactics</li> <li>e. Plans camp shelter if needed</li> <li>f. Simple decontamination of personnel</li> <li>g. Basic ground support for helicopter operations and possibly greater</li> </ul> 2. Capable of using ground and water vehicles and aircraft for support	Not Applicable
			<b>NOTES:</b> Not Specified			

RESOURCE TYPES			TYPE 1	TYPE 2	TYPE 3	NO TYPE 4
COMPONENT	METRIC/ MEASURE	CAPABILITY				
Equipment	Per team	General Equipment	Same as Type 3	Same as Type 3	1. Communications 2. Access, search, rescue, recovery 3. Victim assessment, treatment, and evacuation 4. Vehicle support equipment 5. Ground support for air operations 6. Base and spike camp 7. Discipline-specific PPE, tools, respirators, and breathing apparatus	Not Applicable
<b>NOTES:</b> Not Specified						
Equipment	Per team	Rescue	Same as Type 2 PLUS: 1. Cutting torches 2. Rebar cutter 3. Shoring equipment	Same as Type 3 PLUS: 1. Breaching and breaking equipment 2. Air bags 3. Hydraulic jacks 4. Technical rope rescue equipment	1. Anchor plates 2. Brake rack 3. Carabiners 4. Pulleys 5. Ropes 6. Hand tools	Not Applicable
<b>NOTES:</b> Hand tools include shovels, gasoline or electric saws and bolt cutters. Breaching and breaking equipment includes sledgehammers and crowbars. Additional heavy equipment may need to be ordered such as cranes, aerial lifts (booms) and industrial style forklifts.						
Equipment	Per team	Victim Extraction System	Same as Type 3	Same as Type 3	1. Litter basket 2. Litter wheel 3. Adjustable bridle 4. Patient harness system	Not Applicable
<b>NOTES:</b> Not Specified						

RESOURCE TYPES			TYPE 1	TYPE 2	TYPE 3	NO TYPE 4
COMPONENT	METRIC/ MEASURE	CAPABILITY				
Equipment	Per team	PPE	Same as Type 3	Same as Type 3	Minimum PPE consistent with this resource's capabilities and needs, including: <ol style="list-style-type: none"> <li>1. Helmet(s), headlamp(s), batteries</li> <li>2. Eye and hearing protection</li> <li>3. Breathing protection</li> <li>4. Uniform/protective clothing</li> <li>5. Gloves</li> <li>6. Footwear</li> <li>7. Deployment/travel pack</li> <li>8. Initial attack pack</li> <li>9. Personal medical kit</li> <li>10. Survival Kit</li> <li>11. Other necessary field packs or gear</li> <li>12. Foul weather clothing</li> </ol>	Not Applicable
Vehicle	Per team	Transport	Same as Type 3	Same as Type 3	2 - Vehicles	Not Applicable

RESOURCE TYPES			TYPE 1	TYPE 2	TYPE 3	NO TYPE 4
COMPONENT	METRIC/ MEASURE	CAPABILITY				
Equipment	Per Team Member	Communications	Same as Type 3	Same as Type 3	1. Intra-team and Inter-team communications system 2. Programmable radios 3. Phone; cell or satellite, battery, charger 4. Battery chargers 5. Handheld Global Positioning System (GPS) unit(s) 6. Handi-mikes or earphones/headsets	Not Applicable
<b>NOTES:</b> Intra-team and inter-team communications are consistent with National Interoperability Field Operations Guide (NIFOG).						



## REFERENCES

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1. FEMA, NIMS 509-8: Structural Collapse Search Technician
2. FEMA, NIMS 509-8: Structural Collapse Rescue Technician
3. FEMA, NIMS 509-8: Structural Collapse Search Team Leader
4. FEMA, NIMS 509-8: Structural Collapse Rescue Team Leader
5. FEMA, NIMS 508-8: Structural Collapse Search Team
6. FEMA, NIMS 509-8: Canine Search Specialist, Disaster/Structural Collapse - Live
7. United Nations (UN) International Search and Rescue Advisory Group (INSARAG), Guidelines and Methodology, April 2012
8. American National Standard Institute (ANSI) A10.14 American National Standard for Construction and Demolition Operations - Requirements for Safety Belts, Harnesses, Lanyards and Lifelines for Construction and Demolition Use, latest edition adopted
9. ANSI Z359.1 American National Standard Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components, latest edition adopted
10. ASTM International (ASTM) F-2890-12 Standard Guide for Hazard Awareness for Search and Rescue Personnel, latest edition adopted
11. International Code Council (ICC), International Building Code
12. National Fire Protection Association (NFPA) 1983: Standard on Life Safety Rope and Equipment for Emergency Services, latest edition adopted
13. Occupational Safety and Health Administration (OSHA), 29 CFR 1910.120 (Code of Federal Regulations), Hazardous Waste Operations and Emergency Response
14. OSHA, 29 CFR 1910.146, Permit-Required Confined Spaces
15. OSHA, 29 CFR 1910.134, Respiratory Protection
16. U.S. Department of Homeland Security, National Interoperability Field Operations Guide (NIFOG), v 1.4, January 2011

## NOTES

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Nationally typed resources represent the minimum criteria for the associated component and capability. The AHJ may require additional capabilities and endorsements for unique working environments.