

GLOSSARY

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Electrical terms are listed separately at the end of the Glossary.

A

Acoustic Search Device Sensitive equipment used to listen for a victim's response in collapsed structure.

B

Brace Lacing Pieces of wood attached between components of shoring systems for stability.

Buddy System A safety procedure used in rescue work. When rescuers work in a hazardous area at least two rescuers must remain in contact with each other at all times.

Building Marking System Standardized system used to identify and document (on the actual structure), the location of victims and hazards within that structure.

C

Canine Search The use of disaster-trained search dogs and handlers for the location of victims.

Cantilever A type of collapse void in which one end of a floor or roof section which has collapsed remains suspended and unsupported.

Chain of Command The proper sequence of information and command flow as described in the incident command system.

Cleats/Scabs Small pieces of wood used to secure other parts of a shoring system.

Command Function of ICS that determines the overall strategy of the incident, with input from throughout the ICS structure.

Command Post (Cp) The physical location of the command component of the incident.

Compartment Syndrome An increase in pressure in the closed space of the muscle caused by tissue swelling that causes destruction of muscle fibers and nerves.

Crush Syndrome Complications resulting from blood toxicity that arise after an extremity or muscle mass has been compressed and circulation compromised for an extended period of time.

A sudden release of pressure allows the accumulated toxins in that area to flow into the bloodstream, producing damaging effects on other organs in the body, and possibly resulting in death.

E

Entombed Victim A victim who are trapped and pinned inside a collapsed structure by components of the fallen structure itself.

EOC Emergency Operations Centre — a centrally located facility where information is gathered / disseminated and response actions are determined during disaster and emergency situations. May be called a Disaster Operations Centre or Command Post in some areas.

Extrication Device used for spinal
Collar immobilization.

F

Fiber-Optic Search Device Very small camera on a flexible arm that allows viewing in a confined space with limited access.

H

Hailing Technique used during physical search; involves calling out to victims and listening for responses

Header Surface contact piece that collects load from uppermost area of a vertical shoring system.

Horizontal Strut Horizontal load-bearing timber placed between two wall plates in a shoring.

Hydration Adequate fluid intake.

Hypothermia Decreased body temperature.

Hypovolemia Decreased blood volume.

I

Incident Command System (Ics) The recommended method of establishing and maintaining command and control of an incident. It is an organized approach to incident management, adaptable to any size or type of incident.

Incident Commander (Ic) Individual responsible for a given incident under the incident command system.

Infrared Locating Device Search device which detects heat and may be useful in locating victims.

Inhalation Injuries Injuries as a result of the victim inhaling products other than the normal products of respiration—dust and hazardous atmospheres are the primary concerns in structural collapse situations.

Inspection Hole Small opening created by the rescuer in walls, roofs, floors, or other collapse debris. This opening is used to check for the presence of victims that may be in close proximity to where the breaching operations are progressing.

Intravenous Fluids Fluids administered directly into a vein or veins to maintain a patient's medications or hydration.

Intravenous Line (IV) Catheter placed in the victim's vein to allow fluid replacement and the administration of medications.

L

Lean-To A type of collapse void in which one end of a floor or roof section collapses while the other end remains secured to a wall.

Lightly Trapped Victims who are trapped by furniture or debris within a structure that has remained standing.

Likelihood of Survival Determination of whether there is a greater or lesser chance of survival for victims in a collapsed structure.

Logistics Function in the ICS responsible to see that the details necessary to sustain the incident are handled. This includes such areas as food, shelter, supply, and communications.

Long Backboard Board used to package patient with suspected spinal injury.

M

Mechanical Advantage Used in rope rescue and to lift heavy objects, this refers to the advantage created when levers, pulleys, and tools are used to make work easier.

Mechanism of Injury The forces placed on the victim's body by the collapse.

O

Occupancy Type Nature of business taking place in a given structure or area.

Operations A division of ICS responsible for deployment, direction, and coordination of resources involved in the tactical activities required to meet the strategic goals of the IC. The operations function is responsible for the actual rescue efforts throughout the incident.

Overlapping Rotation A tactic used during prolonged rescue operations. In order to maintain effectiveness of rescue operations, personnel should be rotated in and out of an assignment in an overlap fashion so that not all personnel are rotated at the same time.

P

Pancake A type of collapse void in which several floor and/or roof sections completely collapse and stack up on top of each other.

Physical Search Performed by rescuers without outside search-specific resources. It involves an organized approach to checking all areas of the structure. This is the most easily implemented type of search, as it can be done with available resources.

Plane of Weakness An area created by the rescuers in a wall or floor that is weaker than the surrounding structural material.

Planning Division of the ICS that assures that information is gathered, analyzed, and recorded, to assist the IC in the decision-making process. Planning is responsible for determining the effectiveness of current actions and recommending alternate strategies if the original plan doesn't work. Planning also documents the actions taken during an incident and provides technical expertise as required.

Pre-plan Information gathered and documented by organizations prior to an emergency. This information may exist as a result of a fire department's preplans, community building permit information, or information from an actual building involved, as well as information from involved architects and engineers.

R

Raker Diagonal strut which collects load delivered by the wall plate in a raker shoring system.

Rebar Steel bars that are placed inside concrete structural elements to reinforce and strengthen the element.

Reconnaissance (Recon) The process of gathering information regarding a specific situation.

S

Search	Techniques that allow the rescuer to identify the location of victims and to determine access to those victims in order to remove them to a safe area.	Staging Area	A location used to gather incoming resources, generally remote from the incident
Search Assessment	Search assessment and findings performed by search personnel.	Stokes Basket	Basket device—wire or plastic—used to remove a victim from an unstable environment such as a pile of rubble, structural collapse, or the upper floor of a building; may be used with a harness for lifting.
Secondary Collapse	A collapse that occurs after the initial collapse of a structure. There are many possible causes, but an aftershock (earthquake), the movement of structural members, or weather conditions are common causes.	Structural Engineer	Licensed professional engineer trained in structural stability.
Seismic Victim Locating Device	Detects minute vibrations and movement within a collapsed structure to help identify a victim's location.	Structural Instability	The degree to which the specific structure has lost its integrity
Shims	Wedges used in pairs to tighten up a shoring system	Structure Hazard Assessment	Assessment performed by structural engineer and hazardous materials specialist to determine the current condition of the structure.
Size-Up	The act of determining the magnitude of a disaster and the problems that must be solved in dealing with it. It is essentially triage (or sorting) of the situation.	Supplied Air Breathing Apparatus	A type of breathing apparatus which utilizes an air line to supply air to the user's face mask.
Sole Plate	Surface contact piece that distributes loads delivered by struts	Surface Hazards	Include debris on the ground, trip hazards, and unstable footing.
Spinal Immobilization	Stabilizing the victim's cervical spine (neck and back)	Surface Victims	Victims not trapped by the structure, usually found on top of structural debris. They may be injured from falling debris or by falling down.
	Severing of the spinal cord under the assumption, based on mechanism of injury or actual findings, that the victim has an injury.		
Spinal Precautions	Stabilizing the victim's cervical spine (neck and back) severing of the spinal cord.	Technical Search	The use of specialized equipment to locate victims. Examples of this equipment include seismic, acoustic, fiber-optic, and infrared devices.
		Type of Collapse	How the structure failed; this information is useful in determining possible victim locations and potential for additional collapse.

T

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ELECTRICAL TERMINOLOGY

U

Urban Search and Rescue (USAR) Search and rescue efforts involving structural collapse and other urban environments.

URM Unreinforced masonry.

V

V-type A type of collapse void in which a floor section fails at the centre and falls to the floor below. This results in two void spaces along the supporting out wall.

Vertical Strut Vertical load-bearing member which receives the load from the header in a vertical shoring system.

Void Space Empty space

Non-structural Entrapment Victims who are trapped inside a collapsed structure, pinned by furniture or debris, or whose means of escape have been eliminated.

Vulnerability Assessment The act of predicting what could possibly happen in the future within a given jurisdiction.

Wall Plate Collects and distributes the load from a weakened wall in a shoring system.

Alternating Current An electric current that has periodic changes in magnitude and in direction of the current

Ampere (amp) The unit of measurement for electric current in coulombs per second, or $(6.25 \times 10^{18}$ electrons) per second. One ampere results in a circuit that has a one-ohm resistance when one volt is applied to the circuit.

Current The flow of electrons, measured in amperes. One ampere results when one volt is impressed on a circuit that has a resistance of one ohm.

Direct Current Current in a circuit in one direction only.

Electricity A flow of energy produced by the flow of electrons through materials and devices under the influence of electromotive force produced electrostatically, mechanically, chemically or thermally

Ohm The unit of electrical resistance. A circuit component has a resistance of one ohm when one volt applied to the component produces a current of one ampere.

Volt (voltage) The unit of electromotive force that caused current when included in a closed circuit. One volt causes a current of one ampere through a resistance of one ohm.

Voltage Drop The difference in potential between two points caused by a current through an impedance or resistance.

Watt. The unit of electric power in joules per second equal to the voltage drop (in volts) times the current (in amperes) in a resistive circuit.



Photo Credit: Freepik

Collapsed Structure Search and Rescue (CSSR)

The purpose of the course is to provide individuals with collapsed structure rescue tasks with the knowledge and skills necessary to search for, stabilize and extricate victims trapped in collapsed structures using the safest and most appropriate procedures.



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