CHAPTER 15

URBAN SEARCH AND RESCUE

INTRODUCTION

The Urban Search and Rescue (US&R) organizational module is designed to provide supervision and control of essential functions at incidents where technical rescue expertise and equipment are required for safe and effective rescue operations. US&R incidents can be caused by a variety of events such as an earthquake or terrorist incident that cause widespread damage to a variety of structures and entrap hundreds of people. Other examples of US&R events can range from mass transportation accidents with multiple victims to single site events such as a trench cave-in or confined space rescue involving only one or two victims. US&R operations are unique in that specialized training and equipment are required to mitigate the incident in the safest and most efficient manner possible.

Initial Urban Search and Rescue operations will be directed by the first arriving public safety officer who will assume command as the Incident Commander (IC). Subsequent changes in the incident command structure will be based on the resource and management needs of the incident following established ICS procedures.

Additional resources may include US&R Companies and US&R Crews specifically trained and equipped for urban search and rescue operations. The US&R Company is capable of conducting search and rescue operations at incidents where technical expertise and equipment are required. US&R Crews are trained urban search and rescue personnel dispatched to the incident without rescue equipment. US&R Companies and Crews can be assigned as a single resource, grouped to form US&R Strike Teams or added to other resources to form a Task Force. US&R Single Resources, Strike Teams, and Task Forces are managed the same as other incident resources.

Due to the unique hazards and complexity of urban search and rescue incidents the Incident Commander may need to request a wide variety and amount of multi-disciplinary resources.

US&R Companies and Crews are "typed" based on an identified operational capability. Four levels of US&R operational capability have been identified to assist the IC in requesting appropriate resources for the incident. These levels are based on five general construction categories and an increasing capability of conducting a rescue at specified emergency situations with an identified minimum amount of training and equipment.

The US&R Type-4 (Basic) Operational Level represents the minimum capability to conduct safe and effective search and rescue operations at incidents involving non-structural entrapment in non-collapsed structures.

The US&R Type-3 (Light) Operational Level represents the minimum capability to conduct safe and effective search and rescue operations at structure collapse incidents involving the collapse or failure of Light Frame Construction and low angle or one-person load rope rescue.

The US&R Type-2 (Medium) Operational Level represents the minimum capability to conduct safe and effective search and rescue operations at structure collapse incidents involving the collapse or failure of Heavy Wall Construction, high angle rope rescue (not including highline systems), confined space rescue (no permit required), and trench and excavation rescue.

The US&R Type-1 (Heavy) Operational Level represents the minimum capability to conduct safe and effective search and rescue operations at structure collapse incidents involving the collapse or failure of Heavy Floor, Pre-cast Concrete and Steel Frame Construction, high angle rope rescue (including highline systems), confined space rescue (permit required), and mass transportation rescue.

The Regional US&R Task Force Level is comprised of 29 people specially trained and equipped for large or complex Urban Search and Rescue operations. The multi-disciplinary organization provides five functional elements that include Supervision, Search, Rescue, Medical, and Logistics. The Regional US&R Task Force is totally self-sufficient for the first 24 hours. Transportation and logistical support is provided by the sponsoring agency and may be supported by the requesting agency.

State/National US&R Task Force is comprised of 70 people specially trained and equipped for large or complex Urban Search and Rescue operations. The multi-disciplinary organization provides seven functional elements that include Supervision, Search, Rescue, Haz-Mat, Medical, Logistics and Planning. The State/National US&R Task Force is designed to be used as a "single resource." However, each element of the Task Force is modularized into functional components and can be independently requested and utilized.

Urban Search and Rescue incidents may occur that will require rescue operations that exceed a resource's identified capability. When the magnitude or type of incident is not commensurate with a capability level, the IC will have the flexibility to conduct rescue operations in a safe and appropriate manner using existing resources within the scope of their training and equipment until adequate resources can be obtained or the incident is terminated.

ICS MODULAR DEVELOPMENT

The flexibility and modular expansion capabilities of the Incident Command System provides an almost infinite number of ways US&R resources can be arranged and managed. A series of modular development examples are included to illustrate several possible methods of expanding the incident organization based on existing emergency conditions, available resources, and incident objectives.

The ICS Modular Development examples shown are not meant to be restrictive, nor imply these are the only ways to build an ICS organizational structure to manage Urban Search and Rescue resources at an incident. To the contrary, the ICS Modular Development examples are provided only to show conceptually how one can arrange and manage resources at an Urban Search and Rescue incident that builds from an initial response to a Multi-Branch organization.

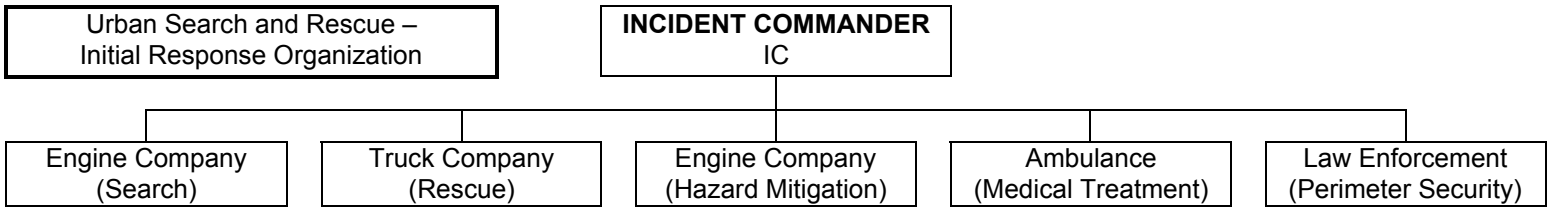
ICS MODULAR DEVELOPMENT EXAMPLES

Initial Response Organization (example): The first arriving Public Safety Officer will assume command of the incident as the Incident Commander (IC). The IC will assume all Command and General Staff functions and responsibilities and manage initial response resources. If the potential for escalation is low, then no specific ICS functional positions are established. If the incident requires an upgraded response, the IC should consider the early establishment of ICS positions. The following examples illustrate this modular growth of the ICS structure to keep pace with increased resource response.

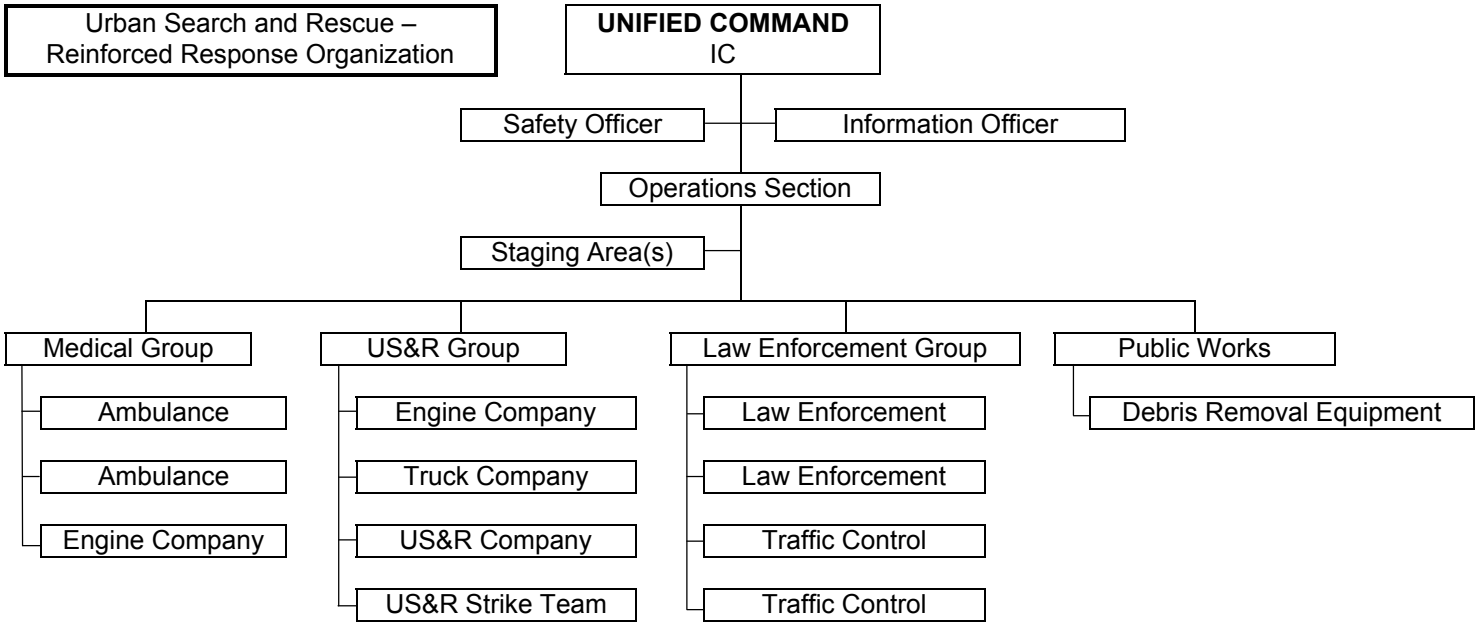
Reinforced Response Organization (example): In addition to the initial response, more Law Enforcement, local Engine and Truck Companies and Mutual Aid resources have arrived. The IC forms a Unified Command with the senior ranking Law Enforcement official on scene and has established a Safety Officer to assure personnel safety. A Public Information Officer has been assigned to manage the large media presence. An Operations Section has been assigned to manage the tactical assignments and responsibilities. A Staging Area is established to check in arriving resources. A US&R Group has been established to better coordinate the search and rescue efforts. Public Works is removing debris from the street to improve access and egress routes.

Multi-Group/Division Response Organization (example): The IC has added a Liaison Officer to the Command Staff to coordinate assisting agencies participation and assigned a Planning and Logistics Section. One US&R Technical Specialist who understands the unique complexities and resource requirements at US&R incidents is assigned to the Planning Section. The Operations Section has established several Groups and Divisions to better coordinate the large volume of diverse resources at the incident. A Law Group and Medical Group have been formed. One State/National US&R Task Force has arrived and is assigned to Division "A". One Structural Engineer Technical Specialist from the Planning Section is assigned to Division "B" to conduct structural damage assessment. A Handcrew Strike Team is assisting with debris removal.

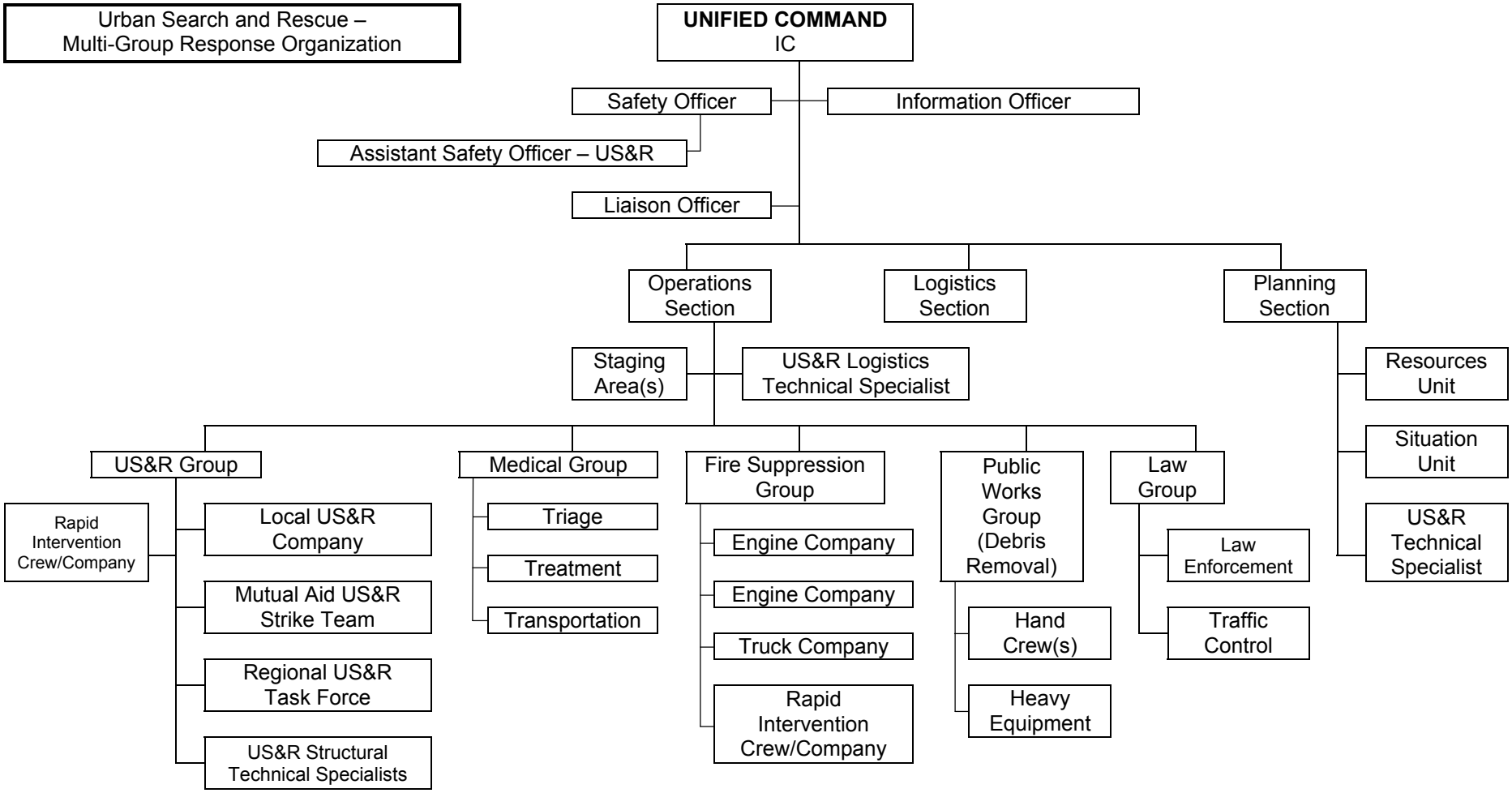
Multi-Branch Response Organization (example): The Incident Commander has assigned a Finance/Administration Section. The Operations Section has established five Branches with similar functions to better coordinate and manage resources. The Planning, Logistics and Finance/Administration Section have several Units operational to support the large amount of resources at the incident.



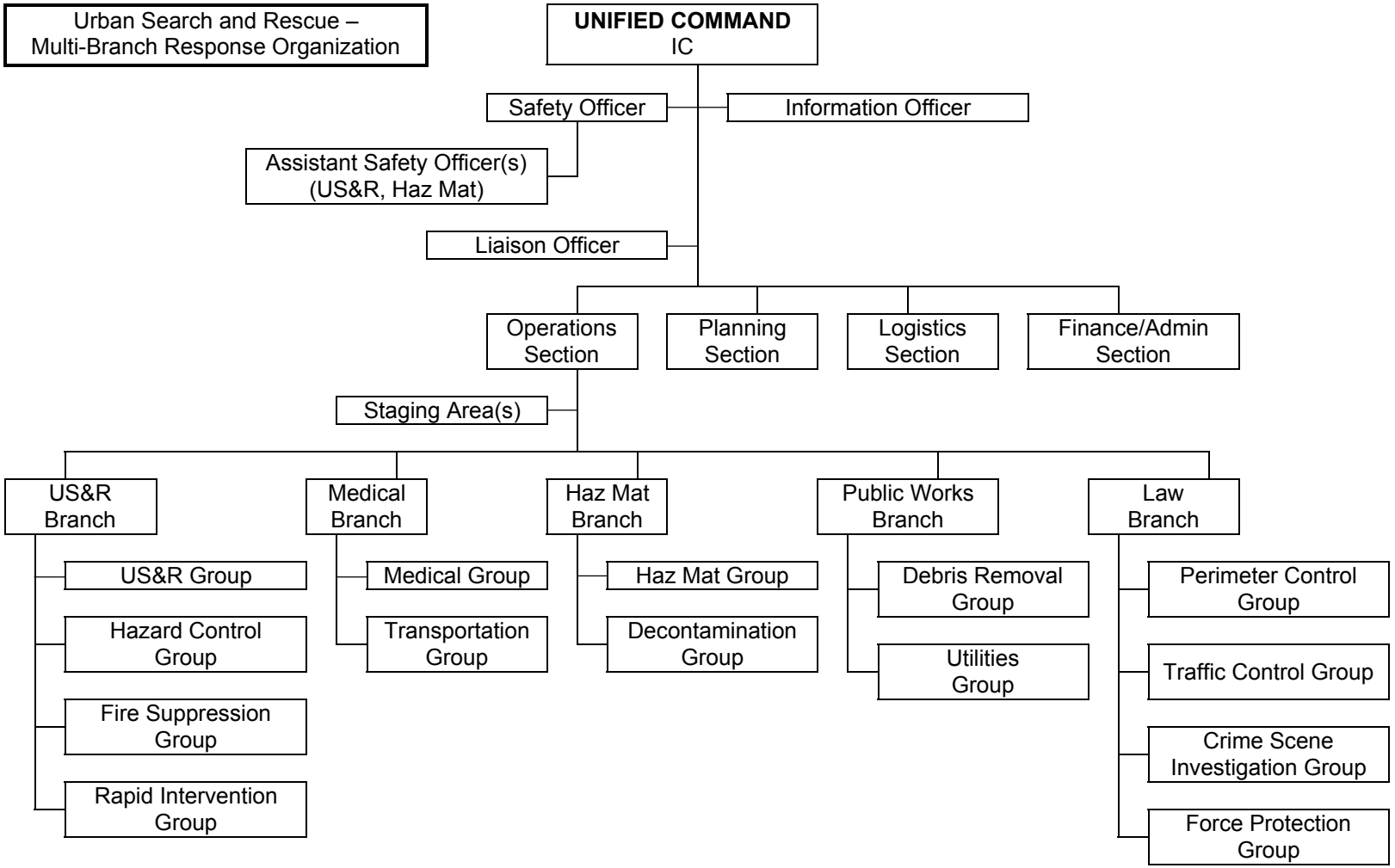
US&R Initial Response Organization (example): The first arriving Public Safety Officer will assume command of the incident as the Incident Commander (IC). The IC will assume all Command and General Staff functions and responsibilities and manage initial response resources. If the potential for escalation is low, then no specific ICS functional positions are established. If the incident requires an upgraded response, then the IC should consider the early establishment of ICS positions. The following examples illustrate this modular growth of the ICS structure to keep pace with increased resource response.



US&R Reinforced Response Organization (example): In addition to the initial response, more Law Enforcement, local Engine and Truck Companies and Mutual Aid resources have arrived. The IC forms a Unified Command with the senior ranking Law Enforcement official on scene and has established a Safety Officer to assure personnel safety. A Public Information Officer has been assigned to manage the large media presence. An Operations Section has been assigned to manage the tactical assignments and responsibilities. A Stating Area is established to check-in arriving resources. A US&R Group has been established to better coordinate the search and rescue efforts. Public Works is removing debris from the street to improve access and egress routes.



US&R Multi-Group Response Organization (example): The IC has added a Liaison Officer to the Command Staff to coordinate Assisting Agencies participation and assigned a Planning and Logistics Section. One US&R Technical Specialist who understands the unique complexities and resource requirements at US&R incidents is assigned to the Planning Section. The Operations Section has established several Groups and Divisions to better coordinate the large volume of diverse resources at the incident. A Law Group and Medical Group have been formed. A Regional US&R Task Force has been assigned to the US&R Group. One State/National US&R Task Force has arrived and is assigned to Division "A". One Structural Engineer Technical Specialist from the Planning Section is assigned to Division "B" to conduct structural damage assessment. A Handcrew Strike Team is assisting with debris removal.



US&R Multi-Branch Response Organization (example): The Incident Commander has assigned a Finance/ Administration Section. The Operations Section has established five Branches with similar functions to better coordinate and manage resources. The Planning, Logistics and Finance/Administration Section have several Units operational to support the large amount of resources at the incident.

POSITION DESCRIPTIONS

ASSISTANT SAFETY OFFICER – URBAN SEARCH AND RESCUE – Reports to the Incident Safety Officer as an Assistant Safety Officer and coordinates with the appropriate supervisor. The Assistant Safety Officer-US&R must possess the appropriate training to coordinate safety related activities for US&R operations. This position advises the appropriate supervisor on all aspects of health and safety and has the authority to stop or prevent unsafe acts.

a. Review Common Responsibilities.
b. Obtain briefing from the appropriate supervisor.
c. Participate in the preparation of and implement the Incident Safety Plan.
d. Advise the appropriate supervisor of deviations from the Incident Safety Plan (ICS Form 208) or any dangerous situations.
e. Has authority to alter, suspend, or terminate any activity that may be judged to be unsafe.
f. Ensure the protection of personnel from physical, environmental, and chemical hazards/exposures.
g. Ensure the provision of required emergency medical services for assigned personnel and coordinate with the Medical Unit Leader.
h. Maintain unit records, including Unit/Activity Log (ICS Form 214).

US&R CANINE SEARCH SPECIALIST – Reports directly to the Search Team Manager. The US&R Canine Search Specialist is responsible for performing the canine search function of the incident. Responsibilities include searching collapsed structures, water, debris piles, land and mudslides, or fire areas as assigned, using appropriate search techniques and dog handler skills. The US&R Canine Search Specialist is responsible for documenting locations of alerts and estimating the status of victims and cooperating with and assisting other search and rescue resources.

a. Review Common Responsibilities.
b. Obtain briefing from appropriate supervisor.
c. Accountable for all issued equipment.
d. Performs additional tasks or duties as assigned during a mission.
e. Maintain unit records, including Unit/Activity Log (ICS Form 214).

HEAVY EQUIPMENT AND RIGGING SPECIALIST – Initially reports to the Rescue Team Manager and may be assigned where their technical services are required. Responsible for performing construction related liaison to the rescue resources, and for assessing capabilities and the need for various heavy equipment.

a. Review Common Responsibilities.
b. Participate in the planning of rescue activities.
c. Adhere to all safety procedures.
d. Receive initial briefing from supervisor.
e. Carry out tactical assignments as directed.
f. Conduct an assessment of immediately available cranes and heavy equipment.
g. Inspect equipment condition for safe operation and insure coverage by equipment agreement.

h. Develop a contact list of equipment providers and establish a point of contact.
i. Evaluate and advise on heavy equipment staging area requirements.
j. Brief heavy equipment operators and construction officials regarding rescue operations.
k. Ensure that heavy equipment operators are briefed on rescue site safety considerations and emergency signaling procedures.
l. Identify various rigging techniques to assist in the rescue of victims or stabilization of collapsed buildings, including the development of rigging plans and procedures.
m. Coordinate rigging and heavy equipment utilization for rescue operations with equipment operators and rescue personnel.
n. Keep your immediate supervisor apprised of any tactical accomplishments or conflicts.
o. Participate in operational briefings.
p. Collect and transmit records and logs to Equipment Time Recorder and/or Rescue Team Manager at the end of each operational period.
q. Provide vendor evaluation to Documentation Unit.
r. Maintain unit records, including Unit/Activity Log (ICS Form 214).

US&R TOOL AND EQUIPMENT SPECIALIST – Reports directly to the US&R Task Force Leader. The US&R Tool and Equipment Specialist is responsible for sharpening, servicing and repairing all US&R tools and equipment.

a. Review Common Responsibilities.
b. Determine personnel requirements.
c. Procure items on site through coordination with Incident Logistics Section.
d. Establish tool inventory and accountability system (appropriate records and reports).
e. Maintain all tools in proper condition.
f. Assemble tools for issuance each operational period per Incident Action Plan.
g. Receive and recondition tools after each operational period.
h. Ensure that all appropriate safety measures are taken in tool conditioning area.
i. Procure equipment during the mobilization phase as directed.
j. Provide accountability and security of the Task Force equipment cache.
k. Maintain unit records, including Unit/Activity Log (ICS Form 214).

US&R MEDICAL SPECIALIST – Reports directly to the US&R Task Force Leader. The Medical Specialist is responsible for providing advanced life support medical care to responders and victims in environments that require special US&R training.

a. Review Common Responsibilities.
b. Provide emergency medical care to all Task Force personnel and victims in environments requiring specialized US&R training.
c. Develop and implement a medical action plan as specified by the US&R Task Force Leader.
d. Adhere to all safety procedures.
e. Provide accountability, maintenance and minor repairs of assigned medical equipment.
f. Perform additional tasks or duties as assigned during an incident.
g. Maintain unit records, including Unit/Activity Log (ICS Form 214).

RESCUE TEAM MANAGER – Reports directly to the US&R Task Force Leader. Is responsible for managing US&R Rescue Operations and supervising assigned resources.

a. Review Common Responsibilities.
b. Coordinate, manage, and supervise assigned rescue activities.
c. Adhere to all safety procedures including accountability of personnel.
d. Determine rescue logistical needs.
e. Receive briefings and situation reports and ensuring that all rescue personnel are kept informed of mission objectives and status changes.
f. Provide situation updates and maintain records and reports.
g. Perform additional tasks or duties as assigned during a mission.
h. Provide accountability, maintenance, and minor repairs for all issued equipment.
i. Maintain unit records, including Unit/Activity Log (ICS Form 214).

SEARCH TEAM MANAGER – Reports directly to the US&R Task Force Leader. The Search Team Manager is responsible for managing US&R Search Operations and supervising assigned resources.

a. Review Common Responsibilities.
b. Develop and implement the tactical search plan.
c. Adhere to all safety procedures including accountability of personnel.
d. Coordinate and supervise all assigned search activities.
e. Determine search logistical needs.
f. Receive briefing and situation reports and ensure that all search personnel are kept informed of status changes.
g. Maintain unit records, including Unit/Activity Log (ICS Form 214).

US&R TECHNICAL SEARCH SPECIALIST – Reports directly to the Search Team Manager. The US&R Technical Search Specialist is responsible for performing the technical search function of the US&R Task Force incident operations.

a. Review Common Responsibilities.
b. Search areas as assigned using appropriate electronic search equipment and techniques.
c. Document locations of possible finds and if possible, estimate the status of the victim(s).
d. Cooperate with and assist other US&R Resources.
e. Provide accountability for all issued equipment.
f. Perform additional tasks or duties as assigned during an incident.
g. Maintain unit records, including Unit/Activity Log (ICS Form 214).

US&R STRUCTURES SPECIALIST – Reports directly to the Search Team Manager or assigned supervisor. The US&R Structures Specialist is responsible for performing the various structure assessments during incident operations.

a. Review Common Responsibilities.
b. Assess the structural condition within the area of US&R operations. This includes identification of structure types, specific damage and structural hazards.

c. Recommend the appropriate type and amount of structural hazard mitigation required to minimize the risks to task force personnel.
d. Adhere to all safety procedures.
e. Cooperate with and assist other US&R Resources.
f. Provide accountability, maintenance, and minor repairs for all issued equipment.
g. Perform additional tasks of duties as assigned during an incident.
h. Monitor assigned structures for changes in condition during incident operations.
i. Actively participate in implementation of approved structure hazard mitigation as a designer and/or supervisor.
j. Coordinate and communicate structure hazard mitigation measures with the Search Team Manager.
k. Maintain unit records, including Unit/Activity Log (ICS Form 214).

URBAN SEARCH AND RESCUE RESOURCE TYPES

Always use the prefix US&R for Urban Search and Rescue (US&R) Resources.
Order Single Resource or Strike Team by Type (Capability – HEAVY, MEDIUM, LIGHT, OR BASIC)

	Type 1 (Heavy)	Type 2 (Medium)	Type 3 (Light)	Type 4 (Basic)
Type	• Heavy Floor Construction • Pre-cast Concrete Construction • Steel Frame Construction • High Angle Rope Rescue (including highline systems) • Confined Space Rescue (permit required) • Mass Transportation Rescue	• Heavy Wall Construction • High Angle Rope Rescue (not including highline systems) • Confined Space Rescue (no permit required) • Trench and Excavation Rescue	• Light Frame Construction • Low Angle Rope Rescue	• Surface Rescue • Non-Structural Entrapment in Non-Collapsed Structures

RESOURCE	RADIO	COMPONENT	TYPES			
			1	2	3	4
US&R Company	Agency Identifier USAR (phonetic) Number Identifier (*VNC USAR 54*)	Equipment Personnel Transportation	Heavy Inventory 6 *	Medium Inventory 6 *	Light Inventory 3 *	Basic Inventory 3 *
US&R Crew **	Agency Identifier Type Identifier Number Identifier (*KRN-USAR Crew 2*)	Personnel Trained To Appropriate Level Supervision Transportation	6	6	3	3
Regional US&R Task Force	Region Identifier Task Force Number Identifier (*R1-TF 1*)	Equipment Personnel Transportation	A Regional US&R Task Force is comprised of 29 persons specially trained and equipped for Urban Search and Rescue Operations. The Regional US&R Task Force is staffed by personnel from either the Region or Operational Area.			
State/National US&R Task Force	State ID Task Force Number Identifier (*CA-TF 5*)	Equipment Personnel Transportation	A State/National US&R Task Force is comprised of 70 persons specially trained and equipped for large or complex Urban Search and Rescue Operations. The multi-disciplinary organization provides seven functional elements that include Command, Search, Rescue, Haz-Mat, Medical, Logistics and Plans. These Task Forces are self sufficient for 72 hours.			

*Requests should include vehicle capabilities when necessary (i.e., four wheel drive, off-road truck, etc.)
**The agency/department sending the US&R Crew will identify the Supervisor.

URBAN SEARCH AND RESCUE STRIKE TEAM TYPES AND MINIMUM STANDARDS

	Strike Team Types	Number/Type	Minimum Task Capabilities	Strike Team Leader	Per Single Resource	Total Personnel
Kind U S & R C O M P A N Y	AR	2 – Type 1 (Heavy)	Vehicle(s) equipped for Heavy Floor Construction, Pre-Cast Concrete Construction, Steel Frame Construction, high angle rope rescue (including highline systems), confined space rescue (permit required), and mass transportation rescue	1	6	13
	BR	2- Type 2 (Medium)	Vehicle(s) equipped for Heavy Wall Construction, high angle rope rescue (not including highline systems), confined space (no permit required), and trench and excavation rescue	1	6	13
	CR	5 – Type 3 (Light)	Vehicle(s) equipped for Light Frame Construction and low angle rope rescue	1	3	16
	DR	5 – Type 4 (Basic)	Vehicle(s) equipped for surface rescue and non-structural entrapment in non-collapsed structure	1	3	16

Kind U S & R C R E W	GR	2 – Type 1 (Heavy)	Trained for Heavy Floor Construction, Pre-Cast Concrete Construction, Steel Frame Construction, high angle rope rescue (including highline systems), confined space rescue (permit required), and mass transportation rescue	1	6	13
	HR	2 – Type 2 (Medium)	Trained for Heavy Wall Construction, high angle rope rescue (not including highline systems), confined space (no permit required) and trench and excavation rescue	1	6	13
	IR	5 – Type 3 (Light)	Trained for Light Frame Construction and low angle rope rescue	1	3	16
	JR	5 – Type 4 (Basic)	Trained for surface rescue and non-structural entrapment in non-collapsed structures	1	3	16

R = Urban Search and Rescue Resource

US&R SEARCH TEAM TYPES

Search element qualifications and equipment are equivalent on all Canine Types. The differentiating factor is based on the training and certification levels of the canine component. Canine Search Teams will have met all of the capabilities of the preceding types.						
RESOURCE	RADIO	COMPONENT	TYPES			
			1	2	3	4
US&R Canine Search Team	Canine Search Team Number identifier (*Canine Search Team 1*)	Personnel (2) Canine (2) Search Team Manager (1)	• Detections in largest search areas • Detection ability amidst numerous distractions	• Detection in limited sized areas • All general construction categories • Extensive obstacle agility	• Light Frame Construction • Confined areas	• Surface Rescue • Non-structural entrapment in non-collapsed structures • Obstacle agility
US&R Technical Search Team	Technical Search Team Number identifier (*Tech Search Team 1*)	Personnel (2)	• Audible and optical search equipment to conduct technical search			

TECHNICAL SEARCH TEAM

Kind	Type	Technical Search Strike Team Capability	Strike Team Leader	Technical Search Team	Total Personnel
AT	1	Detection of victims entombed in collapsed or failed structures and environmental mishap with Technical Search equipment	1	2	3

SEARCH TASK FORCE

Resource	Radio Designation	Components	Capabilities	Total Personnel
Search Task Force	Search Task Force	1 – Search Team Manager 1 – Technical Search Team 1 – Canine Search Team	Detection of victims entombed in collapsed or failed structures and environmental mishap with canines and Technical Search equipment.	5

URBAN SEARCH AND RESCUE CANINE SEARCH TEAMS

Search element qualifications and equipment are equivalent on all Canine Types. The differentiating factor is based on the training and certification levels of the canine component. Canine Search Teams will have met all of the capabilities of the preceding types.				
Resource	Type 1	Type 2	Type 3	Type 4
US&R Canine	• Detections in largest search areas • Detection ability amidst numerous distractions	• Detection in limited sized areas • All general construction categories • Extensive obstacle agility	• Light Frame Construction • Confined areas	• Surface rescues • Non-structural entrapment in non-collapsed structures • Obstacle agility

OES LAW ENFORCEMENT CANINE RECOVERY TEAMS

Search element qualifications and equipment are equivalent on all Canine Types. The differentiating factor is based on the training and certification levels of the canine component. Canine Search Teams will have met all of the capabilities of the preceding types.			
Resource	Type 1 Cadaver Basic	Type 2 Live or Deceased	Type 3 Water
Law Enforcement Canine	• Body above ground • Sub-surface disarticulated • Hanging • Simple structure	• Body above ground • Hanging • Live person, must be area certified • Status of subject unknown	• Submerged • Floating • Shoreline

HEAVY EQUIPMENT RESOURCE TYPING

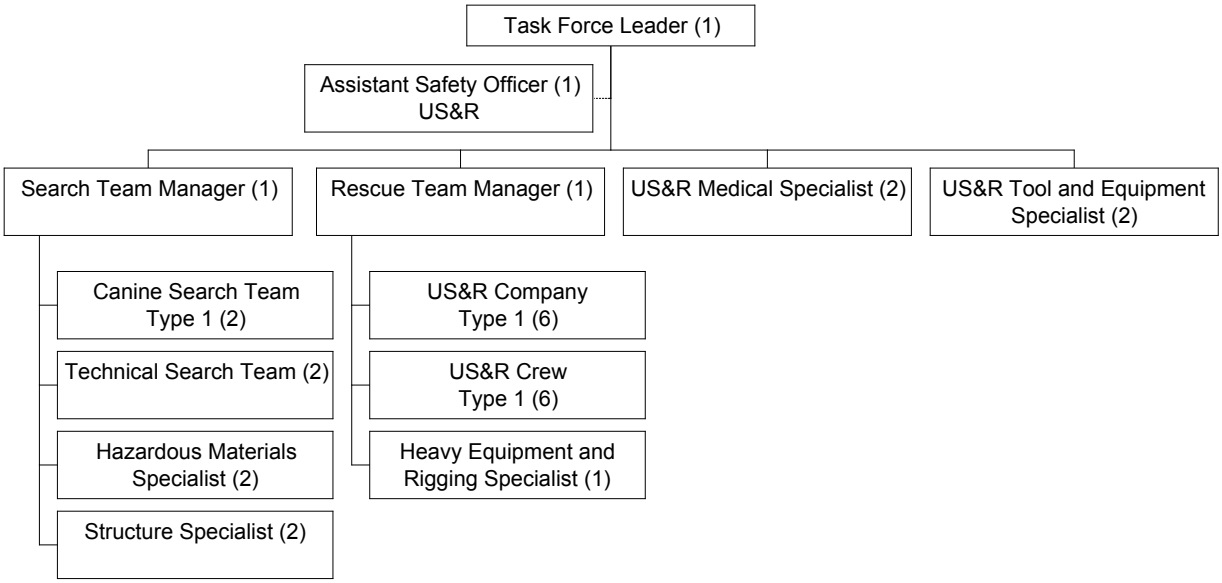
RESOURCE	COMPONENT	TYPE			
		Type 1	Type 2	Type 3	Type 4
Hydraulic Truck Crane	Rating (Tons) Radius (Feet)	100 ton+ Up to 275 feet	50-100 ton Up to 200 feet	Up to 50 ton Up to 150 feet	
Hydraulic Rough Terrain Crane	Rating (Tons) Radius (Feet)	Up to 50 ton Up to 100 feet			
Conventional Truck Crane	Rating (Tons) Radius (Feet)	150 ton+ Up to 300 feet	75-150 ton Up to 250 feet	Up to 75 ton Up to 150 feet	
Conventional Crawler Crane	Rating (Tons) Radius (Feet)	350 ton+ Up to 350+ feet	100-350 ton Up to 275 feet	Up to 100 ton Up to 160 feet	
Excavator Crawler	Rating (Lbs.) Reach	80k lbs.+ Up to 70 feet	40-80k lbs. Up to 50 feet	Up to 40k lbs. Up to 40 feet	Mini
Loader Rubber Tire	Rating (Cubic Yards)	5 cubic yards	3-5 cubic yards	1-3 cubic yards	Backhoe Skid Steer Mini
Forklift Conventional	Rating (Tons)	25 ton+	10-25 ton	5-10 ton	
Forklift All-Terrain Extendable	Rating (Lbs.)	3-6 tons (6-12k lbs.)			

REGIONAL US&R TASK FORCE

The Regional US&R Task Force Level is comprised of 29 people specially trained and equipped for large or complex Urban Search and Rescue Operations. The multi-disciplinary organization provides five functional elements that include Supervision, Search, Rescue, Medical, and Tool/Equipment Support. The Regional US&R Task Force is totally self-sufficient for the first 24 hours. Transportation is provided by the sponsoring agency and logistical support will normally be provided by the requesting agency.

A Task Force Leader supervises the Regional US&R Task Force. An Assistant Safety Officer is attached to the Task Force, and upon arrival at the incident, will be supervised by the incident's Safety Officer. The Assistant Safety Officer will work directly with the Task Force Leader and will be assigned to the Task Force's area of operation. The US&R Task Force Search element includes Canine and Technical Search capabilities. The Task Force Rescue element includes a Type 1 US&R Company (personnel and equipment), a Type 1 US&R Crew (personnel), and a Heavy Equipment and Rigging Specialist. This element can conduct rescue operations in all types of structures. The Task Force Medical element is responsible for the care and treatment of injured Task Force members or victims if such care must occur in the hazard area. The Medical element will work within the Incident Medical Unit or directly assigned to the Regional Task Force as appropriate. The tools and equipment support element works within the Task Force for tool and equipment repair and maintenance, and will coordinate with the Incident Logistics Section for acquisition of tools and equipment from off-incident locations.

REGIONAL US&R TASK FORCE ORGANIZATION CHART



29 POSITIONS
12-HOUR OPERATIONAL CAPABILITY

STATE/NATIONAL US&R TASK FORCE

The Federal Government, through the Federal Emergency Management Agency (FEMA), under the Department of Homeland Security (DHS), has established several State/National Urban Search and Rescue (US&R) Task Forces throughout the nation. All US&R Task Force activities are coordinated through the State Office of Emergency Services (OES) who serves as the primary point of contact for FEMA/DHS. A US&R Task Force is also a State resource that can be acquired without a request for Federal assistance. All requests for a US&R Task Force must go through normal Mutual Aid request procedures. A full, 70-person, Type I, National US&R Task Force is able to deploy within six hours of activation.

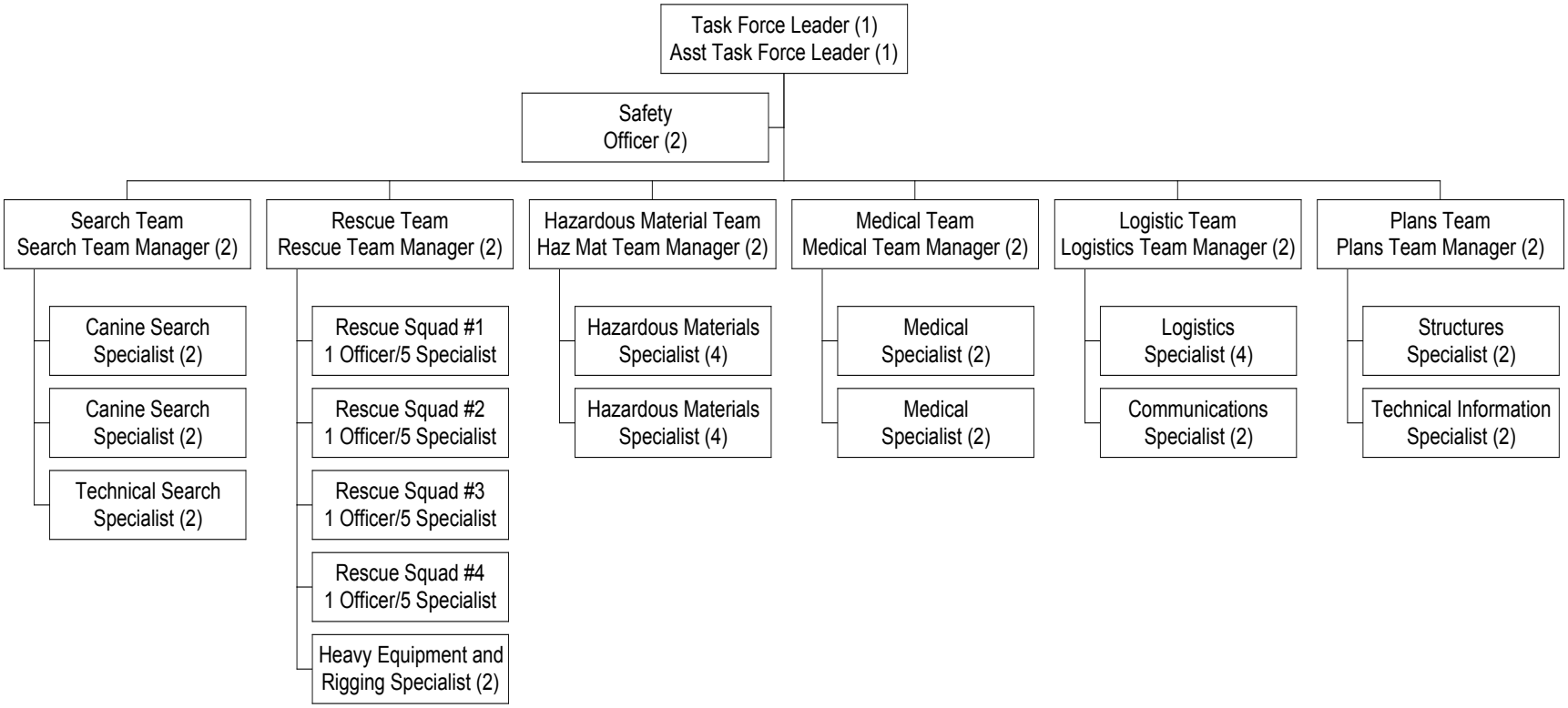
Each State/National US&R Task Force is comprised of 70 persons specifically trained and equipped for large or complex Urban Search and Rescue Operations. The multi-disciplinary organization provides seven functional elements that include Supervision, Search, Rescue, Haz Mat, Medical, Logistics and Planning. The State/National US&R Task Force can provide round-the-clock Urban Search and Rescue Operations (two 12-hour shifts). The US&R Task Force is totally self-sufficient for the first 72 hours and has a full equipment cache to support its operation. Transportation and Logistical support is provided by either State or Federal resources.

A Task Force Leader supervises the State/National US&R Task Force. The US&R Task Force Search element includes physical, canine and electronic capabilities. The Rescue element can conduct rescue operations in all types of structures. The Haz Mat element is primarily responsible for the detection and decontamination of Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) substances for Task Force members and entrapped victims. The Medical element is primarily responsible for the care and treatment of Task Force members and entrapped victims during extrication. The Logistics element provides the Task Force with logistical support and communications. The Planning element provides personnel competent in structural integrity assessments and documentation of Task Force activities.

The State/National US&R Task Force is designed to be used as a Single Resource, but is modularized into functional elements that can be independently requested and utilized. However, once mobilized as a State/National US&R Task Force, the elements shall remain under the supervision of the US&R Task Force Leader.

A Federal US&R Incident Support Team (IST) coordinates the arrival of a State/National US&R Task Force. The IST is capable of providing overhead management and logistical support to the US&R Task Force while on deployment if an ICS organization is not in place. If an ICS organization is in place, the IST will integrate into that organization. State/National US&R Task Forces will work within the local incident command organization.

STATE / NATIONAL US&R TASK FORCE ORGANIZATION CHART



70 POSITIONS
24-HOUR OPERATIONAL CAPABILITY
SELF SUFFICIENT FOR 72-HOURS

STRUCTURE/HAZARDS MARKING SYSTEM

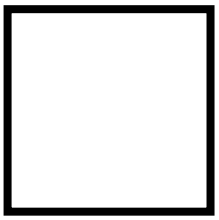
At incidents involving several structures or large areas of damage, the identity and location of individual structures is crucial. The use of existing street names and addresses should always be considered first. If due to damage this is not possible, use the existing hundred block and place all even numbers on one side of the street and all odd numbers on the other side. Mark the new numbers on the front of the structure with orange spray paint. If due to damage the name of the street is not identifiable start with the letter “A” using the phonetic alphabet “Alpha”, “Bravo”, Charlie, etc.

Structure hazards identified during initial size-up activities and throughout the incident should be noted. This Structure/Hazards Mark should be made on the outside of all normal entry points. Orange spray paint seems to be the most easily seen color on most backgrounds and line marking or downward spray cans apply the best paint marks. Lumber chalk or lumber crayons should be used to mark additional information inside the search mark itself because they are easier to write with than spray paint.

A large square box (approximately two feet) is outlined at any entrance accessible for entry into any compromised structure. Use orange paint for this marking. Specific markings will be clearly made adjacent to the box to indicate the condition of the structure and any hazards found at the time of this assessment. Normally the square box marking would be made immediately adjacent to the entry point identified as safe. An arrow will be placed next to the box indicating the direction of the safe entrance if the Structure/Hazards marking must be made somewhat remote from the safe entrance.

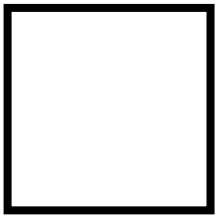
STRUCTURE/HAZARDS MARKINGS

Make a large (2' x 2') square box with orange spray paint on the outside of the main entrance to the structure. Put the date, time, hazardous material conditions and team or company identifier outside the box on the right-hand side. This information can be made with a lumber-marking device.



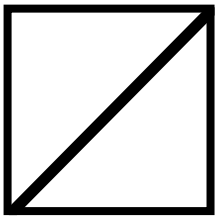
9/12/93
1310 hrs.
HM – nat. gas
SMA – E-1

Structure is accessible and safe for search and rescue operations. Damage is minor with little danger of further collapse.



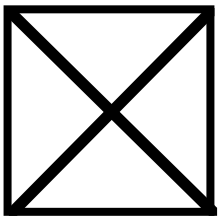
9/12/93
1310 hrs.
HM – none
SMA – E-1

Structure is significantly damaged. Some areas are relatively safe, but other areas may need shoring, bracing, or removal of falling and collapse hazards.



9/12/93
1310 hrs.
HM – nat. gas
SMA – E-1

Structure is not safe for search or rescue operations. May be subject to sudden additional collapse. Remote search operations may proceed at significant risk. If rescue operations are undertaken, safe haven areas and rapid evacuation routes should be created.



9/12/93
1310 hrs.
HM – nat. gas
SMA – E-1

Arrow located next to a marking box indicates the direction to a safe entrance into the structure, should the marking box need to be made remote from the indicated entrance.

SEARCH MARKING SYSTEM

Search Markings must be easy to make, easy to read and easy to understand. To be easily seen the search mark must be large and of a contrasting color to the background surface. Orange spray paint seems to be the most easily seen color on most backgrounds and line marking or downward spray cans apply the best paint marks. A lumber marking device may be used to write additional information inside the search mark itself when it would be difficult to write the additional information with spray paint.

A large distinct marking will be made outside the main entrance of each building, structure or area to be searched. This “Main Entrance” search marking will be completed in two steps. First, a large, single slash (approximately two feet) shall be made starting at the upper left moving to the lower right near the main entrance at the start of the search. The Search Team identifier and time that the structure was entered shall be marked to the left of the mid-point of the slash and the date shall be marked near the top of the slash on the opposite side.

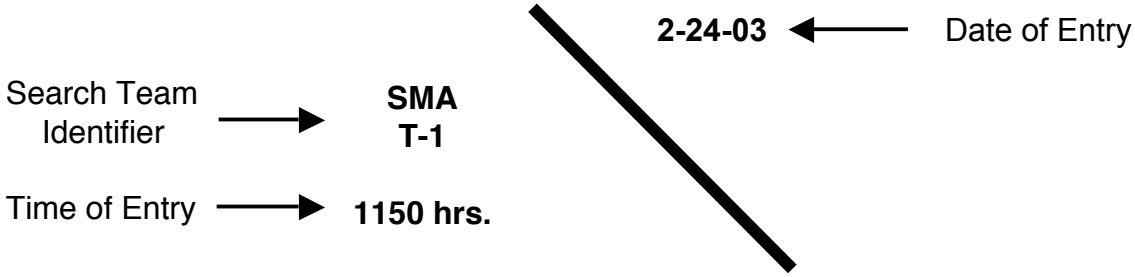
When the search of the entire structure is complete and the Search Team exits the building, a second large slash shall be made in the opposite direction forming an “X” on the Main Entrance search marking. Additional information summarizing the entire search of the structure will be placed in three quadrants of the “X”. The left quadrant will already contain the Search Team identifier and time when the Search Team first entered the structure. In the top quadrant enter the time the Search Team exited the structure under the date. Change the date if different from date the structure was entered. The right quadrant is for any significant hazards located inside the structure. The bottom quadrant is for the number of live “V” or dead “V̶” victims still inside the structure. Use a small “X” in the bottom quadrant if no victims are inside the structure.

If the search of the entire structure is incomplete, make a circle (approximately 1’ diameter) in the middle of the single slash. The left side will already contain the Search Team identifier and time when the Search Team first entered the structure. At the top end of the slash enter the time the Search Team exited the structure under the date. Change the date if different from date the structure was entered. On the right side, mid-point of the slash, is for any significant hazards located inside the structure. The bottom end of the slash is for the number of live “V” or dead “V̶” victims still inside the structure. Use a small “X” at the bottom if no victims are inside the structure.

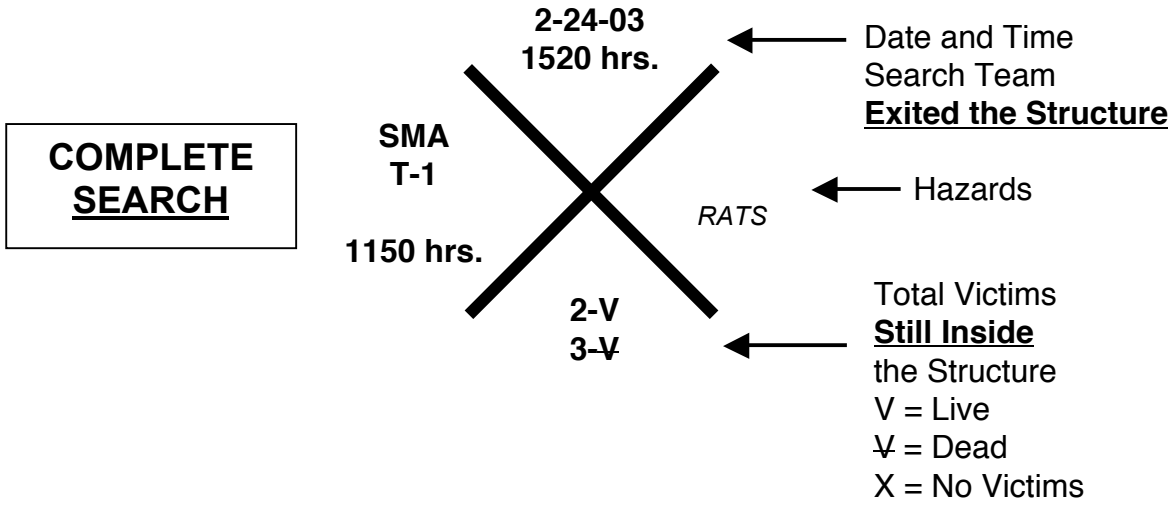
During the search function, while inside the structure, a large single slash shall be made upon entry of each room, area or floor. After the search of the room or area has been completed, a second large slash shall be drawn in the opposite direction forming an “X”. The only additional information placed in any of the “X” quadrants while inside the structure shall be that pertaining to any significant hazards and the number of live “V” or dead “V̶” victims, as indicated by “V” for live and “V̶” for dead.

SEARCH MARKINGS

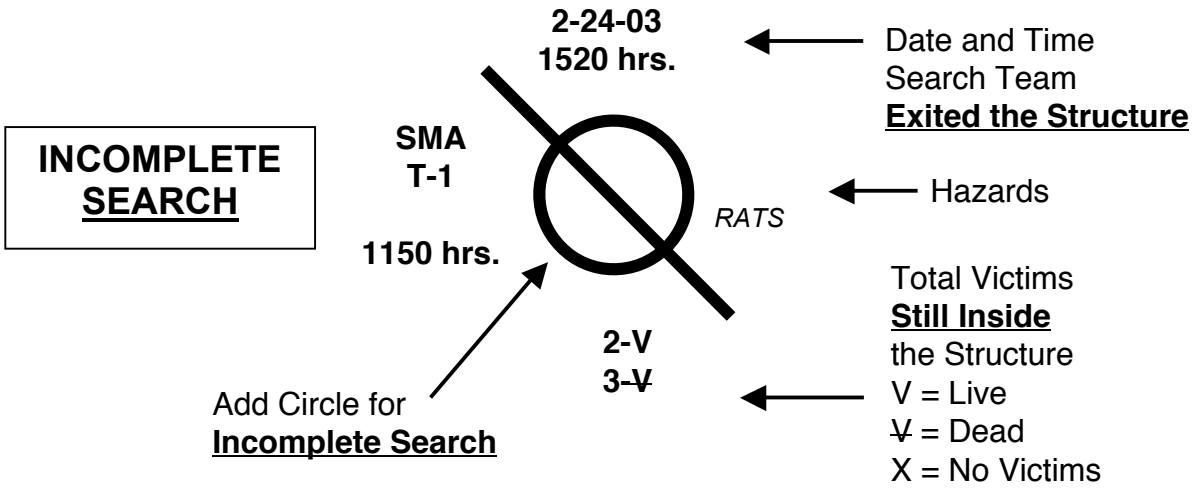
Main Entrance Search Marking- WHEN YOU ENTER



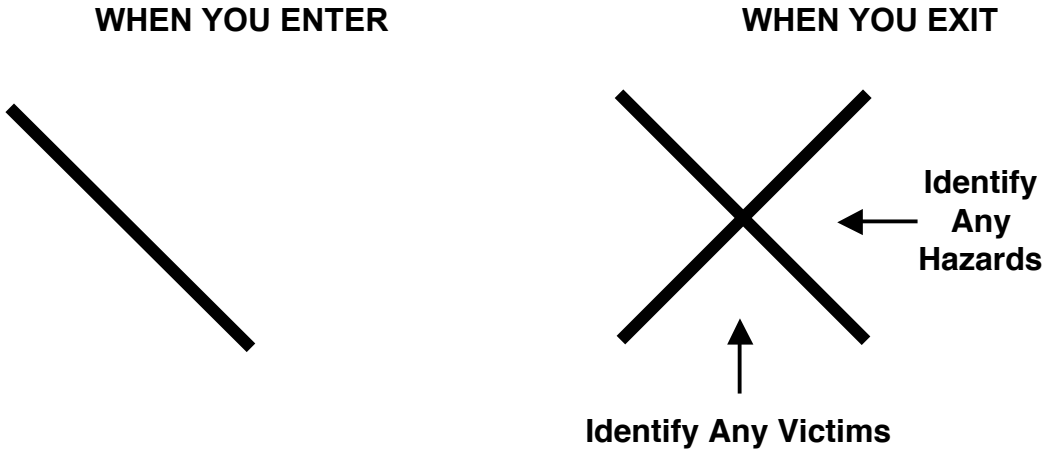
Main Entrance Search Marking- WHEN YOU EXIT



Main Entrance Search Marking- WHEN YOU EXIT

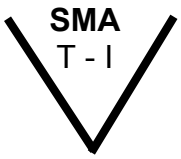


Interior Search Markings- Each Room, AREA OR FLOOR

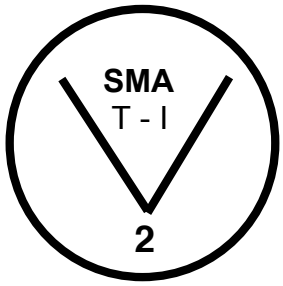


VICTIM MARKING SYSTEM

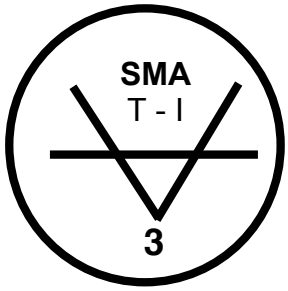
Make a large (2' x 2') "V" with orange spray paint near the location of a **potential** victim. Mark the name of the Search Team or Crew identifier in the top part of the "V" with paint or a lumber marker type device.



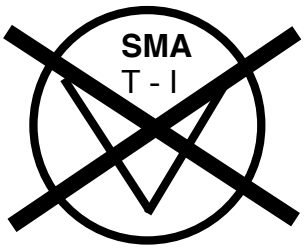
Paint a circle around the "V" when a potential victim is **confirmed** to be **alive** either visually, vocally, or hearing specific sounds that would indicate a high probability of a live victim. If more than one confirmed live victim, mark the total number of victims under the "V".



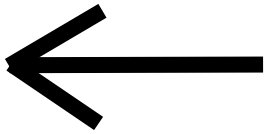
Paint a horizontal line through the middle of the "V" when a **confirmed** victim is determined to be **deceased**. If more than one confirmed deceased victim, mark the total number of victims under the "V". Use both the live and deceased victim-marking symbols when a combination of live and deceased victims are determined to be in the same location.



Paint an "X" through the confirmed victim symbol after **all** victim(s) have been removed from the specific location identified by the marking.



An arrow may need to be painted next to the "V" pointing towards the victim when the victim's location is not immediately near where the "V" is painted.



EMERGENCY SIGNALING SYSTEM

Because of the high potential of secondary collapse, dangerous conditions, and the need to communicate other important information, an emergency signaling system should be adopted and in use by all personnel at the incident site. Emergency signals must be a loud and identifiable and sounded when conditions require immediate attention. Emergency signals can be made using devices such as a whistle, air horn, vehicle horn or bell. Each structure or larger area of operations may need to have its own distinct emergency signal device when multiple rescue operations are taking place in the same area to reduce confusion.

Supervisors should identify and inform assigned personnel of a designated place of assembly and/or safe zone for a Personal Accountability Report (PAR) to be conducted should an evacuation signal be sounded. A place of assembly is usually a safe location outside the evacuation area. A safe zone is usually a safe location within a building or disaster site that can be entered within the evacuation area. When an evacuation signal is sounded, all supervisors must conduct a roll call of their assigned personnel and communicate the results of the PAR to their supervisor.

Evacuate the area	**Short signals repeated for 10 seconds, pause for 10 seconds, and repeat for 3 repetitions. Total signal time – 50 seconds.**
Cease Operations/All quite	**One long signal (8 to 10 seconds).**
Resume Operations	**One long and one short signal.**