MUTUAL AID BOX ALARM SYSTEM

--- MABAS ---

URBAN SEARCH AND RESCUE (US&R) COMPANY GUIDE

This guide is intended for the statewide-deployable technical rescue teams which are NIMS typed as a "Type I US&R Company."

January 2009 Version

as Adopted by TRT Committee

Subject: Technical Rescue Teams US&R Company Guide
Functional Area: Operations
Category: Guideline

Approved By: __TRT Committee__

Purpose:

This DRAFT guideline represents the work of more than four years of meetings and events attended by the members of the MABAS TRT Committee. This document contains the following items designed to assist each state TRT in meeting the mission stated above:

- Current committee members
- ICS guidelines
- Minimum Tool and Equipment Cache for TRTs
- Base of Operation (BoO) guidelines
- Suggested annual training requirements
- Original team participation standards

This guideline serves as the common denominator in how state-recognized TRTs will operate within the ICS. While compliance is not mandatory, it is highly recommended to ensure safe and efficient operations. TRTs who structure their operation within the statewide mutual aid plan in a different manner risk being misunderstood, having difficulty obtain timely support from other TRTs, and generally not fitting into the system.

While the US&R Guide represents to consensus of the TRT committee, this consensus is based on best practices, NIMS and four years of TRT validation exercise results.

Responsibility:

The MABAS TRT committee and its co-chairs maintain responsibility for the development, periodic review and revision of this guideline. All comments and proposed amendments should be forwarded to the co-chairs.

Accountability:

There is no compliance requirement with this guideline.
The original draft documents was circulated in January 2009 to all TRTs listed in the Statewide Mutual Aid Plan. During calendar year 2009 no comments were received by the committee.

Reporting Requirement:

Not applicable.

MUTUAL AID BOX ALARM SYSTEM

Illinois MABAS Offices
27475 Ferry Road Warrenville, IL 60555
630-717-2744 FAX 630-717-2745

January 2009

Dear Illinois Technical Rescue Personnel:

The MABAS TRT Committee's Mission is to guide the development of policy and practice that allows all state-recognized TRTs to effectively function during a technical rescue incident. While the scope of the committee's work is directed at events that are a declared emergency, many of the guidelines will equally benefit the local response.

The Strategic goals of MABAS TRT committee include:

1. Developing and updating of the definition of an Illinois TRT that includes deployment in the field for at least 72 hours with total self-sufficiency for the first 24 hours.
2. Establishing standards for individual TRTs that desire to be recognized under the Illinois Statewide Mutual Aid Plan (ISWMAP).
3. Typing each TRT using the FEMA Resource Typing guidelines. This necessitates a change in terminology from TRT to US&R Company.
4. Developing and updating of the training requirements of an Illinois TRT. The training requirements shall include both initial education and annual continuing education.
5. Determining the minimum equipment cache for individual TRTs that desire to be recognized under the ISWMAP. Such a minimum cache will ensure standardization among all TRTs.
6. Maintaining a working relationship with the Illinois Fire Service Institute in order to conduct an annual TRT validation. This annual event will task approximately one-third of the state's TRTs in a simulated incident that involves deployment.
7. Conducting audits of individual TRTs to insure each is capable of deployment and performance.
8. Making recommendations to the specific details of TRT Strike Team response under the ISWMAP.

All formal policies require approval of MABAS and the ITTF Board.

This document represents the work of more than four years of meetings and events attended by the members of the MABAS TRT Committee. This document contains the following items designed to assist each state TRT in meeting the mission stated above:

- Current committee members
- ICS guidelines
- Minimum Tool and Equipment Cache for TRTs
- Base of Operation (BoO) guidelines
- Suggested annual training requirements
- Original team participation standards

Sincerely,

Drew R. Smith
Deputy Chief, Prospect Heights Fire Protection District
Director, MABAS Division 3 Technical Rescue Team
Co-Chairman, MABAS Technical Rescue Committee

PRESIDENT AND CHIEF EXECUTIVE OFFICER
James P. Reardon, Chief (RET)
27475 Ferry Road
Warrenville, IL. 60555
847-727-6331
reardon@mabas-il.org

1st VICE PRESIDENT
Terrence Lipinski, Chief (RET)
27475 Ferry Road
Warrenville, IL. 60555
708-906-9510
lipinski@mabas-il.org

2ND VICE PRESIDENT
Randy Justus, Chief (RET)
27475 Ferry Road
Warrenville, IL. 60555
847-977-6263
justus@mabas-il.org

TREASURER/COMPTROLLER
Paul Maplethorpe, Chief
Greater Round Lake FPD
409 Nippersink Rd.
Round lake, IL. 60073
847-546-6001
chief@rlfire.org

EXECUTIVE LIAISON/ DEPUTY CHIEF EXECUTIVE OFFICER
Gerald D. Page, Chief (RET)
27475 Ferry Road
Warrenville, IL 60555
630-717-2744
page@mabas-il.org

FINANCE / ADMINISTRATIVE BRANCH CHIEF
Jill Bywater
27475 Ferry Road
Warrenville, IL 60555
630-200-2977
bywater@mabas-il.org

MABAS / CART

Urban Search & Rescue Teams

ICS Guideline

URBAN SEARCH & RESCUE TEAMS

INTRODUCTION

The MABAS / CART Urban Search & Rescue Team (US&R) organizational guide is designed to provide supervision and control of essential functions at incidents where Urban Search & 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 a man made, natural (weather) 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 & Rescue operations will be directed by the first arriving local response agency 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 Urban Search & Rescue Companies specifically trained and equipped for Urban Search & 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 Companies 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 & Rescue incidents the Incident Commander may need to request a wide variety and amount of multi-disciplinary resources to support the operation.

US&R Companies 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 MABAS / CART Urban Search & Rescue Teams in Illinois are all considered Type 1 US&R Companies. The typing provides consistency for the purpose of ordering resources using the IL Statewide Mutual Aid Plan.

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 MABAS / CART Urban Search & Rescue Companies are comprised of 10 people specially trained and equipped for large or complex Urban Search & Rescue operations. The multi-disciplinary organization provides five functional elements that include Supervision, Safety, Search, Rescue, and Logistics. The MABAS / CART US&R company 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 & 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 & 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 capability 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 & 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 & Rescue incident that builds from an initial response to a Multi-Branch organization.

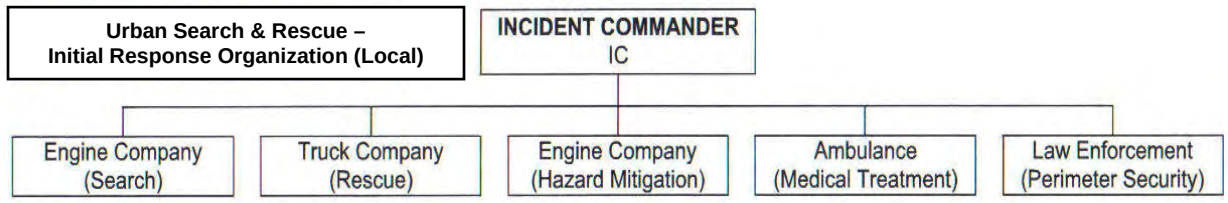
ICS MODULAR DEVELOPMENT EXAMPLES

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.

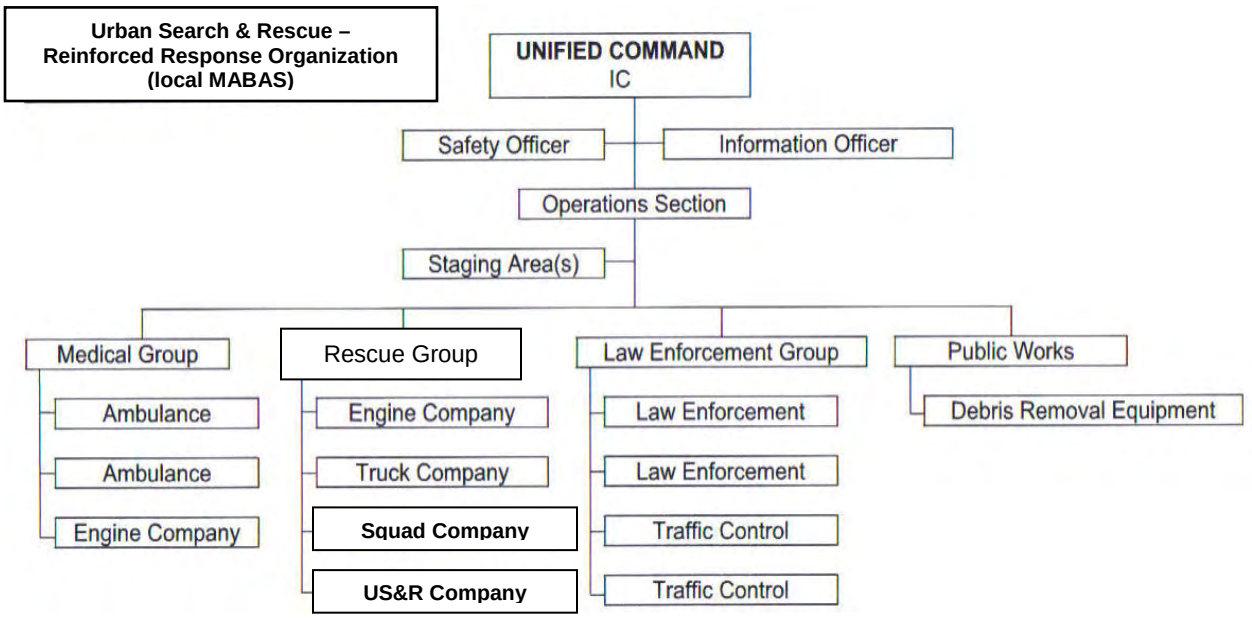
Reinforced Response Organization (example): In addition to the initial response, more Law Enforcement, local Engine and Truck Companies and Mutual Aid resources have arrived. The IC forms a Unified Command with the senior ranking Law Enforcement official on scene and has established a Safety Officer 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 Hand crew Strike Team is assisting with debris removal.

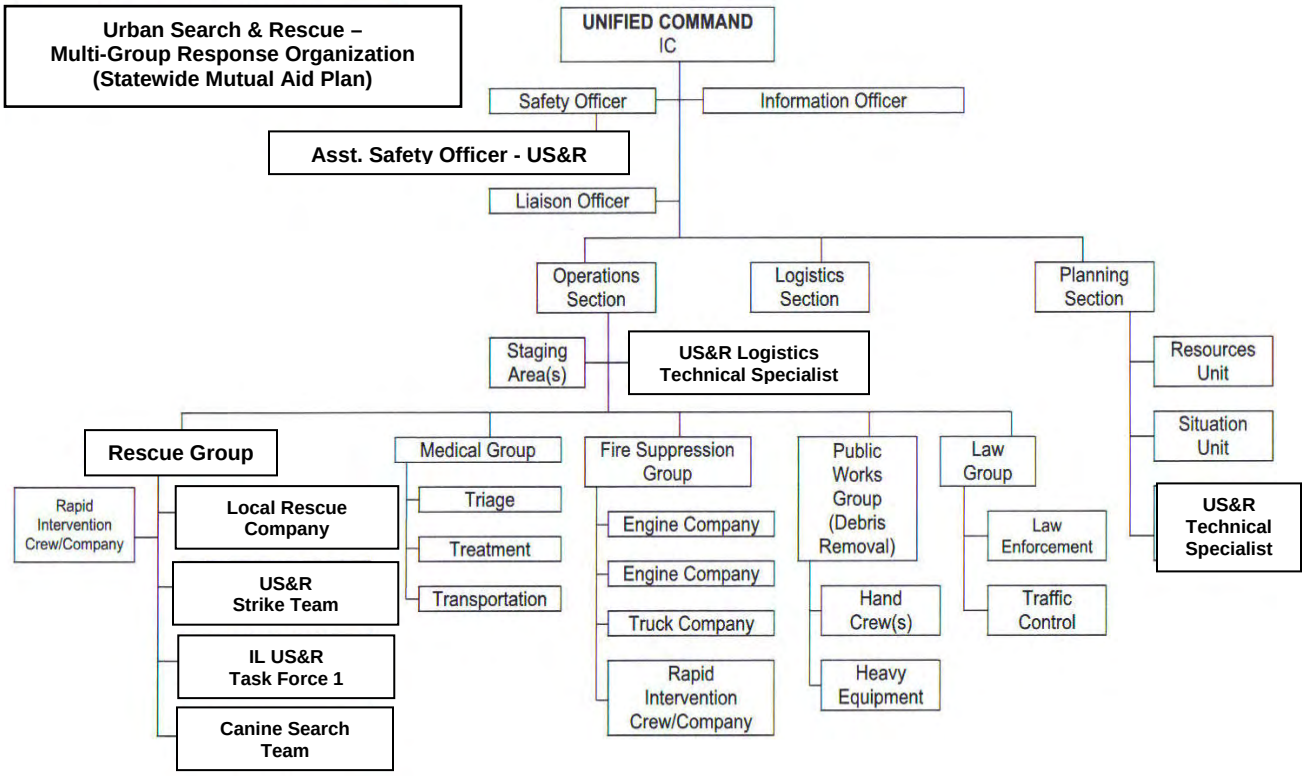
Multi-Branch Response Organization (example): The Incident Commander has assigned a Finance/Administration Section. The Operations Section has established five Branches with similar functions to better coordinate and manage resources. The Planning, Logistics and Finance/Administration Section have several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



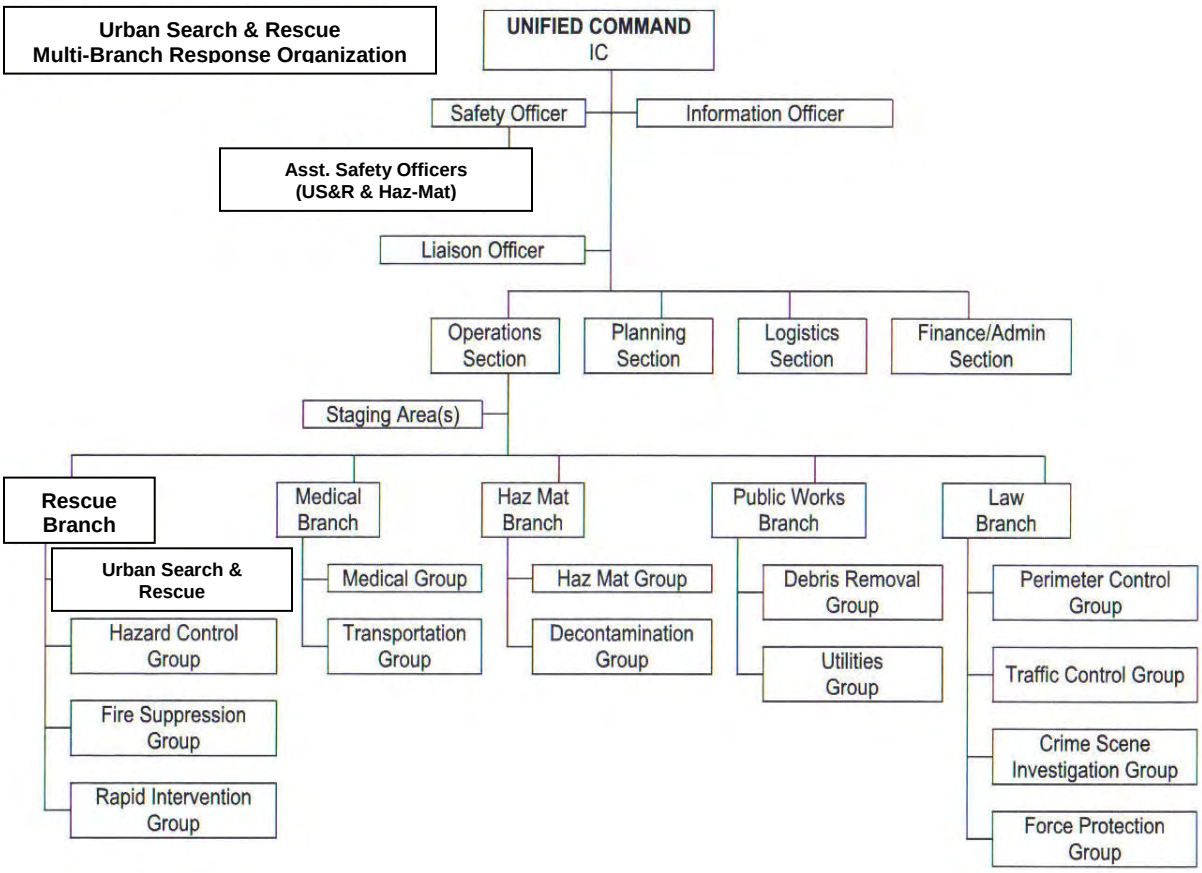
US&R Initial Response Organization (example): The first arriving Public Safety Officer will assume command of the incident as the Incident Commander (IC). The IC will assume all Command and General Staff functions and responsibilities and manage initial response resources. If the potential for escalation 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.



Response Organization (example): In addition to the initial response, the IC has activated the MABAS Box Alarm for their jurisdiction bringing additional companies and Mutual Aid resources. Additional Law Enforcement responds as well. 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 Rescue 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, via the local EMA has requested the statewide mutual aid plan of additional US&R resources. A Liaison Officer is added 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 US&R Strike Team has been assigned to the Rescue Group. One State US&R Task Force has arrived and is assigned to Division “A”. One Canine Team from the Local SAR team is assigned to Division “B” to conduct searches.



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.

ILLINOIS US&R COMPANY & STRIKE TEAM

(MABAS/CART US&R Companies)

ICS MODULAR DEVELOPMENT

Urban Search and Rescue (US&R) Companies Response

US&R Companies may respond locally, regionally, and statewide.

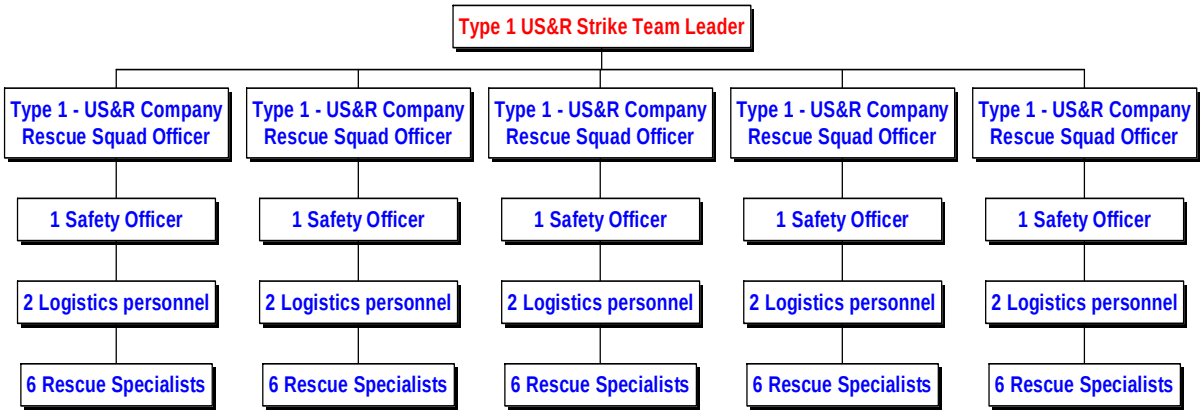
- A local response may involve one to three Type 1 - US&R Companies depending upon the severity and nature of the incident. This response would typically be a MABAS General or Box Level Alarm for a local jurisdiction.
- A regional deployment is a five Type 1 – US&R Companies Strike Team response sent to augment a local response as specified through local Box Cards. This response would typically be an Interdivisional MABAS Box Alarm from one or more neighboring MABAS Divisions.
- A statewide deployment is a number of strike teams sent to support a local or regional incident(s). This response would require approval by IEMA through a local disaster declaration.

Regional Deployment of State US&R Companies

Organization

A Type I US&R Strike Team is defined as five Regional Type 1 - US&R Companies (generally closely geographically located). A US&R Strike Team Leader is the leader of this 51 member team. The US&R Strike Team Leader is the point of contact for the local incident commander.

Each of the five Regional Type 1 – US&R Companies shall consist of a minimum of ten members. The team shall have a designated Supervisor (Rescue Squad Officer), one Safety Officer, six Rescue Specialists, and two designated logistics personnel



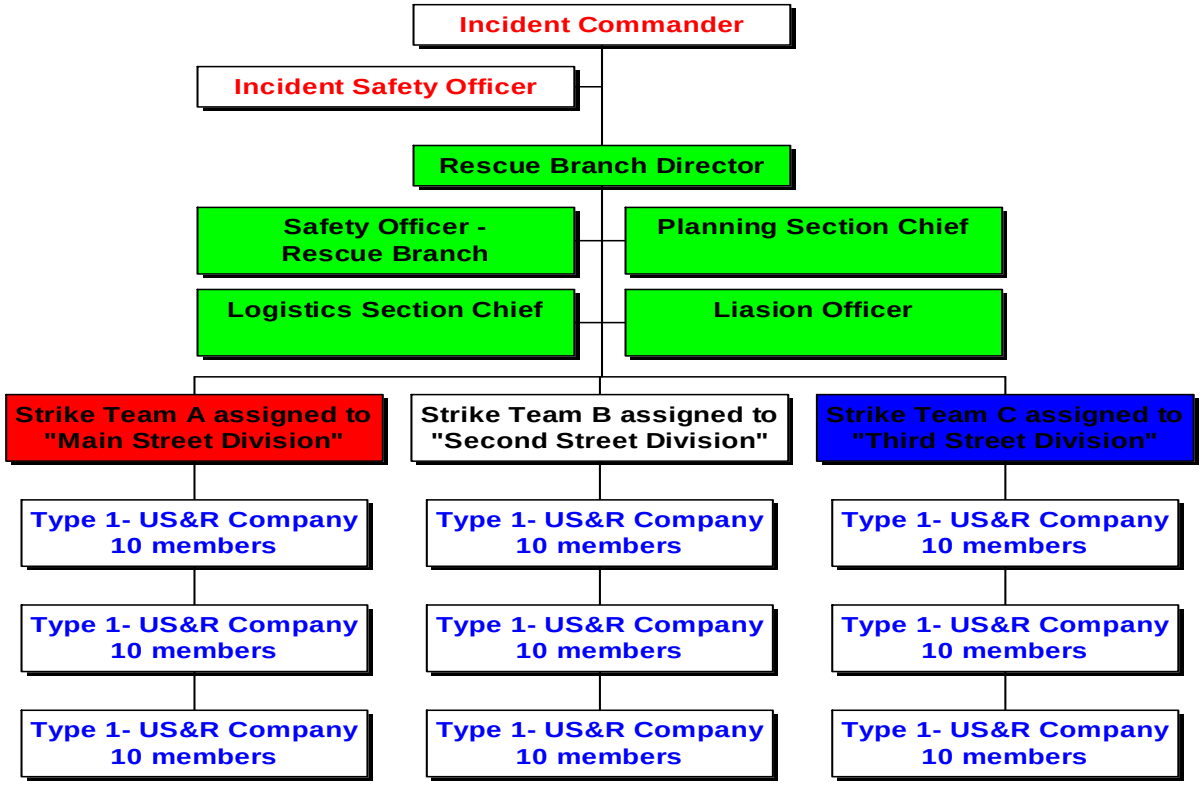
Ideally, a Strike Team would travel to a remote incident as a group. However, it is not required. A pre-determined staging area will be required for all of the individually arriving member teams of the Strike Team to form as a group**.**

The Strike Team Leader should be a senior Type 1 - US&R Company member (preferably senior ranking) from one of the five designated Type 1 - US&R Companies. The Strike Team Leader will be the lead member of the Strike Team and responsible for all activities of the Strike Team.

Suggested training and experience required for a Strike Team Leader:
Experience/suggested rank: Battalion Chief Officer or higher
Required training:

- Technician level training in all four technical rescue disciplines.
- IS 100, IS 200, IS 700, IS 800
- Unified Command
- NFA Command and General Staff course

In the event a regional deployment is initiated, a standard incident command structure for the incident shall be established. Command and general staff positions shall be filled from the members of the responding strike teams. To illustrate this concept, it is depicted below in a sample response organizational chart.



Command Support

One could assume that the Incident Commander of a large technical rescue incident could benefit from having additional trained and experienced Command and General Staff positions (Safety, Liaison, Operations, Planning, and Logistics) specific to Technical Rescue.

An Incident Advance Team (IAT) may be deployed in advance of the Type 1 - US&R Company Deployment package. The concept is that a forward element (IAT) of the Type I – US&R Companies would gather information regarding the emergency and begin planning on the best approach with the resources enroute.

Team Identifiers

- Single US&R Companies shall be designated as “Agency” US&R “Apparatus #”e.g. “DeKalb -US&R Company 1”
- Regional US&R company strike teams (ST) shall be designated as MABAS ST-“#” e.g. “MABAS-Strike Team #3”
- Any US&R Taskforce temporarily developed to meet the needs of an incident shall be designated by State ID, Type, Number Identifier. E.g. IL-TF2. Note: the designation IL-TF1 has been permanently assigned and shall not be used for any other taskforce assignment.

Technical Rescue Incident Advance Team (IAT)

A Technical Rescue Incident Advance Team (IAT) is a group of trained individuals sent ahead of the Strike Team to determine and prioritize the work of the Strike Team. The Advance Team shall have personnel who have trained and/or qualified to serve as a Task Force Leader, Planning Section Chief, Logistics Section Chief, and Communication Specialist. Members of a responding Incident Advance Team may continue to support the Incident Commander by transitioning into various positions in the Incident Commander’s Command or General staff.

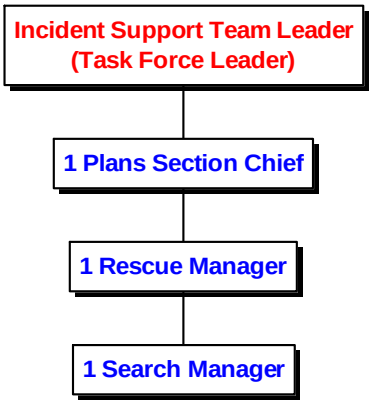
Technical Rescue Incident Support Team (IST)

An Incident Support Team (IST) is a group of trained individuals sent to support the Incident Commander. The incident support team is a group of personnel trained to function in various command roles such as - Task Force Leader, Planning Section Chief, Rescue Manager, and Search Manager. It is the intent of this response to evaluate the scene for any additional resource needs, provide technical informational support, and operational support for the local incident commander.

These function(s) shall be assigned to Illinois Task Force 1 (IL-TF1). Assigned IL-TF1 personnel shall respond, assess the scene, and report their findings to Illinois Emergency Management Agency (IEMA). After the assessment phase is complete, IL-TF1 personnel may be utilized in various command and general staff roles as needed to support the Incident Commander.

<u>The functional difference between an IAT and an IST:</u>

- The IAT arrives before the first strike team(s) and interfaces with the IC to begin prioritizing strike team tasks. The IAT operates in the initial operation period and may or may not function at the command post. The IAT may begin recon or planning at a work site assigned by the IC
- The IST interfaces with a formal IC structure that has command and general staff functions assigned to personnel who may or may not be part of an IMT. The IST generally operates at the command post and serves during each operational period.
- When involved in a Federal Type 1 Incident, the US&R Strike team or US&R Companies may report directly to an IST.



Incident Management Team (IMT)

An Incident Management Team (IMT) is a group of trained individuals (can be emergency management, fire, police, emergency medical services, and public works back ground) sent to support the Incident Commander in overall incident management. IMT personnel will most likely not have US&R background. The Incident Management Team consists of personnel trained to function in various command and general staff roles such as – Incident Commander, Safety Officer, Liaison Officer, Information Officer, Operations Section Chief, Planning Section Chief, Logistics Section Chief, and Finance/Admin. Section Chief. It is the intent of this group to provide operational support for the local incident commander.

Documentation

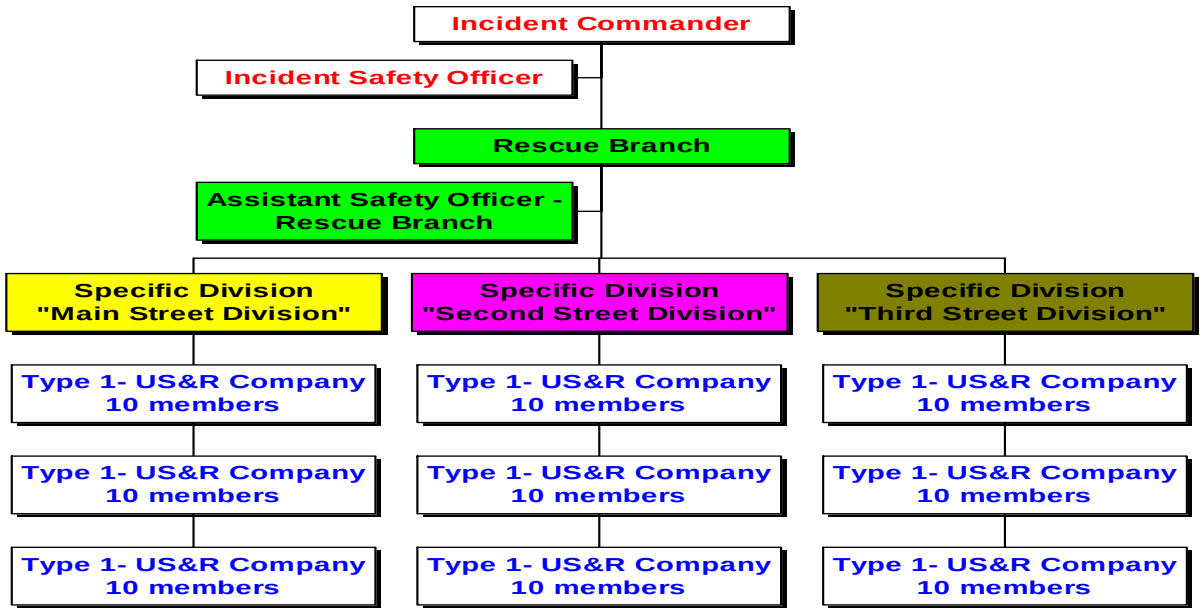
All local, regional, or statewide responses require the use of FEMA ICS Forms. Copies of those forms are available on FEMA's website (http://training.fema.gov/EMIWeb/IS/ICSResource/ICSResCntr_Forms.htm) as a PDF or Word Document. The following are the typical ICS Forms that are used.

- ICS Form 201, Incident Briefing
- ICS Form 202, Incident Objectives
- ICS Form 203, Organization Assignment List
- ICS Form 204, Assignment List
- ICS Form 205, Incident Radio Communications Plan
- ICS Form 206, Medical Plan
- ICS Form 207, Organizational Chart
- ICS Form 209, Incident Status Summary
- ICS Form 210, Status Change Card
- ICS Form 211, Check-In List
- ICS Form 213, General Message
- ICS Form 214, Unit Log
- ICS Form 215, Operational Planning Worksheet
- ICS Form 215a, Incident Action Plan Safety Analysis
- ICS Form 216, Radio Requirements Worksheet
- ICS Form 217, Radio Frequency Assignment Worksheet
- ICS Form 218, Support Vehicle Inventory
- ICS Form 219-2, Card Stock - Green (Crew)
- ICS Form 219-4, Card Stock - Blue (Helicopter)
- ICS Form 219-6, Card Stock - Orange (Aircraft)
- ICS Form 219-7, Card Stock - Yellow (Dozer)
- ICS Form 220, Air Operations Summary
- ICS Form 221, Demobilization Plan
- ICS Form 221 Page 1, Demobilization Checkout

US&R Companies Response

The basic design of the local technical rescue response is based upon a ten to thirty technical rescuer response. It is suggested that the initial response to a technical rescue incident be designed as a three team package. This is based on the predetermined number of personnel assigned to a Type 1 - US&R Company (10). Thus, for the purposes of this discussion, we have made the assumption that the local technical rescue response would be a single site, single event situation. Therefore, we have designated the person in charge of the entire rescue operation as the Rescue Branch and all of the assumptions of this paper are based upon the ten person per US&R Company (Type 1 - US&R Company) response. To illustrate this concept, it is depicted below in a response organizational chart.

In the case of multiple technical rescue events or sites, there should be one Rescue Branch with the appropriate number of Division Type 1 - US&R Company Rescue Squad leaders in charge of each respective site. For example, a structural collapse incident with three locations may be organized this way:

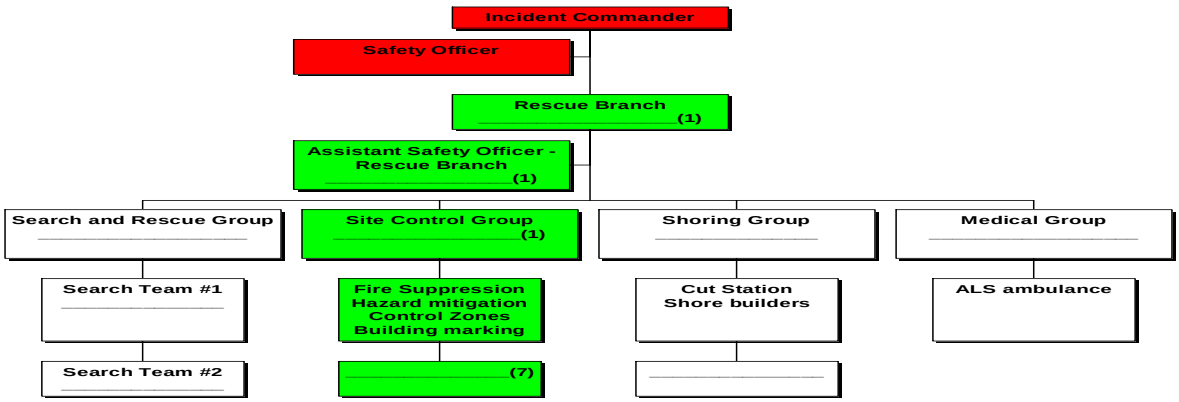


Objectives #1 Identify the minimum standard command roles for technical rescue incident for first arriving US&R Companies and #**2** Identify the additional roles to be filled by second and third arriving US&R Companies.

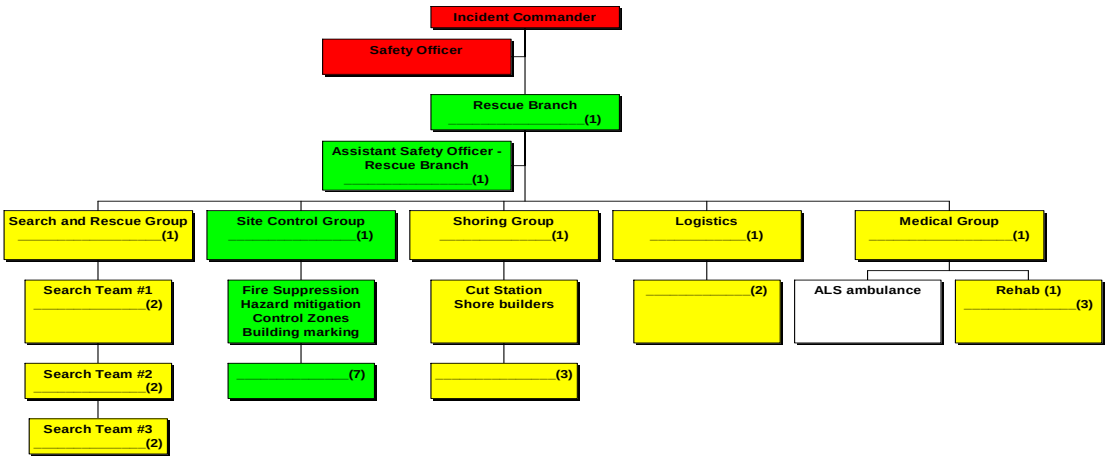
Technical Rescue Incident type - Structural Collapse Incident:

Assume that the initial arriving emergency responders have implemented the Incident Command System (ICS). Command shall be established and Safety Officer should be designated.

The senior officer or firefighter on the first arriving Type 1 - US&R Company (assume a ten person team) should establish the Rescue Branch/Group and assign a Type 1 - US&R Company Safety Officer (Assistant Safety Officer) to consult with the Rescue Branch/Group on the safety measures and precautions to be taken in the operation. The Type 1 - US&R Company Safety Officer shall evaluate the risks and enforce all safety requirements associated with the particular situation. If the Incident Safety Officer or Type 1 - US&R Company Safety Officer judges that an operation is unsafe, the operation shall be suspended. The type and intensity of the incident will help to determine additional ICS positions. For example, in the early stages of a structural collapse incident, a Site Control Group Leader may be appointed to oversee the Site Control activities of the remainder (7 members) of the unassigned members of the initial arriving US&R Company. We shall assume that this first arriving Type 1 –US&R Company will be overwhelmed with the incident to be able to fulfill any other ICS positions.



The second and third arriving Type 1 - US&R Companies will help to fulfill additional ICS positions necessary for an expanding rescue operation. The senior officer(s) or firefighter on the second and third arriving Type 1 – US&R Companies (assume a ten person team) could head the Search and Rescue Group, Medical Group, Logistics, or Shoring Group. Again, the quality of the incident will help to determine the breadth of the command structure. Below is an example of an expanded typical Structural Collapse incident command structure:

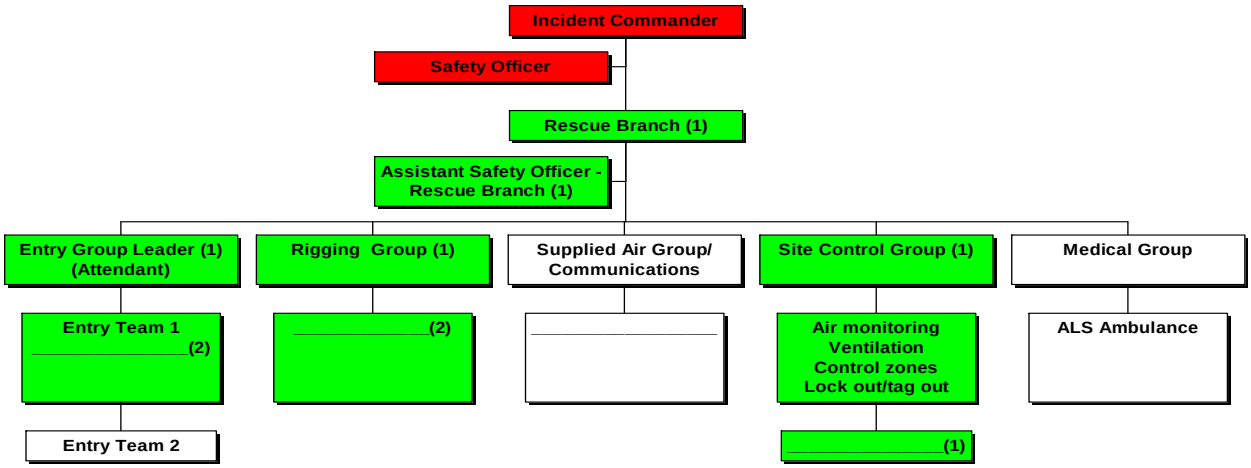


Technical Rescue Incident type - Confined Space

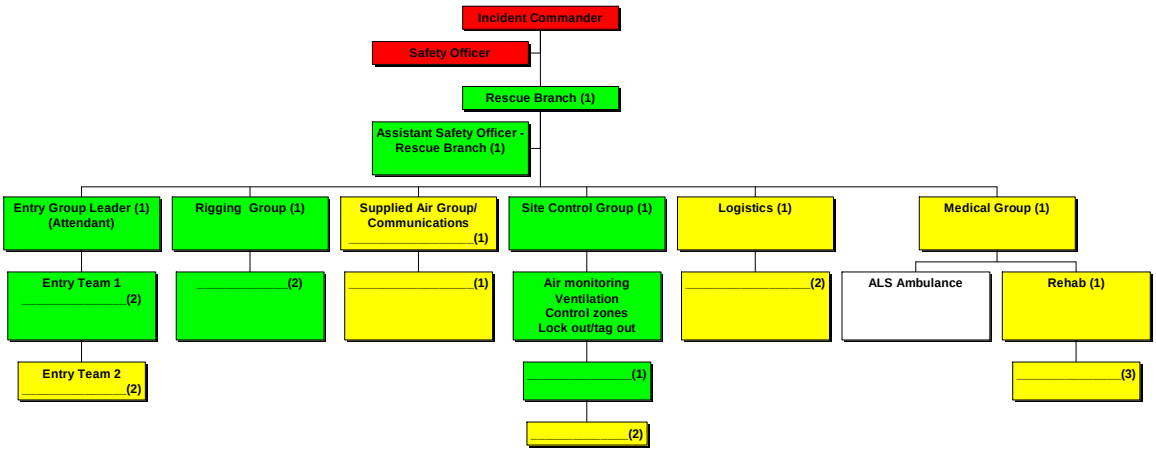
Assume that the initial arriving emergency responders have implemented the Incident Command System (ICS). Command shall be established and Safety Officer should be designated.

The senior officer or firefighter on the first arriving Type 1 - US&R Company (assume a ten person team) should establish the Rescue Branch/Group and assign a Type 1 - US&R Company Safety Officer (Assistant Safety Officer) to consult with the Rescue Branch on the safety measures and precautions to be taken in the operation. The Type 1 - US&R Company Safety Officer shall evaluate the risks and enforce all safety requirements associated with the particular situation. If the Safety Officer or Type 1 - US&R Company Safety Officer judges that an operation is unsafe, the operation shall be suspended.

The type and intensity of the incident will help to determine additional ICS positions. For example, in the early stages of a confined space incident, a Site Control, Rigging, and Entry Group Leaders may be appointed to oversee the site activities of the remainder (5 members) of the unassigned members of the initial arriving Type 1 - US&R Company. We shall assume that this first arriving Type 1 – US&R Company will be overwhelmed with the incident to be able to fulfill any other ICS positions.



The second and third arriving Type 1 - US&R Company will help to fulfill additional ICS positions necessary for an expanding rescue operation. The senior officer(s) or firefighter on the second and third arriving Type 1 - US&R Companies (assume a ten person team) could head the Supplied Air/Communication, Medical, Logistics, and Rehab Groups. Again, the quality of the incident will help to determine the breadth of the command structure. Below is an example of an expanded typical Confined Space incident command structure:

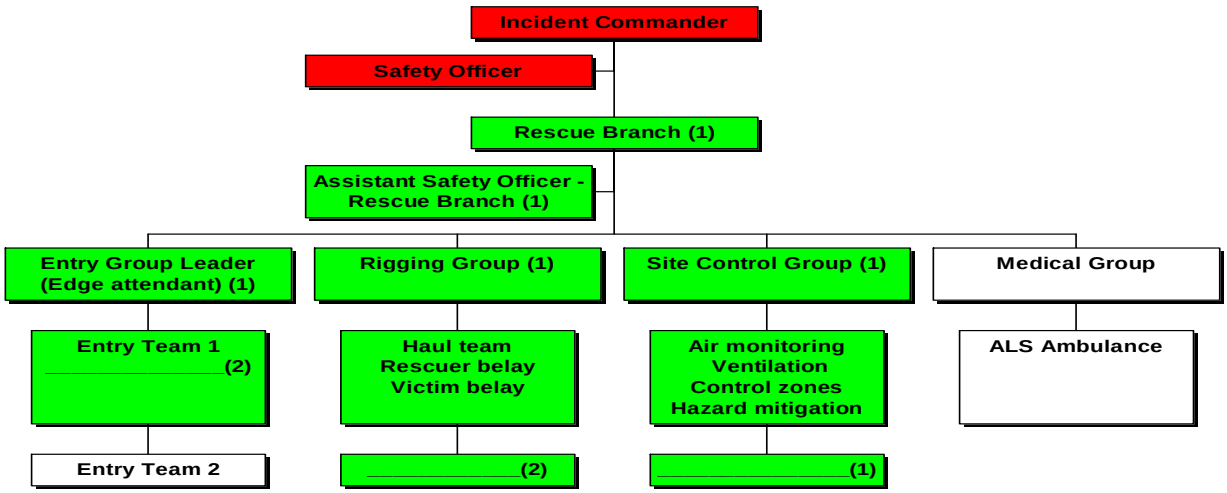


Technical Rescue Incident type - Rope Rescue Incident:

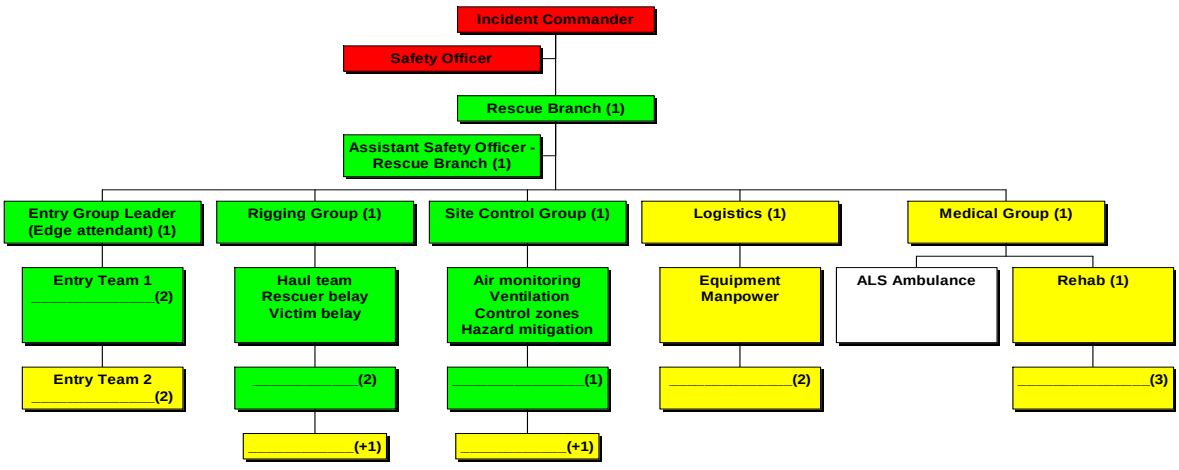
Assume that the initial arriving emergency responders have implemented the Incident Command System (ICS). Command shall be established and Safety Officer should be designated.

The senior officer or firefighter on the first arriving Type 1 - US&R Company (assume a ten person team) should establish the Rescue Branch/Group and assign a Type 1 - US&R Company Safety Officer (Assistant Safety Officer) to consult with the Rescue Branch on the safety measures and precautions to be taken in the operation. The Type 1 - US&R Company Safety Officer shall evaluate the risks and enforce all safety requirements associated with the particular situation. If the Safety Officer or Type 1 - US&R Company Safety Officer judges that an operation is unsafe, the operation shall be suspended.

The type and intensity of the incident will help to determine additional ICS positions. For example, in the early stages of a rope rescue incident, Site Control, Rigging, and Entry Group Leaders may be appointed to oversee the site activities of the remainder (5 members) of the unassigned members of the initial arriving US&R Company. We shall assume that this first arriving Type 1 –US&R Company will be overwhelmed with the incident to be able to fulfill any other ICS positions.



The second and third arriving Type 1 - US&R Companies will help to fulfill additional ICS positions necessary for an expanding rescue operation. The senior officer(s) or firefighters on the second and third arriving US&R Company Type 1 - US&R Companies (assume a ten person team) could head the Logistics, Medical, and Rehab Groups. Again, the quality of the incident will help to determine the breadth of the command structure. Below is an example of an expanded typical Rope Rescue incident command structure:

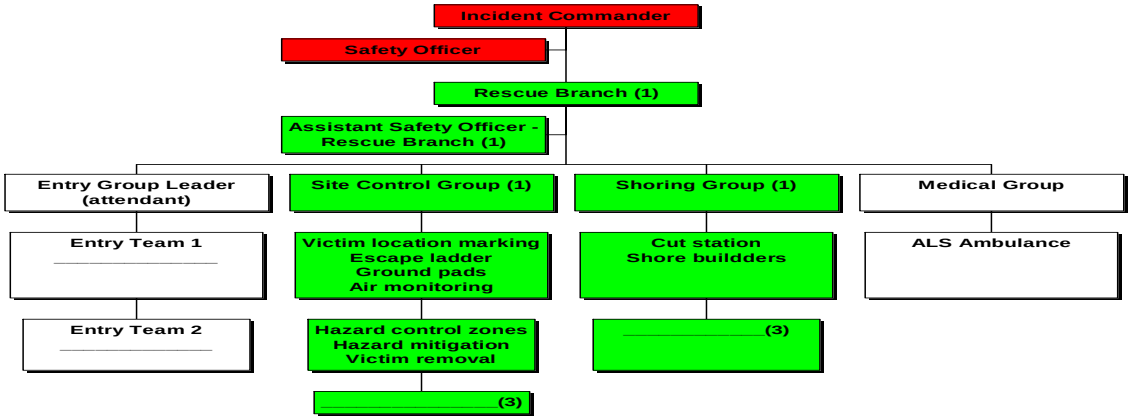


Technical Rescue Incident type - Trench Rescue Incident:

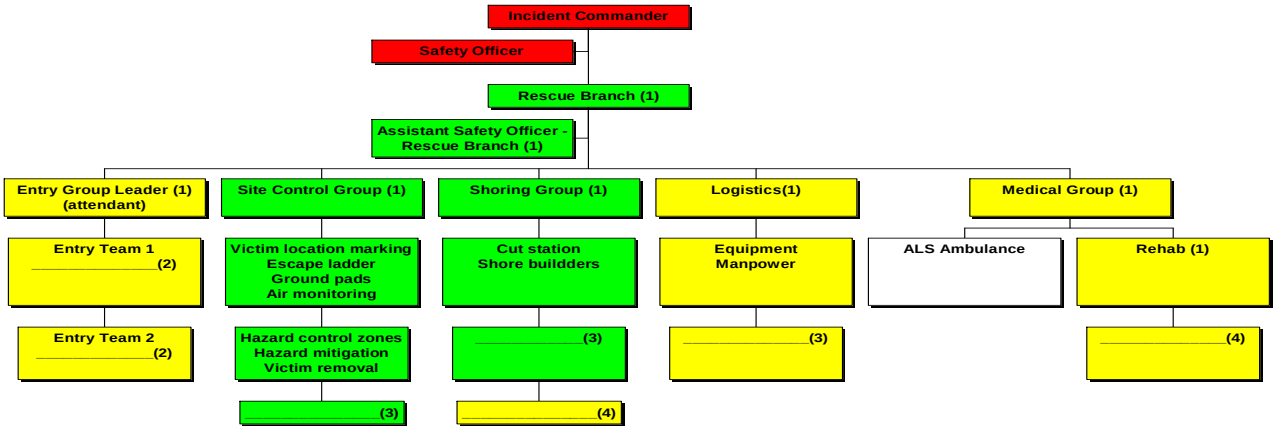
Assume that the initial arriving emergency responders have implemented the Incident Command System (ICS). Command shall be established and Safety Officer should be designated.

The senior officer or firefighter on the first arriving Type 1 - US&R Company (assume a ten person team) should establish the Rescue Branch/Group and assign a Type 1 - US&R Company Safety Officer (Assistant Safety Officer) to consult with the Rescue Branch on the safety measures and precautions to be taken in the operation. The Type 1 - US&R Company Safety Officer shall evaluate the risks and enforce all safety requirements associated with the particular situation. If the Safety Officer or Type 1 - US&R Company Safety Officer judges that an operation is unsafe, the operation shall be suspended.

The type and intensity of the incident will help to determine additional ICS positions. For example, in the early stages of a trench rescue incident, a Site Control Group and Shoring Group Leaders may be appointed to oversee the various site activities of the remainder (6 members) of the unassigned members of the initial arriving US&R Company. We shall assume that this first arriving Type 1 - US&R Company will be overwhelmed with the incident to be able to fulfill any other ICS positions.



The second and third arriving Type 1 - US&R Companies will help to fulfill additional ICS positions necessary for an expanding rescue operation. The senior officer(s) or firefighter on the second and third arriving US&R Company Type 1 – US&R Companies (assume a ten person team) could head the Entry, Medical, Logistics, and Rehab Groups with the balance of the technical rescue personnel filling out those groups. Again, the quality of the incident will help to determine the breadth of the command structure. Below is an example of an expanded typical Trench rescue incident command structure:



Objective #3. Define the responsibilities of the following roles during an emergency incident response: Incident Commander, Rescue Branch or Group Type 1 - US&R Company Rescue Squad Leader, Safety Officer (Assistant Safety Officer), Site Control Group, Search and Rescue Group, Medical (EMS) Group, Rigging Group, Air Monitoring Group, Logistics (Equipment/Support) Group, Entry Group, and Shoring Group.

ICS POSITIONS

Incident Commander – typically a senior officer of the stricken jurisdiction. The IC assumes overall command of an incident.

1. Ensure the response of appropriate apparatus, requesting needed assistance early.
2. Establish a visible Incident Command Post (ICP).
3. Directs first in unit is performing adequate size-up
4. Establish an incident Safety Officer early in the incident
5. Confer with first arriving US&R Company personnel to assign a Rescue Branch Officer.
6. Establish Site Control Group (second or third in Type 1 - US&R Company).
7. Determine a staging area for US&R Company apparatus that will allow site access for the placement of specialized equipment.
8. Ensure direct access to the scene for additional arriving US&R Companies and apparatus

Rescue Branch or Group Supervisor - typically the senior officer on the first arriving Type 1 - US&R Company. The Rescue Branch assumes overall command of the rescue operation.

1. Coordinates all rescue operations and assigns needed ICS positions.
2. Reports directly to the Incident Commander (IC) of the agency having jurisdiction
3. Provide an initial technical rescue size-up
4. Establish control zones – Do not allow unauthorized and/or untrained personnel (including department personnel) into the HOT ZONE.
5. Determine the location and number of victims
6. Determine if hazardous atmospheric conditions exist
7. Attempt to establish contact with the victim(s) while remaining in a safe area. Contact established by FD personnel must be maintained throughout the call.
8. Determine the number and location of access points to the area of rescue.
9. Attempt to determine the mechanism of entrapment or nature of illness or possible trauma to victim.
10. Determine electrical, mechanical and chemical hazards in the area.

Safety Officer (Assistant Safety Officer) – typically an officer or senior firefighter from the first due Type 1 - US&R Company assigned by the Rescue Branch. This position may be supported by 1-2 additional US&R Company Rescue Specialists if the rescue site is large or complex.

1. Responsible for observing and checking all technical aspects of the rescue
2. Works with all rescue groups.
3. **Reports directly to the Incident Safety Officer**.
4. The Safety Officer will consult with the Rescue Branch on the safety measures and precautions to be taken in each case.
5. The Safety Officer shall evaluate the risks and enforce all safety requirements associated with the particular situation. If the Technical Safety Officer judges that an operation is unsafe, the operation shall be suspended.
6. The Safety Officer must be trained to the level of the incident.

Site Control Group – typically an officer from the first or second due Type 1 - US&R Company assigned by Incident Command or Rescue Branch. This group would be supported by 1-2 US&R Company Rescue Specialists. This group would typically be responsible for:

1. Establish and secure a perimeter (hot zone) with safety tape a minimum of two times (2X) the height of the structure.
2. Ensure that all Fire Department personnel, co-workers, family members and bystanders do not enter unauthorized areas.
3. Request Police to assist with control of perimeter and the rerouting or stopping of traffic, including air traffic (vibrations / noise).
4. Keep / relocate spectators, unnecessary personnel, and apparatus, a minimum of 100 feet away from the cold zone.
5. Ensure site access for US&R Company apparatus.
6. Ensure that ambulances have direct access to the site.
7. Determine wind direction and consider its effect on vehicle exhaust travel.
8. Shut down all devices capable of causing vibrations.
9. Shut down all devices capable of causing adverse changes in the atmospheric conditions near the structure.
10. Ensure fire extinguisher and/ or hose line protection is in place when potentially flammable atmospheric conditions exist.
11. Ensure elimination of potential ignition sources.
12. Perform lock out/ tag out procedures to all utilities.
13. Ensure adequate lighting.
14. Complete a tactical worksheet as soon as possible and report directly to IC or Rescue Branch
15. Control or eliminate any hazards to rescuers

Search and Rescue Group - typically an officer or firefighter from the first due Type 1 - US&R Company assigned by Incident Command or Rescue Branch. This group would be supported by 1-2 US&R Company Rescue Specialists. This group would typically be responsible for:

1. Assembly of two person search teams
2. Coordinates all search and rescue efforts in a defined area
3. Keeps Rescue Branch informed of search and rescue efforts and observations of the site.

Medical (EMS) Group – typically an officer or firefighter from the second or third due Type 1 - US&R Company assigned by Incident Command or Rescue Branch. This group would be supported by 1-2 ambulances staffed by emergency medical technician personnel. This group would typically be responsible for:

1. Coordinates all EMS related activity within the Rescue Branch
2. Informs Rescue Branch of the needs of the Medical Group
3. Provides care and transport to medical facility for injured rescuers
4. Provides care and transport to medical facility for victims
5. Facilitates EMS resources through Rescue Branch
6. Provides pre-entry assessment and post-entry assessment for rescuers working in a confined space
7. Keeps local hospital(s) informed of patient numbers and condition

Rigging Group - typically an officer or firefighter from the second or third due Type 1 - US&R Company assigned by Incident Command or Rescue Branch. This group would be supported by 1-2 US&R Company Rescue Specialists. This group would typically be responsible for:

1. Assembly of rope systems and placement of necessary equipment to perform the rescue.
2. Reports directly to the Rescue Branch
3. May serve as haul team if needed, for victim removal

Air Monitoring Group- typically an officer or firefighter from the second or third due Type 1 - US&R Company assigned by Incident Command or Rescue Branch. This group would be supported by 1-2 US&R Company Rescue Specialists. This group would typically be responsible for:

1. Responsible for continuous atmospheric monitoring (every ten minutes)
2. To log all air monitoring readings and periodically report findings to the Rescue Branch
3. To evaluate the area for best ventilation practices and report findings to the Rescue Branch

Logistics (Equipment/Support) Group- typically an officer or firefighter from the second or third due Type 1 - US&R Company assigned by Incident Command or Rescue Branch. This group would be supported by 2-3 US&R Company Rescue Specialists. This group would typically be responsible for:

1. Securing an area to centrally locate rescue equipment needed to support the rescue operation.
2. Works closely with all functional groups
3. Facilitates tools and equipment to functional groups as requested
4. Sets up supplied air system and rescuer communication system as needed
5. Provided manpower to various functional groups as needed
6. Reports directly to the Rescue Branch.

Entry Group - typically an officer or firefighter from the second or third due Type 1 - US&R Company assigned by Incident Command or Rescue Branch. This group would be supported by 4-5 US&R Company Rescue Specialists. This group would typically be responsible for:

1. Assembly of two 2 person entry teams with appropriate personal protective equipment
2. Provide rescue teams the necessary equipment to perform the rescue.
3. Reports directly to the Rescue Branch
4. Controlling access to the confined space by monitoring the entrance/exit point
5. Record the names, assignments, entry times, and SCBA cylinder pressure of all personnel entering the confined space.
6. Maintain a time awareness of the expected exit time for each individual based on air supply at the time of entry and provide a warning at the predetermined time to begin exit procedures. Warning will be provided by radio or other pre-established communications system.
7. Control the number of persons and prevent crowding at the entrance to the confined space.

Shoring Group - typically an officer or firefighter from the second or third due Type 1 - US&R Company assigned by Incident Command or Rescue Branch. This group would be supported by 1-2 US&R Company Rescue Specialists. This group would typically be responsible for:

1. The set up and operation of a cut station for wood shoring
2. The building of shores as measured by the entry teams

Objective #4 Define the role of the following during non-emergency routine operations: Team Leader/Coordinator, Assistant Team Leader/Assistant Team Coordinator – Logistics, and Assistant Team Leader/Assistant Team Coordinator - Training

The non-emergency roles for Type 1 - US&R Companies generally revolve around three issues: team administration, team equipment – procurement and maintenance, and team training – basic and continuing, Typically, these positions in various forms may be assigned to the senior most officers or firefighters of the team. Some times those roles may be assigned to the strengths or interest of the members of the team involved, but generally, the lead positions of the team are the most senior officer of the team. The following is an example of the non-emergency team structure.

Team Leader/Team Coordinator - Team administration
The Team leader is responsible for team administration - serves as contact with the Team Administrative liaison, attending required meetings, scheduling of team activities, and keeping members informed of team activities.

Assistant Team Leader/Assistant Team Coordinator - Team equipment (Logistics)
The Assistant Team Coordinator - Team equipment is responsible for the accountability, repair and maintenance of issued TRT equipment

Assistant Team Leader/Assistant Team Coordinator - Team training
The Assistant Team Coordinator - Team training is responsible for the basic and continuing training of team members

Once the rescue mode has been activated, and under perfect conditions, these three positions are designed to fill the top three positions on the emergency organizational chart – Rescue Branch, Safety, and the initial required functional group for the incident.

Objective #5 Identify the roles/position for an incident support team for a technical rescue incident response: Rescue Branch Director, Safety Officer, Logistics Officer, Planning Officer

The Incident Support Team is a group of trained individuals sent to support the Incident Commander. The incident support team is a group of individuals trained to function in various command roles such as - Rescue Branch Director, Safety Officer, Logistics Officer, and Planning Officer. The CART organization has used for many years a form of this team called a “Technical Advisory Response”. A technical advisory response would entail the CART Chairman, Operations, Planning, and Logistic Officers. It is the intent of this response to provide technical and organizational support.

One could assume that the Incident Commander of a large technical rescue incident could benefit from having additional trained and experienced Command and General Staff positions (Safety, Liaison, Operations, Planning, and Logistics) specific to Technical Rescue. In order to explore this concept, one must be aware of the current state of IMT in Illinois.

In July 2005, a proposal for the creation of an Illinois Incident Management Team (IMT) was forwarded to the Illinois Terrorism Task Force (ITTF) for consideration. The ITTF asked the Crisis Response and Preparedness Sub-Committee to conduct a thorough review of the concept and, if deemed feasible for Illinois, recommend how such a team could be implemented. The group formed by the Crisis Response and Preparedness Sub-Committee comprised of personnel from Illinois Emergency Management Agency (IEMA), Illinois Emergency Services Management Agency (IESMA), Illinois Fire Service Institute (IFSI), Mutual Aid Box Alarm System (MABAS), Illinois Medical Emergency Response Team (IMERT), Illinois Law Enforcement Alarm System (ILEAS), Illinois Law Enforcement Training Standards Board (ILETSB), Office of the State Fire Marshall (OSFM) and Illinois State Police (ISP), was asked to resolve several issues. The state will require an MOU with IEMA similar to the agreement with ILEAS and MABAS, since the State Emergency Operations Center (SEOC) will be the controlling authority for deployment of an IMT. The standardized IMT concept can then be incorporated into Emergency Management Agreements (EMAs) to allow response to incidents of any nature.

The purpose of creating an IMT is to provide a valuable resource for state and local Incident Command/Unified Command. The goal for an Illinois IMT would be to develop teams to assist with Type 3 (significant local event) and Type 2 (significant statewide event) incidents. It is overwhelmingly suggested Illinois first develop a Type 3 team, which should evolve into a Type 2 team.

It is suggested Illinois create a standing IMT committee, comprised of one person from IEMA, IESMA, IFSI, MABAS, ILEAS, ILETSB, OSFM, ISP, IMERT and the Illinois Department of Public Health (IDPH), who will have equal voting power in the development of training requirements, operational policies and selection of team members. The IMT committee will be responsible for development and oversight of the team, managing and approval of continuing education/training for team members, and selection of replacements if team members resign. It is further recommended Illinois' IMT consist of the following positions:

1. IMT Leader
2. Deputy IMT Leader
3. Safety Officer
4. Liaison Officer
5. Information Officer
6. Operations Section Chief
7. Planning Section Chief
8. Logistics Section Chief
9. Finance/Admin. Section Chief

The concept of an IMT for Technical Rescue is to provide support to a regional technical rescue response. With the Illinois IMT Committee already undertaking the responsibility for development of an IMT Team, one could envision the ability to "spin off" technical rescue personnel also qualified as a state IMT member. For example, a US&R Company member who would be qualified as a Planning Section Chief for the Illinois IMT would therefore be potentially qualified as a Technical Rescue Planning Officer. One could assume that many of the more senior ranking technical rescue personnel will be participating in Illinois IMT in various positions and could serve a dual role in a Technical Rescue Support Team. Many of the issues (administration, training, continuing training, and specific role experience) for a Technical Rescue Support team would be the same for the Illinois IMT concept.

US&R Resource Types

Always use the prefix US&R for Urban Search & Rescue 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 high line systems) Confined Space Rescue (permit required) Mass Transportation Rescue	Heavy Wall Construction High Angle Rope Rescue (not including high line systems) Confined Space Rescue (no permit required) Trench & 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 ID US&R (phonetic) Number ID ***(MABAS US&R 4)***	Equipment Personnel Trained to Appropriate Level Supervision Transportation	Heavy 10 1 *	Medium 10 1 *	Light 10 1 *	Basic 10 1 *

A MABAS US&R Strike Team (ST) is comprised of five (5) US&R Companies

State US&R Task Force	State ID Task Force Number ID ***(IL TF-1)***	Equipment Personnel Trained To Appropriate Level Supervision Transportation	The State 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. The Task Force is self sufficient for 72 hours.

*Requests should include vehicle capabilities when necessary (i.e., four wheel drive, off-road truck, etc.)

The CART / MABAS / METRO US&R Companies are considered a Type 1 Collapse Search & Rescue Teams as outlined by FEMA NIMS Resource Typing Definitions

Urban Search & Rescue Strike Team

As outlined by the Statewide Mutual Aid Plan, an Urban Search & Rescue Strike Team consists of three (3) to five (5) US&R companies with a leader. The following outlines the equipment and staffing for a strike team.

US&R Company	Equipment	Leader *	Technicians	Total
1	Heavy Cache	1	10	11
2	Heavy Cache	1	10	11
3	Heavy Cache	1	10	11
4	Heavy Cache	1	10	11
5	Heavy Cache	1	10	11
	TOTAL	**5**	**50**	**55**
**** One (1) Company Officer must be assigned as the Strike Team Leader***				

STATE US&R TASK FORCE

IL TF-1

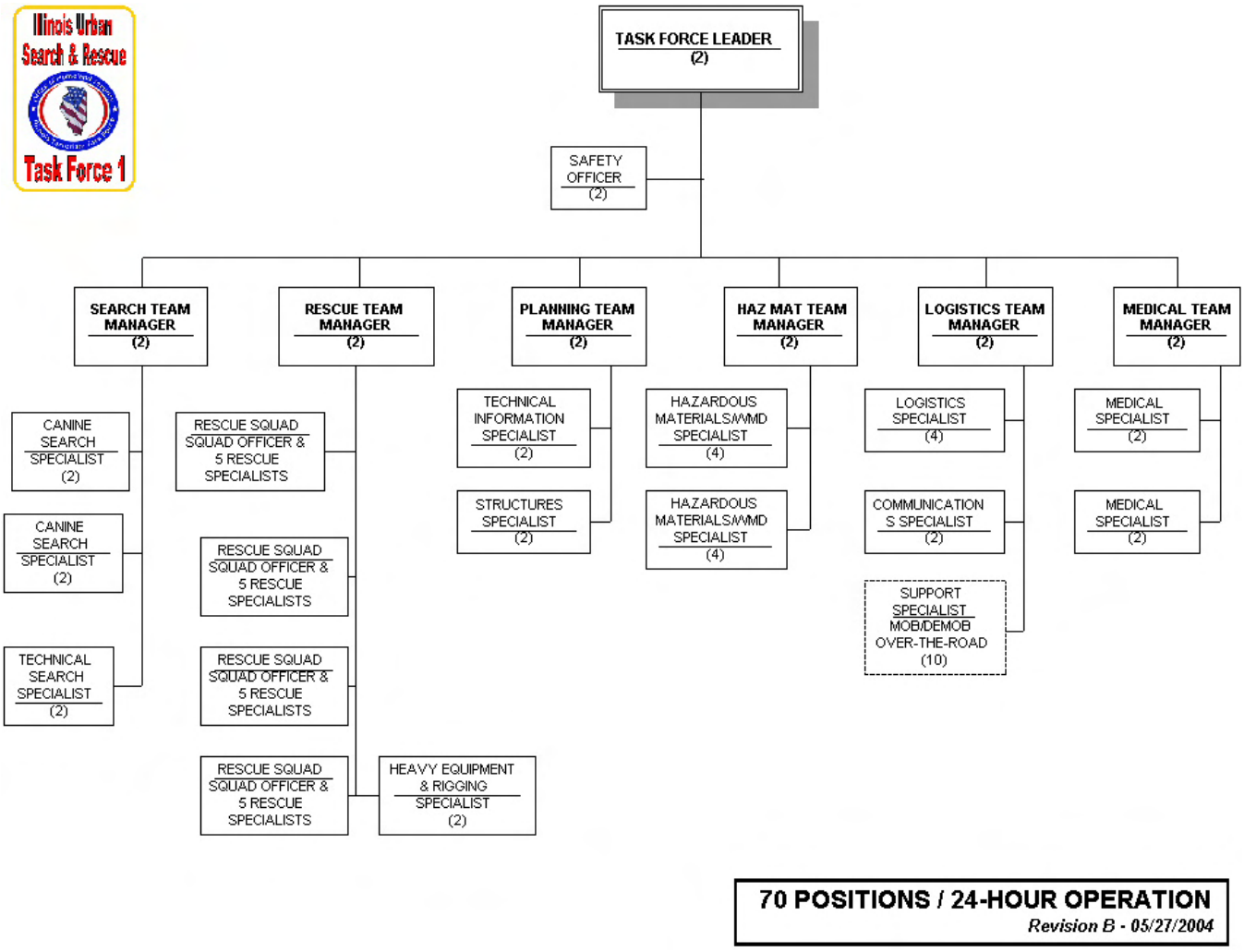
The Illinois Terrorism Task Force (ITTF) and the Mutual Aid Box Alarm System (MABAS), has established a State Urban Search & Rescue (US&R) Task Force to respond throughout Illinois. All US&R Task Force activities are coordinated through the Illinois Emergency Management Agency (IEMA) who serves as the primary point of contact for IL TF-1. All requests for a US&R Task Force must go through normal Mutual Aid request procedures. The full, 70-person, Type I, State US&R Task Force is able to deploy within six hours of activation.

The State US&R Task Force is comprised of 70 persons specifically trained and equipped for large or complex Urban Search & Rescue Operations. The multi-disciplinary organization provides seven functional elements that include Supervision, Search, Rescue, Haz Mat, Medical, Logistics and Planning. The State US&R Task Force can provide round-the-clock Urban Search & 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 State, MABAS and ITTF resources.

A Task Force Leader supervises the State 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 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 US&R Task Force, the elements shall remain under the supervision of the US&R Task Force Leader.

A State US&R Incident Support Team (IST) coordinates the arrival of a State 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. The State US&R Task Force will work within the local incident command organization.


Illinois Urban Search & Rescue
Task Force 1
TASK FORCE LEADER (2)
SAFETY OFFICER (2)
SEARCH TEAM MANAGER (2)
RESCUE TEAM MANAGER (2)
PLANNING TEAM MANAGER (2)
HAZ MAT TEAM MANAGER (2)
LOGISTICS TEAM MANAGER (2)
MEDICAL TEAM MANAGER (2)
CANINE SEARCH SPECIALIST (2)
CANINE SEARCH SPECIALIST (2)
TECHNICAL SEARCH SPECIALIST (2)
RESCUE SQUAD SQUAD OFFICER & 5 RESCUE SPECIALISTS
RESCUE SQUAD SQUAD OFFICER & 5 RESCUE SPECIALISTS
RESCUE SQUAD SQUAD OFFICER & 5 RESCUE SPECIALISTS
RESCUE SQUAD SQUAD OFFICER & 5 RESCUE SPECIALISTS
HEAVY EQUIPMENT & RIGGING SPECIALIST (2)
TECHNICAL INFORMATION SPECIALIST (2)
STRUCTURES SPECIALIST (2)
HAZARDOUS MATERIALS/WMD SPECIALIST (4)
HAZARDOUS MATERIALS/WMD SPECIALIST (4)
LOGISTICS SPECIALIST (4)
COMMUNICATIONS SPECIALIST (2)
SUPPORT SPECIALIST MOB/DEMOB OVER-THE-ROAD (10)
MEDICAL SPECIALIST (2)
MEDICAL SPECIALIST (2)
70 POSITIONS / 24-HOUR OPERATION
Revision B - 05/27/2004

STRUCTURE & HAZARDS MARKINGS

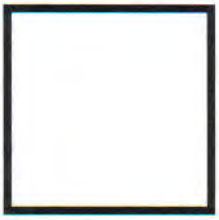
At incidents involving several structures or large areas of damage, the identity and location of individual structures is crucial. The use of existing street names and addresses should always be considered first. If due to damage this is not possible, use the existing hundred block and place all even 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.

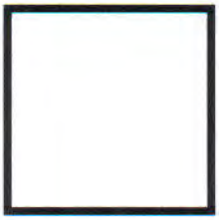
STRUCTURE/HAZARDS MARKINGS

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.

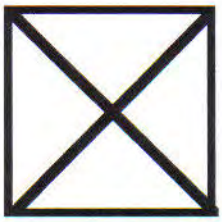


9/12/93
1310 hrs.
HM – none
SMA – E-1

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.

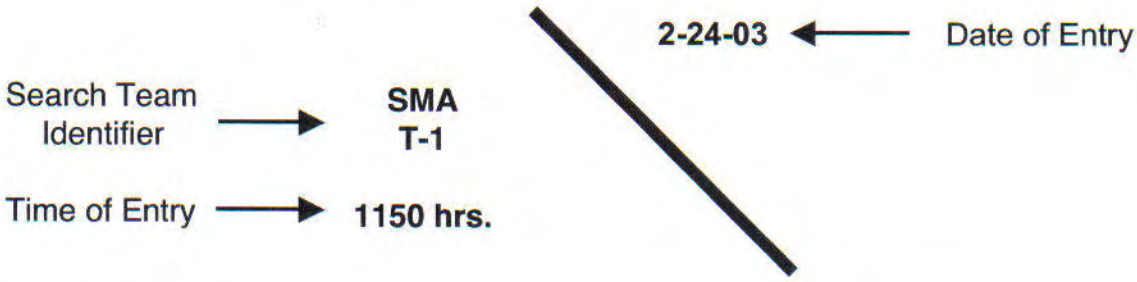
When the search of the entire structure is complete and the Search Team exits the building, a second large slash shall be made in the opposite direction forming an “X” on the Main Entrance search marking. Additional information summarizing the entire search of the structure will be placed in three quadrants 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 “V” 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 “∀” victims still inside the structure. Use a small “X” at the bottom if no victims are inside the structure.

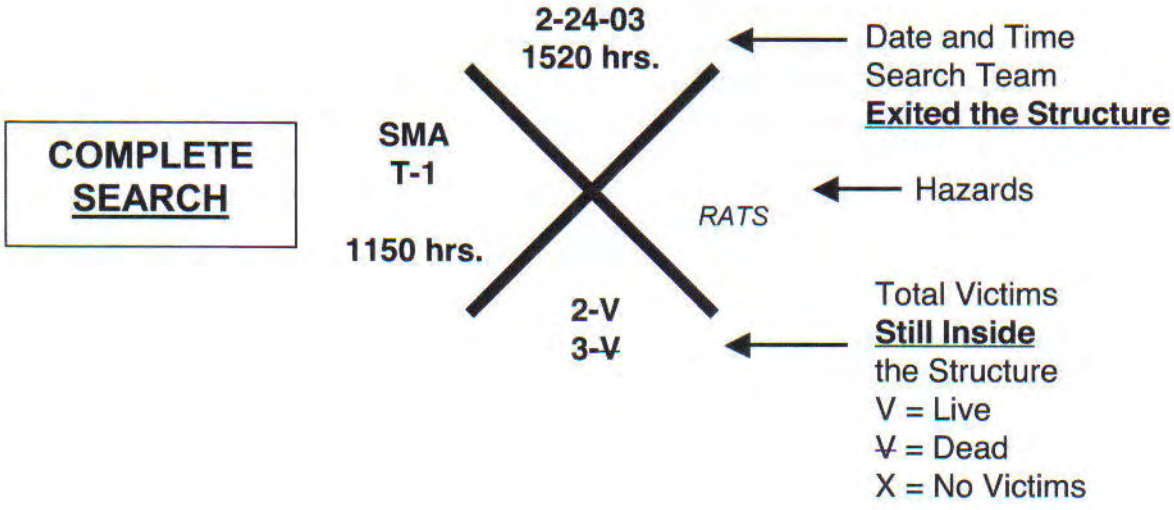
During the search function, while inside the structure, a large single slash shall be made upon entry of each room, area or floor. After the search of the room or area has been completed, a second large slash shall be drawn in the opposite direction forming an “X”. The only additional information placed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

SEARCH MARKINGS

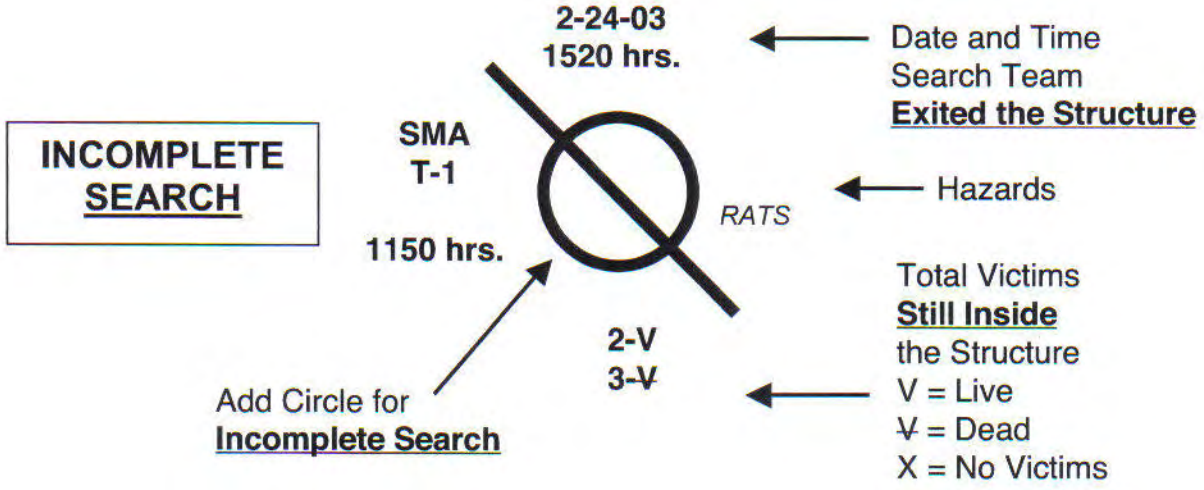
Main Entrance Search Marking- WHEN YOU ENTER



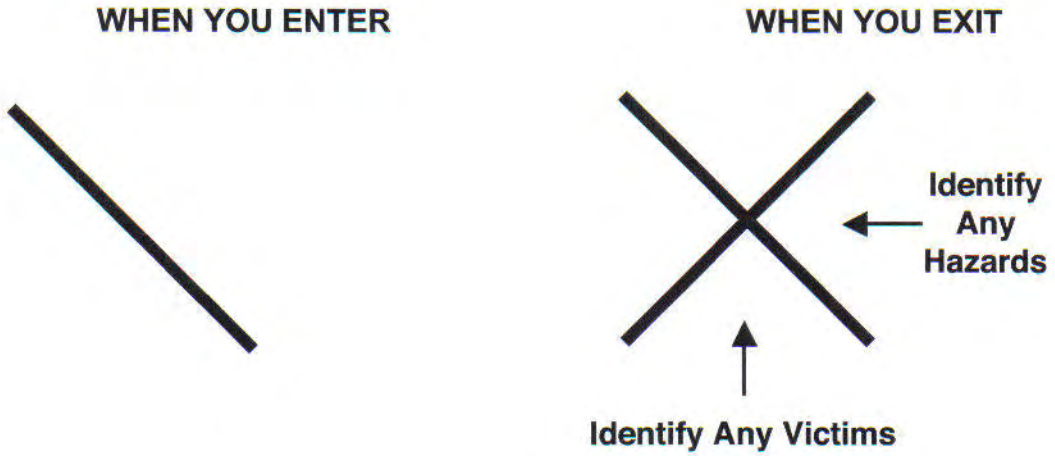
Main Entrance Search Marking- WHEN YOU EXIT



Main Entrance Search Marking- WHEN YOU EXIT



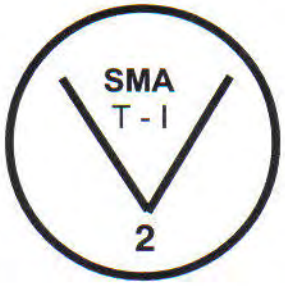
Interior Search Markings- Each Room, AREA OR FLOOR



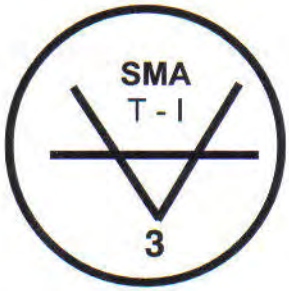
VICTIM MARKING SYSTEM

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.

US&R Company Safety

Maintain accountability using PASSPORT system.
Maintain Situational Awareness at all times.
Use appropriate Personal Protective Equipment (PPE).
Review emergency signaling and evacuation procedures.
Establish LCES for all work areas.
Monitor daily health and safety plans for:

- Sanitation & Hygiene
- Evacuation and Assembly Points
- Proper level of PPE
- Decontamination procedure
- Operations to determine safe practices
- Work/rest cycles
- Weather
- Fire protection monitoring at all locations.

LCES

- **Lookouts**
  - **Appoint site Safety Officer**
  - **Observe only**
- **Communications**
  - **Request radio channel(s)**
  - **Review evacuation signals**
- **Escape Routes**
  - **Pre-established path to safe area**
- **Safe Zones**
  - **Pre-established areas of refuge**
  - **Pre-identified assembly area**

EMERGENCY TRAFFIC:	Term will be utilized by any unit encountering an immediate perilous situation and will receive the highest communications priority from all operating units on the frequency. Examples of emergency traffic are as follows: ❑ Structural collapse or potential ❑ Rapidly changing conditions ❑ Hazardous Materials ❑ To initiate immediate evacuation of building or area. Units can initiate "EMERGENCY TRAFFIC" by verbally contacting a Division/Group Supervisor or Command and declaring "EMERGENCY TRAFFIC" then stating what the nature of the emergency is.
MAYDAY:	Term used exclusively for the purpose of identifying a rescuer(s) that are in imminent danger and require the action of the Rapid Intervention Team (RIT), such as: ❑ Injured or in need of immediate assistance ❑ Lost or missing ❑ Trapped ❑ Out of SCBA/SABA air ❑ Any circumstance that can seriously injure a rescuer(s) ❑ To be used by any rescuer who locates another rescuer(s) in any of the above situations

Emergency Signaling

Effective emergency signaling procedures are essential for the safe operation of rescue personnel operating at a disaster site. These signals must be clear and understood by all rescue personnel. Hand-held air horns, bull horns, vehicle air horns or other appropriate hailing devices shall be used to sound the appropriate signals as follows:

- Cease Operation/All Quiet:
  - ◊ 1 long blast (3 seconds).
- Evacuate the Area:
  - ◊ 3 short blasts (1 second each).
  - ◊ Evacuate to the designated safety zone.
  - ◊ Conduct a Personnel Accountability Report (PAR) to account for all personnel.
  - ◊ All task forces must develop a personnel accounting system.
- Resume Operations:
  - ◊ 1 long and 1 short blast.

Emergency Traffic must also be declared on the radio.

Illinois Technical Rescue Team
Equipment List
Grant Funding 2003/2004/2006

	Equipment Category:	CBRNE Hand tools Equipment						
Fiscal Year	Part Number	Commodity Description	U/M	Quanity	UNIT PRICE	Total Price	Agency Tasked	
	Tool	Description of Item purchased	Each	AMT	Cost per unit	Total Price	SOS	Vender
2003/2004	FH - SHF10 fiberglass	10 lb. sledge hammers/fiberglass handle	2	2	$20.05	$40.10		Fastenal
2003/2004	Fiberglass hadle	4 lb. sledge hammers/fiberglass handle	2	2	$10.17	$20.34		Fastenal
2003/2004		cold chisels 12"	2	2	$14.00	$28.00		Air One
2003/2004	GFE-PPB36	pinch point pry bars/36"	4	4	$23.00	$92.00		Air One
2003/2004		pinch point pry bars 56-60"	1	1	$115.00	$115.00		Air One
2003/2004		claw wrecking bars (3 foot)	2	2	$17.00	$34.00		Fastenal
2003/2004	HGESGHS1	hacksaws	2	2	$19.53	$39.06		Fastenal
2003/2004	HDESGHBP1	carbide hacksaw blade	5	5	$1.15	$5.75		Fastenal
2003/2004	MC4058A45	crosscut handsaws	2	2	$12.63	$25.26		Fastenal
2003/2004		axe pick head 8 lb.with fiberglass handle	1	1	$36.00	$36.00		Darley
2003/2004		axe flat head 8 lb.with fiberglass handle	1	1	$35.50	$35.50		Darley
2003/2004	ESGBMK1	**Building marking kit***	1	1		$0.00		
2003/2004	**Building marking kit***	CYALUME LIGHTSTICKS WHITE 12 HRS.box of 10	10	2	$14.63	$146.30		Fastenal
2003/2004	**Building marking kit***	100 marking flags orange	50	50	$0.06	$3.00		Fastenal
2003/2004	**Building marking kit***	100 marking flags green	50	50	$0.06	$3.00		Fastenal
2003/2004	**Building marking kit***	2 - 3"x1000' caution tapes	1	1	$5.64	$5.64		Fastenal
2003/2004	**Building marking kit***	2 - 3"x1000' danger tapes	1	1	$5.64	$5.64		Fastenal
2003/2004	**Building marking kit***	Orange spray paint	4	4	$2.95	$11.80		Fastenal
2003/2004	**Building marking kit***	Red china marker	5	5	$0.62	$3.10		Fastenal
2003/2004	**Building marking kit***	Black China marker	5	5	$0.64	$3.20		Fastenal
2003/2004	**Building marking kit***	White China marker	5	5	$0.64	$3.20		Fastenal
2003/2004	**Building marking kit***	flagging tape lime orange	6	6	$0.97	$5.82		Fastenal
2003/2004	**Building marking kit***	Flagging tape lime green	6	6	$0.97	$5.82		Fastenal
2003/2004	HDESGFH1	22 oz. framing hammers	2	2	$22.39	$44.78		Ace
2003/2004	MC-1960A65	tri or speed squares	2	2	$5.07	$10.14		Fastenal
2003/2004	HDESGCB1	carpenter belts	2	2	$23.18	$46.36		Fastenal
2003/2004		Tool box 9-65337	1	1	$56.24	$56.24		Fastenal
2003/2004		Tool box 9-59216	1	1	$47.00	$47.00		Fastenal
2003/2004		tool kit craftsman*	1	1	$380.94	$380.94		Fastenal
2003/2004	HDESGDT12	rolls of duct tape (case 12) 2"x 50 yrds.	1	12	$45.83	$45.83		Fastenal
2003/2004	FH-CRS	folding shovels*	4	4	$15.00	$60.00		Fastenal
2003/2004	HDESGSQ1	long handle shovel, square point	1	1	$18.00	$18.00		Fastenal
2003/2004	HDESGRP1	long handle shovel, round point	1	1	$18.00	$18.00		Fastenal
2003/2004	HDESGSS	scoop shovel (D handle)	1	1	$28.39	$28.39		Fastenal
2003/2004		1" 30 foot tape measures	3	3	$11.20	$33.60		Ace
2003/2004	42"	Bolt Cutters (Heavy Duty, 42-inch)	1	1	$137.20	$137.20		Fastenal
2003/2004	FH-BC-30	bolt cutter (30")	1	1	$64.00	$64.00		Fastenal
2003/2004	Nail cache	nails (box): 1 50lb 16b	1	1	$53.43	$53.43		Fastenal
2003/2004	Nail cache	nails (box): 1 50lb. 8d	1	1	$55.12	$55.12		Fastenal
2003/2004	ESGJ3T	high lift jacks 3.5 ton	2	2	$67.95	$135.90		ESG
2003/2004	3TP96	come along 3 ton/chain set 6 ton	1	1	$939.86	$939.86		Darley
2003/2004	TU32 8000#60' cable	grip hoist type come along 4 ton w/60' cable TU32	1	1	$1,555.70	$1,555.70		ESG
2003/2004		Saw horse	2	2	$22.39	$44.78		Ace
2003/2004	TS1000	Cutting table	1	1	$119.00	$119.00		Ace
2003/2004	SC1216	Salvage covers	1	1	$21.50	$21.50		Fastenal
2003/2004	SJ4	screw jacks pairs 1 1/2 " or equivalent	6	6	$35.00	$210.00		ESG
2003/2004	**Anchor kit***	7 1/2" X1/2" concrete anchor	25	1	$25.71	$642.75		Fastenal
2003/2004	**Anchor kit***	7 1/2" X1/2" concrete anchor	25	1	$31.03	$775.75		Fastenal
2003/2004	**Anchor kit***	1/2 eye nuts	10	10	$2.98	$29.80		Fastenal
		CBRNE Hand tools Equipment Total:	266	221	$4,138.96	$6,241.60		

Illinois Technical Rescue Team
Equipment List
Grant Funding 2003/2004/2006

	Equipment Category:	CBRNE Rescue Equipment						
Fiscal Year	Part Number	Commodity Description	U/M	Quanity	UNIT PRICE	Total Price	Agency Tasked	
	Tool	Description of Item purchased	Each	AMT	Cost per unit	Total Price	SOS	Vender
2003/2004		200'x1/2 static kermantle 9000 lb.rope/id bag/18"edge protection/NFPA 1983 2001 Edition	2	2	$198.00	$396.00		AIR ONE
2003/2004		300'x1/2 static kermantle 9000 lb.rope/id bag/18"edge protection/NFPA 1983 2001 Edition	2	2	$267.00	$534.00		AIR ONE
2003/2004		20'x1/2 static kernmantle 9000lb.nfpa 1983	2	2	$15.00	$30.00		AIR ONE
2003/2004	R-CDF139-02	friction devices* steel 6 bar rack	2	4	$63.00	$126.00		AIR ONE
2003/2004	11mm large stainless steel D locking	Steel carabiners locking D 11mm	24	24	$23.00	$552.00		Air One
2003/2004	R-#2SS	camming devise*	6	6	$59.00	$354.00		Air One
2003/2004	R-RP118NFPA	rescue pulleys 2"	3	3	$29.00	$87.00		Air One
2003/2004	CMI 4" 1/2" pully NFPA	rescue pulleys 4"	3	3	$44.00	$132.00		Air One
2003/2004	R-06101S	webbing kit* 300 feet	2	600	$0.24	$0.48		Air One
2003/2004	R-148500	edge protection devices*	2	2	$105.00	$210.00		Air One
2003/2004	R-WPOS	pick off straps	2	2	$22.00	$44.00		Air One
2003/2004	PEPWX1710	commercial class III harness	4	4	$232.00	$928.00		Air One
2003/2004		Rigging plate	5	5		$0.00		
2003/2004		first aid kit	1	1	$30.60	$30.60		Darley
2003/2004	FT 82300	trauma kit	1	1	$206.99	$206.99		Galls
2003/2004	ESG Blanket	blankets	1	2	$28.85	$28.85		Darley
2003/2004		Sked package	1	1	$369.72	$369.72		Darley
2006		Liberty Rescue Tube (Only for critical TRT areas)	1	1	$3,670.00	$3,670.00		ESG
2003/2004		Stokes basket	1	1	$419.25	$419.25		Darley
2003/2004	Review Document	bridle, for stokes basket	1	1	$84.00	$84.00		Darley
2003/2004		LSP halfbackboard	1	1	$664.40	$664.40		Bound Tree
2003/2004		LSP halfbackboard lifting harness	1	1	$134.00	$134.00		Bound Tree
2003/2004		straps for backboard	3	3	$10.99	$32.97		Galls
2003/2004	ECESGBB	backboard with straps	1	1	$99.99	$99.99		Galls
2003/2004		swivels	2	2		$0.00		Air One
2003/2004	PE-P054-53	tri-pod -human rated 7-9'w/hauling system	1	1	$1,335.00	$1,335.00		Air One
		CBRNE Rescue Equipment Total:	75	676	$8,111.03	$22,952.45		

Illinois Technical Rescue Team
Equipment List
Grant Funding 2003/2004/2006

	Equipment Category:	CBRNE Gas Powered Equipment						
Fiscal Year	Part Number	Commodity Description	U/M	Quanity	UNIT PRICE	Total Price	Agency Tasked	
03-4	Tool	Description of Item purchased	Each	AMT	Cost per unit	Total Price	SOS	Vender
2003/2004	5hp. Honda twin-8cfm@90psi	Compressor gas powered Honda/ twin tank 8gal/ min.8cfm	1	1	$685.00	$685.00		ESG
2003/2004	55OO KW 9HP Honda	Generator (5kw) 9hp Honda, (L5/20 twistlocks)	1	1	$1,983.00	$1,983.00		Air One
2003/2004	Stihl	Carbide tipped 20" chain saw -spare chain &bar, bar&motor oil &tool kit	1	1	$1,112.00	$1,112.00		Highway C
2006	K-960	Ring saw K960 14" concrete ring saw, with case	1	1	$2,226.00	$2,226.00		Murphy's
2006	ELD blades	blades - ring saw	1	1	$520.00	$520.00		Murphy's
2003/2004	Stihl,wet head, 4 gal. Bottle, 30' hose & blade	circular saw (14") Wet cut kit&carbide blade	1	1	$958.00	$958.00		Highway C
2003/2004	Ffh-cbt-12"X24t	circular saw blades (14" carbine tip)	2	2	$214.00	$428.00		Highway C
2003/2004	K505375110	circular saw blades (14" metal cutting)	12	12	$6.25	$75.00		Highway C
2003/2004	(14"diamond tipped ELD 20)	circular saw blades (14"diamond tipped ELD 45)	2	2	$184.00	$368.00		Highway C
		CBRNE Gas Powered Equipment Total:	22	22	$7,888.25	$8,355.00		

Illinois Technical Rescue Team
Equipment List
Grant Funding 2003/2004/2006

	Equipment Category:	CBRNE Pnuematic/misc Equipment						
Fiscal Year	Part Number	Commodity Description	U/M	Quanity	UNIT PRICE	Total Price	Agency Tasked	
03-4	Tool	Description of Item purchased	Each	AMT	Cost per unit	Total Price	SOS	Vender
2003/2004		Pneumatic- air nailer 8 - 16D nails	1	1	$299.00	$299.00		Ace
2003/2004		1/2" air hose 50'	2	2	$11.88	$23.76		Fastenal
2003/2004	Pneumatic- air nailer 8 d nails	Box 8 D nails	1	1	$39.99	$39.99		Ace
2003/2004	Pneumatic- air nailer 16 D nails	Box 16D nails	1	1	$54.00	$54.00		Ace
2003/2004	MSA-G-CM60330-1C125-0	4500-SCBA /PASS/spare cylinder/mask/case	6	6	$2,844.00	$17,064.00		Air One
2003/2004	MSA PreMaire	supplied air breathing apparatus w/escape cylinder	4	4	$1,399.00	$5,596.00		Air One
2003/2004	50' sections (300')	air supply hoses TOTAL 300'/ SCBA PACK	24	24	$259.00	$6,216.00		Air One
2003/2004		Air Cart with 2-air cylinders, gages, regulators	1	1	$2,248.00	$2,248.00		Air One
		Hydration - Camel pack	14					
		Millineum masks CBRN	30					
		Cannister Millineum masks CBRN	30					
2003/2004		Germiccidal cleaner	1	1	$ 20.00	$20.00		Air One
2003/2004		Personal equipment towlettes 220/canister	1	1	$ 17.00	$17.00		Air One
2003/2004		Exothermic Torch, slice pack	1	1	$1,531.39	$1,531.39		Rockford
2003/2004		cutting rods	1	1	$130.96	$130.96		Rockford
2003/2004		cutting googles	1	1	$25.00	$25.00		Rockford
2003/2004	minimum USAR equipment list	Pneumatic shoring kit /USAR Standard	1	1	$24,511.56	$24,511.56		Darley
2003/2004	400 Zumro 19'x21' heater/lighting 7 lights/fuel tank/wiring	Portable tent shelter Zumro 400 - with blower, heater, 8' duct, propane gas line & tank, 7 lights, SCBA inflater hose,inflater motor, ID panel	1	1	$19,615.06	$19,615.06		ESG
		CBRNE Pnuematic/misc Equipment Total:	121	47	$53,005.84	$77,391.72		

Illinois Technical Rescue Team
Equipment List
Grant Funding 2003/2004/2006

	Equipment Category:	CBRNE Electrical Equipment						
Fiscal Year	Part Number	Commodity Description	U/M	Quanity	UNIT PRICE	Total Price	Agency Tasked	
03-4	Tool	Description of Item purchased	Each	AMT	Cost per unit	Total Price	SOS	Vender
2003/2004	DW7055 12" W/CASE	Miter saw 12"	1	1	$240.00	$240.00		Ace
2003/2004	GFE-PL-500	floodlights (500w) L5/20 Twistlock plug	4	4	$174.00	$696.00		Air One
2003/2004		extension cords (50' 3/10 L5 20amp plug)	6	6	$77.00	$462.00		Darley
2003/2004	GFE-L5-20	junction box (4 outlets w/GFI L520 plug)	1	1	$217.00	$217.00		Air One
2003/2004		electric adapter L5/20 male - household female 3/10	2	2	$29.50	$59.00		Air One
2003/2004		electric adapter L5/20 female - household male 3/10	2	2	$29.50	$59.00		Air One
2003/2004		ventilation fan confinced space type with heater	1	1	$2,300.00	$2,300.00		ESG
2003/2004		Hammer, electric, rotary, HD 1-1/2" (min.) (spline)11248 EVS	1	1	$599.00	$599.00		Ace
2003/2004	HC-4501	Hammer, electric, rotary, Bit, spline shank, 3/8" diamond carbide tipped	1	1	$19.99	$19.99		Ace
2003/2004	HC-4510	Hammer, electric, rotary, Bit 1/2" diamond carbide tipped	1	1	$22.99	$22.99		Ace
2003/2004	HC-4550	Hammer, electric, rotary, Bit 1" diamond carbide tipped	1	1	$49.99	$49.99		Ace
2003/2004	HC-4591	Hammer, electric, rotary, Bit1-1/2" diamond carbide tipped	1	1	$89.99	$89.99		Ace
2003/2004	T-1831	Hammer, electric, rotary, adapter, "B" taper	1	1	$16.99	$16.99		Ace
2003/2004	HA-1020	Hammer, electric, rotary, Adapter, SDS	1	1	$49.99	$49.99		Ace
2003/2004	HS-1913	Hammer, electric, rotary, Points, Bull 12"	1	1	$10.99	$10.99		Ace
2003/2004	HS-1914	Hammer, electric, rotary, Points, Bull 18"	1	1	$13.99	$13.99		Ace
2003/2004	HS-1811	Hammer, electric, rotary, chisels, cold	1	1	$9.99	$9.99		Ace
2003/2004	HC-6021	Hammer, electric, rotary, Bit, 21/2", diamond carbide-tipped THROUGH HOLE	1	1	$299.00	$299.00		Ace
2003/2004	HC-8020	Hammer, electric, rotary, Bit, 21/2", diamond carbide-tipped Core bit	1	1	$139.99	$139.99		Ace
2003/2004	HS-1813	Hammer, electric, rotary, Bit, bull point, 10"	1	1	$9.99	$9.99		Ace
2003/2004	HS-1812	Hammer, electric, rotary, Bit, chisel point 10"	1	1	$13.99	$13.99		Ace
2003/2004	MIL 6460	saw, electric (10 1/4")	1	1	$399.99	$399.99		Ace
2003/2004		saw blades (101/4" carbide)	2	2	$49.99	$99.98		Ace
2003/2004	Norton 10x.06x5/8"	saw blades (10 1/4 metal)	12	12	$49.99	$599.88		Ace
2003/2004	1645K BOTCH	Battery sawsall / quick release(spare bat. & chrg.)	1	1	$439.99	$439.99		Ace
2003/2004	G-6XG39	Electric sawsall / quick release blade	1	1	$319.99	$319.99		Ace
2003/2004	SWN95 50 blades/case	sawsall blades - wood	12	12	$149.99	$1,799.88		Ace
2003/2004	DEMO Blades SRD9 5 blades/Case	sawsall blades - metal	18	18	$22.49	$404.82		Ace
2003/2004	Brute - 11304K	demolition hammer - large min. 37' lbs force, 4 bit&cart	1	1	$1,599.00	$1,599.00		Ace
2003/2004		Hammer, Demolition, electric, 10-20lb ,11317 EVS Botch	1	1	$849.00	$849.00		Ace
2003/2004		Hammer, Demolition, 15lb, Bull point, 12"11317 EVS Botch	2	2	$7.99	$15.98		Ace
2003/2004		Hammer, Demolition, 15lb, Bull point, 18" 11317 EVS Botch	2	2	$10.99	$21.98		Ace
2003/2004		Hammer, Demolition, 15lb, Flat Chisel point, 1"x12" 11317 EVS Botch	2	2	$7.99	$15.98		Ace
2003/2004		Hammer, Demolition, 15lb, Flat Chisel point, 1"x18"11317 EVS Botch	2	2	$10.99	$21.98		Ace
2003/2004		cut off tool 1989# milwaukee	1	1	$199.00	$199.00		Ace
2003/2004		cut off tool blades	5	5	$25.99	$129.95		Ace
		CBRNE Electrical Equipment Total:		94	$8,557.26	$12,297.28		

Illinois Technical Rescue Team
Equipment List
Grant Funding 2003/2004/2006

	Equipment Category:	CBRNE Hydraulic Equipment						
Fiscal Year	Part Number	Commodity Description	U/M	Quanity	UNIT PRICE	Total Price	Agency Tasked	
03-4	Tool	Description of Item purchased	Each	AMT	Cost per unit	Total Price	SOS	Vender
2003/2004	Hurst - centar - SC14/12VBP	1" rebar cutter - multi-purpose tool	1	1	$7,903.00	$7,903.00		5 Alarm
2003/2004	HDESGDBJ20	hydraulic jacks (minimum 20-ton)	2	2	$71.05	$142.10		Fastenal
2006	966947201	Hydraulic Power unit PP 418	1	1	$5,595.00	$5,595.00		Illini Contractors Supply
2006	5102023-10	Hydraulic hose pre-charged	3	3	$870.00	$2,610.00		Illini Contractors Supply
2006	BR45120	1 1/8" Breaker 45lb	1	1	$1,620.00	$1,620.00		Air One
2006	BR89120	1 1/8" Breaker 90lb	1	1	$2,253.00	$2,253.00		Air One
2006	2333	chisel bit	2	2	$42.00	$84.00		Air One
2006	2334	asphalt bit	2	2	$54.00	$108.00		Air One
2006	8106	Keen kut bit	2	2	$132.00	$264.00		Air One
2006	A90008	FL face CPL sets	2	2	$82.00	$164.00		Air One
2006	DS063000	Diamond chain saw	1	1	$1,298.00	$1,298.00		Air One
2006	56800	Diamond chain saw chains	2	2	$1,235.00	$2,470.00		Air One
2006	35037	Chain saw Bars	2	2	$472.00	$944.00		Air One
2006	DCP30101	water pump attachment	1	1	$735.00	$735.00		Air One
2006	21550	water gauge	1	1	$64.00	$64.00		Air One
2006	Hose	50' blue water hose	2	2	$83.00	$166.00		Air One
2006		hose basket kit						Air One
		CBRNE Hydraulic Equipment Total:		**26**	**$22,509.05**	**$26,420.10**		

	Equipment Category:	CBRNE Monitoring Equipment						
Fiscal Year	Part Number	Commodity Description	U/M	Quanity	UNIT PRICE	Total Price	Agency Tasked	
03-4	Tool	Description of Item purchased	Each	AMT	Cost per unit	Total Price	SOS	Vender
2003/2004	DELSAR - TACK STICK	Electrical detection device*	1	1	$335.00	$335.00		Darley
2003/2004	PGM570Q	4 - range air monitor 4 gas, pump, list tube	1	1	$1,089.00	$1,089.00		ESG
2003/2004	Technical System 1	Search camera rigid	1	1	$6,495.00	$6,495.00		Zistos
2003/2004	Technical System 2	Search camera small rigid with spole of video cable	1	1	$4,295.00	$4,295.00		Zistos
2003/2004	Utra Radiac	Radiation detector	1	1		$0.00		
2003/2004	LLKIT	Laser transit	1	1	$2,637.00	$2,637.00		Seiler
2003/2004	DELSAR 6 Probe	tech. search device;listening Delsar 6 sensor	1	1	$11,459.07	$11,459.07		
		CBRNE Monitoring Equipment Total:	**7**	**2**	**$26,310.07**	**$26,310.07**		

Illinois Technical Rescue Team
Equipment List
Grant Funding 2003/2004/2006

	Equipment Category:	CBRNE Personal Protection Equipment						
Fiscal Year	Part Number	Commodity Description	U/M	Quanity	UNIT PRICE	Total Price	Agency Tasked	
03-4	Tool	Description of Item purchased	Each	AMT	Cost per unit	Total Price	SOS	Vender
2003/2004	Ten Persons Technical Rescue Deployment Team	**Person Protective Equipement**	10	10		$0.00		
2003/2004		Flashlight, battery intrinsically safe, UL rated, w/ four spare bulbs	10	10	$75.00	$750.00		ESG
2003/2004		Hearing protection, ear plugs, must meet ANSI S3.9-1974	1	1	$22.04	$22.04		Bound Tree
2003/2004		Helmet, rescue-type, low profile, Kevlar with identification crescents	10	10	$69.00	$690.00		ESG
2003/2004		Helmet light, Intrinsically safe (with 2 spare bulbs)	10	10	$47.95	$479.50		ESG
2003/2004		Knife, combination, folding (Leatherman)	10	10	$54.00	$540.00		EMP
2003/2004	7103120	Gloves	10	10	$10.00	$100.00		Ace
2003/2004		Safety glasses with keepers, shatter proof, with side shields, must meet ANSI 28	10	10	$12.00	$120.00		ESG/ AIR
2003/2004		Uniform, Jumpsuit or two piece, Nomex IIIA XL	5	5	$185.39	$926.95		Galls
2003/2004		Uniform, Jumpsuit or two piece, Nomex IIIA 2XL	5	5	$185.39	$926.95		Galls
2003/2004		Bandannas	30	30	$2.50	$75.00		ESG
2003/2004		Pack, field, personal, yellow, complete set FSS field pack or equivalent	10	10	$110.00	$1,100.00		EMP
2003/2004		Toiletry kit, including all personal hygiene items, such as Chap Stick, soap, lotion, etc.	10	10	$30.00	$300.00		ESG
2003/2004		Respirator, halfface, cartridge type, with cartridges & spare cartridge set (P100)	10	10	$22.00	$220.00		ESG
2003/2004	personal tool kit	Tool Pouch	10	10	$19.95	$199.50		EMP
2003/2004	personal tool kit	pliars 9-45381V	10	10	$22.00	$220.00		Fastenal
2003/2004	personal tool kit	screw driver CFT9-41161	10	10	$10.27	$102.70		Fastenal
2003/2004	personal tool kit	tin snips 6C157	10	10	$15.00	$150.00		Fastenal
2003/2004	personal tool kit	stanley razor knife 23629 QK CHANGE	10	10	$7.80	$78.00		Ace
2003/2004	personal tool kit	razor blades 2065068	10	10	$2.24	$22.40		Ace
2003/2004	personal tool kit	10" Ajustible wrench 9-44604V	10	10	$14.41	$144.10		Fastenal
2003/2004		Field Operations Guide, FEMA US &R	10	10	$15.00	$150.00		ESG
2003/2004		Rope Gloves	10	10	$30.00	$300.00		ESG
2003/2004		ESS Goggles	10	10	$39.58	$395.80		Darley
2003/2004		Knee Pads	10	10	$11.69	$116.90		Galls
2003/2004		Elbow pads	10	10	$8.99	$89.90		Galls
	TOTAL personal gear	**CBRNE Personal Protection Equipment Total:**	261	261	$1,022.20	$8,219.74		

Illinois Technical Rescue Team
Equipment List
Grant Funding 2003/2004/2006

	Equipment Category:	CBRNE Decontamination Equipment Level B Protection						
Fiscal Year	Part Number	Commodity Description	U/M	Quanity	UNIT PRICE	Total Price	Agency Tasked	
03-4	Tool	Description of Item purchased	Each	AMT	Cost per unit	Total Price	SOS	Vender
		Level B HAZ/MAT Protection						
2003/2004		Coverall CPF-4; attached hood, attached sock boots, elastic wrists 3 cases/team - 18 coveralls/case sizes XL ,XXL	3	3	$566.50	$1,699.50		ESG
2003/2004		Haz. Mat Boots 1case/ team - 10 prs/case, Tingly	1	1	$546.00	$546.00		ESG
2003/2004		Triple Dipped Neoprene Gloves: 3 cases/team - 12 prs/case	3	3	$53.00	$159.00		Air One
2003/2004		MSA Millinium mask large CBRN 2/TEAM	2	2	$ 147.00	$294.00		Air One
2003/2004		MSA Millinium mask Medium 17/TEAM	17	17	$ 147.00	$2,499.00		Air One
2003/2004		MSA Millinium mask small CBRN 1/TEAM	1	1	$ 147.00	$147.00		Air One
2003/2004		CBRN Canister P/N 10046570	60	60	$ 26.00	$1,560.00		Air One
2003/2004		P 100 Cartride for Millinium masks 2/ TEAM 6/BOX	2	2	$ 69.00	$138.00		Air One
2003/2004		Disposable 55 gal bags 50 bags/case min 3 mil	1	1	$95.40	$95.40		Darley
2003/2004		Respirator - P100 masks 100 masks/case	1	1	$675.00	$675.00		Air One
2003/2004		Decon shower - RMC Medical decon shower	1	1	$476.96	$476.96		Darley
2003/2004		Decon Pools - RMC 2 Pools/case	1	1	$197.91	$197.91		Darley
2003/2004		RMC Medical Manifold	1	1	$154.68	$154.68		Darley
2003/2004		Water supply line min.5/8" 2-50' hoses/case	2	2	$17.93	$35.86		Darley
2003/2004		Bucket, 5 gal.	5	5	$2.00	$10.00		ACE
2003/2004		Scrub Brushes w handles 4/case	4	4	$7.58	$30.32		Darley
2003/2004		Spray wands 2/case	2	2	$20.40	$40.80		Darley
2003/2004		Disposable Coveralls tyvek 50/case size XL	2	2	$84.45	$168.90		Darley
2003/2004		Plastic sheeting 20'x100' 1case, min.9 mil thickness	1	1	$62.86	$62.86		Fastenal
2003/2004	Soap 4/1 gal bottles	Decontamination solution for human use 4 bottles/case	2	1 gal	$19.18	$38.36		Darley
			112	110	$3,515.85	$9,029.55		

GRAND TOTAL	**$1,459.00**	**$135,058.51**	**$197,217.51**	

MABAS Technical Rescue Team Deployment and Base of Operations Procedures

January 2007

Table of Contents

List of Illustrations

Appendixes

Purpose

The purpose of this document is to serve as guidance for the deployment of Mutual Aid Box Alarm System (MABAS) Technical Rescue Team (TRT) personnel and equipment. It focuses on the Point of Contact (POC), team muster point, Point of Departure (PoD) and Base of Operations (BoO).

The Point of Departure Plan provides procedures for assembling personnel and equipment for deployment to the Base of Operations (BoO).

The Transportation Plan is designed to identify the needs required to move the deploying personnel and the cache of equipment to the Base of Operations.

This document also contains information regarding TRT equipment, and will affirm a complete cache of equipment for the TRT.

The Base of Operation Plan creates the guidelines to establish the lay out and base set-up by the deployed personnel.

These plans will be implemented and followed upon the activation of the MABAS TRT response.

Definitions

Will/Shall – Used to indicate a mandatory requirement.

Should – Indicates an acceptable or suggested means of accomplishment.

MABAS TRT Response Point of Departure Procedures

Purpose

The purpose of this procedure is to insure the timely and accurate processing of personnel and equipment for departure to a Base of Operations.

In the case of a MABAS Technical Rescue Team (TRT) response, the Team's muster location will also be their Point of Departure (PoD).

In order for this process to be timely and accurate, the Point of Departure (PoD) is divided into specific assignments with checklists.

Facilities

The Point of Departure (PoD) will have facilities suitable to process and hold deploying personnel and equipment out of extreme or inclement weather. Additionally, the PoD will have relief facilities and an area sufficient to conduct briefings.

Processing Positions

The following positions shall be filled for the processing of personnel and equipment. The personnel selected for these positions should not be deploying. Upon notification of a deployment, agencies should identify extra non-deploying members and assign them to the Point of Departure (PoD) to assist in processing. The checklists provided in this document should be used to insure the timely and efficient deployment of personnel and equipment to an incident.

PoD "Operations" – This is the director of the PoD. All assignments are directed from Operations. Operations will be in direct communication with the TSC. All communications at the PoD flow to Operations. Assistants to operations may be assigned as needed. See "PoD Operations" checklist.

PoD "Personnel" – This individual is assigned to receive all TRT personnel responding to the PoD. Assistants may be assigned as needed. Personnel director reports to Operations. See "PoD Personnel" checklist.

PoD "Equipment" – This individual is assigned to receive all incoming equipment from all deploying agencies. This division may be divided into Equipment Receiving and Equipment Loading. Assistants may be assigned as needed. Equipment director reports to Operations. See "PoD Equipment" check-off sheet.

PoD “Security/Staging” – This individual is assigned to secure the entire PoD. The primary focus will be securing the entrance and exit to the PoD, setting up a remote staging area, a processing staging area for all responding personnel and equipment and personnel holding/briefing area for personnel that has in-processed. The Security Team may be assigned as needed. Security director reports to Operations. See “PoD Security” checklist.

Any and all assistants may be selected from responding agencies.

Team Mustering

Teams are to designate a specific mustering site for the selected individuals of the TRT to gather with their personal equipment, deployment equipment, and their equipment cache (see attachment: ITTF/IEMA TRT Minimum Cache Inventory).

Upon arrival at the muster site, TRT members are to check-in with the designated team leader, complete the Member Information Form, inventory and tag all cache equipment and pack equipment in the designated vehicle.

TRT personnel and equipment shall respond to the incident in no more than four (4) vehicles not including trailers.

Processing Operations Checklist

Processing Operations Officer _____

( ) Don "Operations" ICS position vest

( ) Briefly survey the PoD area to determine areas for personnel processing, equipment processing, briefing, staging and security.

( ) Select Operations assistants as necessary (i.e. scribes).

( ) Assign key positions, brief each on their duties and responsibilities, and provide them with their group checklist.

- ( ) Security/Staging Group _____
- ( ) Personnel Processing Group _____
- ( ) Equipment Processing Group _____

( ) Occasionally check with Group Supervisors to ensure a smooth operation. If necessary, assign assistants to aid the process.

( ) Designate a Holding/Briefing area for registered TRT personnel to stage and be briefed by the Team Leader or designee.

( ) Prior to departure of TRT personnel and equipment, meet with all group supervisors and collect necessary documentation.

( ) Conduct a post departure meeting with group supervisors to discuss the operation of PoD and document any suggestions to improve the process.

Security/Staging Group Checklist

Security/Staging Group Supervisor: _____

As the Security/Staging Group Supv. there are a number of tasks that must be completed. The priority of this position is to provide security for the entire PoD. This is to be accomplished by controlling all equipment and personnel entering and exiting the PoD. Assign additional personnel where necessary.

( ) Don "Security/Staging" ICS position vest

( ) Select and document all assistants, and their assigned positions in the security group on the reverse side of this document.

( ) Briefly survey the entire PoD and determine entrance and exit points for personnel and equipment processing. Staff these key positions with personnel.

( ) Determine, identify and mark two (2) staging areas for equipment.

- ( ) Remote Staging – (Assign two (2) assistants) In the event the location for the PoD does not have adequate space to stage all incoming apparatus a remote staging location will be selected. Remote Staging will funnel apparatus to processing as space becomes available. (**Note:** TRT personnel **do not** leave their apparatus.

- ( ) Processing Staging – (Assign two (2) assistants) Processing staging will separate personnel and equipment. Send each to their respective processing areas.

( ) Determine and identify Holding area.

- ( ) Holding Area – (Assign two (2) assistants) Maintain strict ingress/egress control, to insure the accountability and security of the deploying members and issue two bottles of water and prepackaged meals.

( ) As Agencies arrive, check & verify identify. At Remote Staging **everyone must produce identification.**

- ( ) **Agency Name**: _____

  Leader Name: _____

  Number of personnel: _____

  Apparatus: _____

( ) **Agency Name**: _____

Leader Name: _____

Number of personnel: _____

Apparatus: _____

( ) **Agency Name**: _____

Leader Name: _____

Number of personnel: _____

Apparatus: _____

( ) Periodically report to Operations on status of security.

( ) Assign security personnel to verify identification of TRT personnel prior to embarking on motor coach (I.D. check)

( ) Document time security ended. Conduct a post departure meeting with assistants to discuss the operation of Security/Staging Group, and document any suggestions to improve the process.

( ) Report to Operations after TRT personnel have departed for post departure meeting.

Personnel Processing Group Checklist

Personnel Processing Group Supervisor: _____

As the Personnel Processing Officer you are responsible for the checking-in of all TRT personnel.

Upon arrival at the PoD, staging will stop all Team vehicles. The vehicle operator and one person will remain with the vehicle, equipment and equipment inventory. The Team Leader or representative, with their Deployment Bag will report to personnel processing with the Personnel Information Sheets. Each member with their Deployment Bag will report to a processor and present identification, then proceed to Holding and remain together until the Team Leader or representative returns. The team leaders must maintain control of their personnel at all time.

The bag numbers will be annotated on the upper right corner of the members Personnel Information Sheet.

( ) Don the "Personnel" ICS Position vest.

( ) Select and document all assistants.

( ) Set up stations to receive TRT personnel with proper I.D. and completed Personnel Information Sheet.

( ) Ensure assistant's check that ALL TRT personnel produce proper I.D. and have completed Personnel Information Sheet.

( ) Ensure assistant's check that each TRT member has their deployment bag.

( ) Identify, from Operations, the briefing/holding area and instruct check-in assistants to direct TRT personnel to the area after check-in.

( ) Upon completion of the TRT check-in, have assistants turn-in all paperwork to the Personnel group supervisor.

( ) Take all completed paperwork to the Operations Section Cheif.

( ) Meet with the group assistants and debrief any problems or improvements.

( ) Report to Operations after TRT personnel have departed, for post departure meeting.

TRT Positions

Team Leader: _____

Assistant Team Leader/Safety Officer: _____

Logistics: _____

Logistics: _____

Rescue Squad Leader 1: _____

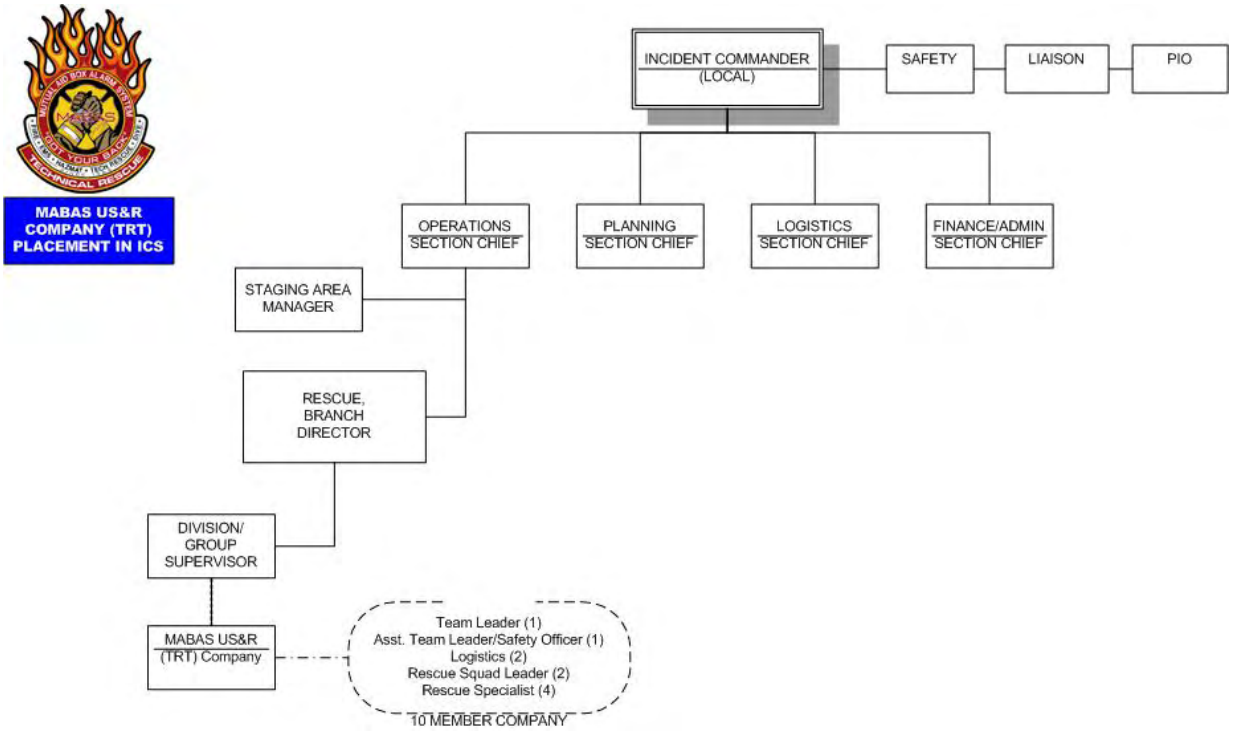
Rescue Squad Specialist: _____

Rescue Squad Specialist: _____

Rescue Squad Leader 2: _____

Rescue Squad Specialist: _____

Rescue Squad Specialist: _____



Equipment Group Checklist

Equipment Group Supervisor: _____

Staging, as soon as practical, will send the team vehicle to the equipment processing point. Assign assistants as necessary. Equipment reports directly to operations.

( ) Don "Equipment" ICS position vest.

( ) Select and document all assistants.

( ) Designate and identify the vehicles to be loaded for deployment to the Base of Operations.

( ) Locate pre-assigned equipment bins and position them in the loading area, for loading of Team designated equipment.

( ) The vehicle operator and assistant will inventory the equipment to be deployed and place the equipment in its pre-assigned bin.

( ) Ensure inventory sheets and loading pictures are affixed to each bin.

( ) Document the loaded vehicles, number of bins and its equipment section (i.e. Lifting, Cutting).

( ) Upon completion of equipment loading the vehicle operator and assistant will park their vehicle in a designated location and with their yellow deployment bag join their team in the taskforce check-in and then briefing area.

( ) Upon completion of vehicle loading, collect all paperwork and turn it over to "Operations".

( ) Meet with the group assistants and debrief any problems or improvements.

( ) Report to Operations after TRT personnel have departed for post departure meeting.

MABAS TRT Member Information and Team Equipment

Overview

Upon notification of a MABAS TRT response the selected Teams shall implement their local Muster Plan. Each Team will assemble at their pre-determined muster location identified in their plan. Each Team is responsible for the assembly, management and movement of their personnel and equipment listed in the ITTF/IEMA TRT Minimum Cache Inventory as well as all documentation to the incident.

At their muster location, a "Member Information Form" must be completed for each team member deploying. To ensure that the information is current, this form should be completed no earlier than the time of activation. However, if the information form is completed prior to the time of activation it must be verified for correctness at this time

At the team's pre-determined muster location, their assigned equipment items will be given an inventory sticker, and marked with the Team's MABAS four letter identifier. Additionally, the equipment items will be recorded on equipment "Equipment Record/Receipt". A separate form will be issued for each agency's (fire department) equipment within the team. The form's original copy remains with the agency and the copy will be retained by a logistics team member.

Each team will report as a group to the incident reception area with their personnel, equipment cache, and documentation. A Team arrival time will be given at the time of the TRT activation or prior to departing for the incident.

MABAS TRT Transportation Procedure

Introduction

The purpose of this document is to serve as guidance for the transportation of TRT personnel and equipment from their muster point to the incident. This plan will be implemented and followed upon the request for a MABAS TRT response.

Overview

Upon notification of a TRT response, each team will implement their notification plan and assemble at their muster point. Each team is responsible for the assembly, management and movement of their personnel, equipment cache and documentation, to the incident.

Every effort should be made to transport team equipment and personnel to the incident in the least number of vehicles possible.

TRT movement will be via convoy. Each vehicle will maintain visual and voice contact with each other. If a TRT uses trailers to transport their equipment, trailers and their tow vehicles will be at the front of the convoy, followed by the personnel. A chase vehicle capable of towing a trailer will be at the rear of the convoy.

Equipment

Upon arrival at the muster point, agencies will load their assigned equipment into the responding trailers and/or vehicles.

MABAS TRT Base of Operations Procedures

Introduction

The purpose of this document is to provide guidelines for establishing the Base of Operations (BoO). This document is designed in a manner to provide a step by step process utilizing available personnel based on the strategic plan. This process allows for a component of Technical Rescue Team (TRT) Leaders to perform strategic planning while the Base of Operations is set up. In addition, this document allows set up coordinators to choose from two options in order to set up the cache and base. These options are designed for the possibility of immediately deploying a Recon Team or supporting any other immediate operational need.

This manual will remain with the TRT Leaders and on file with the technical documentation and forms. It will remain in the possession of these individuals until the site selection has been completed. Additional copies of the diagrams, sketches and check-off sheets will be kept with the technical documentation and forms.

In order for this document to provide the assistance it was intended for, the user must follow the guidelines set forth in this manual. If the manual is followed step by step the BoO will be set up in an orderly and timely manner, maximizing the available resources.

Overview

The most crucial supporting element of a successful rescue operation is the location set up and operation of the Base of Operations (BoO). The BoO serves the function of equipment cache set-up area, resting and eating and a place of refuge from the elements. The correct site location for supporting the work site is imperative, but it is one that can be easily missed if improper thought is given to its location.

One of the functions of the Incident Support Team (IST) is site survey and selection. The IST may have information available from the local jurisdiction regarding possible BoO sites. If not, the IST should begin the process of locating BoO sites for the incoming Technical Rescue Teams. If this is not possible due to the lack of personnel or the wide scope of the disaster, then the Technical Rescue Teams may have to find a location on their own. If there is no established location for the BoO at the time the team leaves the reception center or staging area for their work site, it may be prudent for the team to send out an advance team to provide reconnaissance for selecting an appropriate site.

Regardless of whether it is the IST or TRT personnel making the site selection or determining if an existing building is acceptable, there are a number of general considerations that should be considered when selecting the BoO site. The most important strategic factor for the location of the BoO is its proximity to the work site. The two key considerations in making this decision are travel distance and transportation.

There is a delicate balance between having the BoO close enough to the work site for the efficient movement of personnel and equipment and far enough away that the noise and contaminants form the work site do not interrupt the rest cycle and feeding of off duty personnel. This decision is made easier if the site is accessible to vehicles and there are buses or other similar transportation available for the movement of personnel and equipment to and from the BoO and work site.

If transportation is limited, or the work site has limited access a forward base or logistics area close to the work site should be considered.

As important as the proximity of the BoO to work site is, it is also prudent to consider placing the BoO some distance away from the work site. The site must provide a tranquil place where team members can get restful sleep and should not be near major highways, railroad tracks, and airports. It is extremely important for all members to get as much regular and adequate rest as possible. This makes for more productive work sessions and lessens the chance of injuries while deployed. It is also important that the members are physically away from the work site and are not forced to constantly view the site. This reduces the amount of stress that workers must deal with during the incident, and gives them temporary refuge from the unpleasantness associated with working on site.

The BoO should be environmentally safe with no possibility of contaminated run-off entering the base. It should not be located near landfills, manufacturing plants, tank farms, or other such facilities and should be located upwind and upstream of any facilities that may have a release of hazardous materials. The base must also be safe and protected from any rain run-off, snow build-up, exposure to high winds, etc. The BoO site should be set up to provide as much natural security as possible. The BoO provides an excellent site for intruders and others who recognize it for its food, water, and equipment. These can be desirable after a widespread disaster. As much as possible, the TRT members must provide guard over the site, challenging anyone who is not properly identified. The IST or TRT leader should request professional security personnel or military guards to maintain security of the base and work site at all times.

Existing structures may be provided for the BoO site. The IST or the TRT should consider in their reconnaissance the availability of useable structures for sleeping, cache set up, etc. Existing structures are preferred over the cache tents, but they must be assessed by the IST or TRT and the local jurisdiction as safe to use. Earthquake after-shocks and secondary collapse, as well as other events that may affect the structural stability of the base site must be considered in the final decision to utilize the structure as a BoO. The BoO should not be set up next to a high-rise building or other structures with the potential for full or partial failure. If the team desires existing buildings for their BoO, permission must first be obtained from the local jurisdiction. There may have to be waivers on the zoning and occupancy of the building used, as well as other health and safety issues involved with the use of non-residential buildings.

If tents or shelters are used, the space must be level and have proper drainage so that rainwater and run off does not flow into the tents or create a muddy area where there is heavy foot traffic.

Following the procedures outlined in the subsequent sections of this document will aid in the efficient setup and operation of the Base of Operation.

Enroute To The Disaster Site

While enroute to the incident, work assignments should be made to facilitate the setting up the BoO using the team positions listed in option 1 and option 2. Names should be assigned to the team positions in both Option 1 and Option 2. This will allow the team to be flexible and set up the BoO or support the operational needs of the incident.

Selecting The BoO Site

Utilizing the following resources and supplies, the Advance team should determine the best location for the Base of Operations for the TRT.

1. Base of Operations Manual

2. Base of Operations Site Selection Checklist (Figure 1).

3. Equipment Required: BoO Kit:

	(2) 100 ft. measuring tapes
	(2) Rolls banner tape
	(1) Box of marking chalk
	(2) Binoculars
	(2) Backpack w/Harness
	Grease Pencils
	Clipboards w/Paper and Plastic Tablets
	Polaroid Camera
	Spray Paint
	Base of Operations Signs

Figure 2

Strategic Factors for the Placement of the BoO

1. Proximity to potential/anticipated rescue work sites. Key Factors:

   a. Travel distance (critical)

   b. Available transportation

   c. Access routes

   d. Terrain/height of location

   e. Personnel shelter (existing structure vs. tents)

   f. Cache shelter (existing structure vs. tents)

   g. Radio communications

   h. Site safety/security

   i. Health and Hygiene

2. BoO Layout/Configuration

   a. Operations area

      1) Cache set-up and maintenance

      2) Meeting/Dinning area

   b. Living area

      1) Shelter for personnel

      2) Shower and bathroom facilities

3. Once a site has been selected, complete the TF Base of Operations Location Checklist (Figure 3)

4. Photograph the area.

5. Layout and identify the perimeter of the Base of Operations with paint and banner tape using the BoO Layout Diagram (Figure 2).

.

6. Mark ground with spray paint for each section of the Base of Operations and the location of the tents. Utilize one color to mark the perimeter of each area and the other color to mark the location of the tents.

7. Identify travel and access routes.

8. Identify fuel storage area remote from Base. Ensure a fire extinguisher is present.

9. Locate site for generators at the perimeter of the Base of Operations. Use the following considerations:

    a. Close as possible to equipment being powered.

    b. Provide fire extinguishers where needed

    c. Keep cord runs out of walkways.

    d. Keep away or shield from sleeping areas.

10. Sketch the final layout of the BoO using the area provided in Figure 5.

BoO SITE SELECTION CHECKLIST

[ ] Site Location/Address:_____

[ ] Best Access Route(S):_____

[ ] Distance To Anticipated Work Sites:_____

[ ] Adequate Space Available?_____

[ ] Personnel Shelter Considerations:_____

[ ] Existing Structures [ ] Shelters/Tents

[ ] Cache Shelter Considerations:

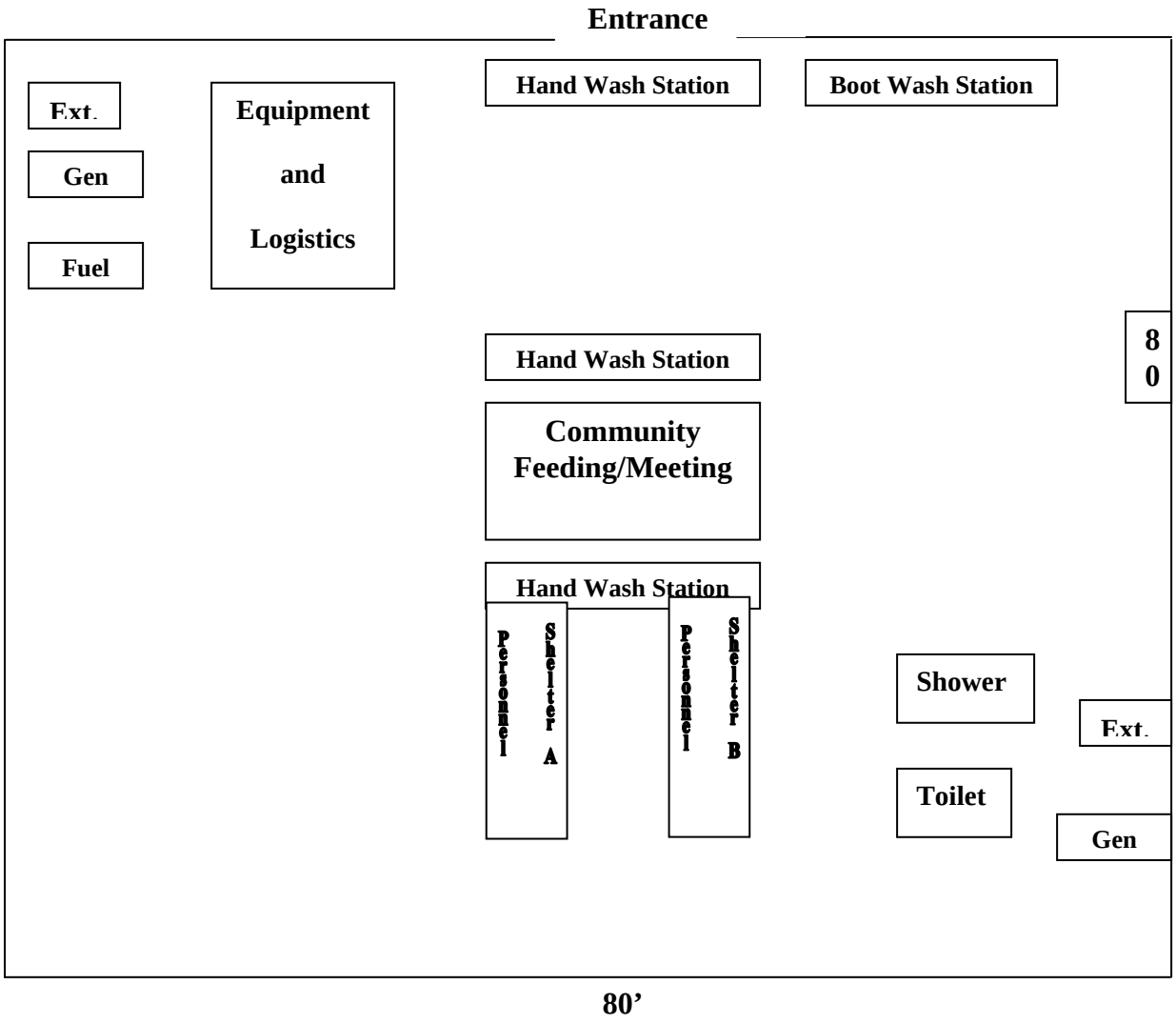
[ ] Existing Structures [ ] Shelters/Tents

[ ] Radio Communications Considerations:
(High Ground Is Usually Advantageous)

[ ] Site Safety/Security:_____

- [ ] Tall adjacent buildings/utilities creating hazard?
- [ ] Terrain with regard to rain/water run-off?
- [ ] Site appropriately separated from rescue work sites?
- [ ] Security assistance request from military/local jurisdiction?
- [ ] Haz-Mat/exposure concerns.

Figure 3



BoO Layout Diagram

Figure 4

BoO Layout Sketch

Considerations:
Personnel Shelter-A
Personnel Shelter-B
Personnel Latrine
Food/Feeding
Shower
Decon
Generator
Fire Extinguishers

Figure 5

MABAS TRT BoO Assignments

The actual set up of the Base of Operations should be handled in a fashion based upon the priority of needs of the team as it begins the mission. Certainly the team is not fully effective without the use of the tools, equipment and supplies in the cache. Therefore, the cache area of the Base should receive attention first. The cache set up organization and should be supervised by the Team Leaders and Logistics Specialists. In most cases, it will be necessary to assign additional personnel to assist in the set up of the cache due to its size and weight. As the cache area is developed, the initial set up is based upon prioritizing the equipment needs of the team and any immediate operational activities. This may include tools and equipment to support a structures triage team, search and reconnaissance team, and search operations or rescue operations, either separately or collectively.

An early consideration of the cache set up should be the shelter requirements for various cache elements. If an existing structure(s) can safely be used to house either some or the entire cache, this need is simplified. If not, separate tents should be erected for weather sensitive supplies and equipment, food and water provisions, and medical supplies as a minimum, if trailers are not available.

The evaluation and choice of site location will have a direct impact on the team's operations throughout the course of the mission. Serious consideration must be given to the size of the cache and its strategic location at the Base of Operations.

After the teams' cache is set up and organized, lodging requirements should be addressed. The determination of whether existing structures are available and could safely be used must be made. In general, smaller, wood framed structures may prove safe for cache and personnel shelter. The type of construction (i.e. un-reinforced masonry, tilt-up construction, etc.) as well as the general condition of such should be taken into account. If structures are not available or useable, a personnel shelter area should be established using tents appropriately placed and spaced according to the BoO layout diagram or as denoted on the Base of Operations Location Checklist/Sketch form that was developed at the inception of the mission.

In addition, a food preparation and team feeding area, and toilet/sanitation (trash) areas must be established. The site location for sleeping accommodations (tents vs. buildings) and food preparation and feeding areas should be chosen with considerations for the needs of the TRT personnel (i.e. away from the mainstream of activity, equipment cache area tool repair, etc.).

The main entrance should be near the main route of travel. Generators and lighting should be placed on the perimeter of the BoO as close as possible to the section being powered. This reduces tripping hazards and the amount of electrical cord required. The quietest generators should be used around the sleeping area.

Throughout the course of the mission, team leaders should continually assess the support requirements for the team. Requests to the IST may be necessary for communications equipment, medical supplies and equipment, cache needs, or issues related to food, shelter and sanitation needs of the team.

Set-Up Procedures

The MABAS TRT Base of Operations Layout Diagram or the Location Checklist/Sketch form can be used for the actual placement of the facilities within the BoO. The area will then be marked with signs and banner tape. This will speed the set up process in that it will be evident exactly where each BoO function is located. Once the area has been marked, TRT personnel can follow the outline provided for each section. Areas that should be marked are the perimeter, logistics & equipment cache, eating and sleeping, fuel storage, sanitation/hygiene areas.

Once the site has been chosen one of the following options should be chosen based on the strategic plans.

BoO Setup With Complete Team - Option 1

The entire TRT commits to the BoO set-up. This is the recommended method. This allows the team to set-up the cache and logistics area in the quickest possible manner. This option also enables the logistics staff to locate and account for equipment and the remaining personnel to establish the base. The priorities for this option are as follows:

1. Logistics and Cache Set-up
2. Overall BoO Set Up

The following personnel will be available for strategic planning.

Team Leader

Logistics Specialist

The following personnel will be assigned to set up the BoO. The areas are listed with the personnel to be assigned to each.

Overall BoO Set-up Coordination

Assistant Team Leader/Safety

Logistics and Cache Set-up

Logistics Specialist (1)

Rescue Squad Leader (1)

Rescue Specialist (2)

Feeding/Meeting and Hygiene areas

Rescue Squad Leader (1)

Rescue Specialist (2)

BoO Setup With Search/Recon Team Assigned - Option 2

This option should be utilized if a Recon Team is needed immediately. The necessary equipment for the Recon Team to operate will be located, pulled, and issued prior to the BoO set-up. The remaining personnel will be assigned to set up the BoO. The priorities for this option are as follows:

1. Logistics and Cache Set-up
2. Feeding/Meeting Area
3. Personnel Shelters
4. Hand Washing Stations and Toilet Area
5. Shower Area
6. Perimeter Fence and BoO Site Lighting

If assignments were not accomplished enroute, do so at this time.

The Search/Recon Team consist of the following.

Assistant Team Leader/Safety

Rescue Squad Leader 1

Rescue Squad Specialist

Rescue Squad Specialist

The logistics staff will locate and issue the needed equipment for the Recon Team to operate.

The following personnel will be available for strategic planning.

Team Leader

Logistics Specialist (1)

The following personnel will be assigned to set up the BoO. The areas are listed with the personnel responsible for each area.

Overall BoO Set-up Coordination

Logistics Specialist (1)

Logistics and Cache Set-up

Rescue Squad Leader (1)

Rescue Specialist (2)

After completion of the above assignments, the following BoO areas must be set up. They should be setup in the order in which they are listed.

1. Logistics and Cache Set-up
2. Feeding/Meeting Area
3. Personnel Shelters
4. Hand Washing Stations and Toilet Area
5. Shower Area
6. Perimeter Fence and BoO Site Lighting

BoO Set Up Considerations

The following are items that should be considerations for the different areas of the BoO to ensure safety and efficiency of the personnel living and operating in the BoO.

Logistics and Cache Areas

A. Cache Container Area

- Place containers in order by category and number.

B. Erect Logistics Tent

- Set up 19’ x 35’ Western Shelters or equivalent.
- Set up tables and provide chairs as needed.
- Set up administrative kit.
- Set up cache check-out/check-in documentation.
- Set up maintenance area.

C. Power Supply

- If local power supply is available, set up generators as back-up as time permits.
- Locate generator area outside BoO perimeter and set up generator.
- Locate area for fuel supply storage minimum 100' from BoO.
- Mark generator & fuel storage areas with “caution” and/or “haz mat” banner tape.
- Run electrical cords to tent and site lighting to avoid foot traffic areas.
- Provide fire extinguishers for generator and fuel storage areas.
- Provide lighting to tent and cache storage areas.

D. Weather Protection

- Keep lids on containers when not being used.
- Ensure tarps or plastic sheeting is available to cover cache containers not in tents during inclement weather.

E. Security

- Install perimeter fences as required and provide a single entry/control point to the cache area.
- Detail unassigned team members to watch cache storage areas until local military or security forces can be acquired.
- Cover or keep equipment out of sight whenever possible.

F. Forward Equipment Staging Area

- Determine forward staging area location in close proximity to disaster/work site.
- Set up shelter (if needed).
- Set up perimeter fence around forward staging area and provide one entry point.
- Establish area for generator and set up electrical cords as needed.
- Set up lighting for tent and surrounding area as needed.
- Obtain table(s) and chair(s) as needed from logistics.
- Obtain equipment documentation and/or inventory sheets for inventory control.
- Obtain office supplies as needed from logistics administrative kit.
- Arrange storage of cache equipment inside tent or perimeter fence as needed.

G. Hand Wash Station

- Locate pressurized water source or utilize water supply bladder with sink unit.
- Set up Western Shelter Sink Station.
- Utilize necessary set up equipment and hoses.
- Provide fuels for water supply pump, if needed (Store fuel outside BoO perimeter!).
- Set-up gray water bladder.

Meeting/Dining Area

A. Erect Meeting/Dining Area Tent

- 19' x 35' Western Shelter Tent or equivalent.
- Set up tables and chairs (Obtain from Logistics)
- Utilize empty equipment containers for additional seating.
- Install sign to warn all persons to wash hands before entering area. VERY IMPORTANT!!

B. Electrical Power

- If local power is available, obtain electric cord from logistics.
- If needed, obtain generator to provide power supply.
- Place generator outside perimeter fence.

C. Cooking Area Outside Tent (if required)

- Set up Camp Chef Stove.
- Obtain propane cylinder or equivalent from contact Logistics.
- If cover is needed over cooking area contact logistics for tarp.

D. Food Preparation Area

- Locate and assemble eating utensils and supplies needed to prepare and serve food products.
- Place one day supply of Freeze Dried food under serving table.

  1 - Breakfast

  1 - Lunch

  1 - Dinner

- Store remaining freeze-dried food product and water inside tent.
- Store MRE's and MRE heat packs (KEEP DRY!) inside tent.
- Fill coolers as listed:

  1 - Cold water

  1 - Hot water

  1 - Gatorade

E. Trash Containment

- Trash bags are stored with kitchen supplies/equipment, tie to post to keep from spilling.
- Locate any trash receptacles available at or near site (dumpsters, trashcans, boxes, etc.).
- Contact Logistics if additional receptacles are needed.

F. Insect/Bacteria Control

- Entire area in and around tent and trash areas to be sprayed with 10% bleach solution at least every 12 hours to control insects and bacteria.
- Obtain bleach & sprayer from Logistics.

Personnel Shelter Requirements

A. Erect Personnel Shelters/Tents

- Each TRT member will be issued his or her own sleeping bag.
- Wool blankets can be issued, if needed.

B. Sleeping area considerations

- Locate on high ground or dig rain runoff trenches as necessary.
- Provide lighting for walkway areas, if necessary. BoO site lighting may be adequate.

C. Personnel Shelter Assignments:

A-Personnel Shelter	B-Personnel Shelter
Team Leader	Asst. Team Leader/Safety
Logistics	Logistics
Rescue Squad Leader	Rescue Squad Leader
Rescue Squad Specialist	Rescue Squad Specialist
Rescue Squad Specialist	Rescue Squad Specialist

D. Personal Tent Assignments (if shelters or large tents are not available)

- Assign tents.
- Mark each tent with assignment number in order to quickly locate personnel.
- Provide master list and site map near entrance to area for reference.

Shower/Bathroom Facilities

A. Erect Shower & Sink Station Tents

- Erect Western Shelter Shower Tents or equivalent.
- Provide means for water runoff from shower tents. Dig trench just outside. perimeter fence (if required) and mark area with “Danger” banner tape.
- Set up water heaters and propane cylinders or equivalent.
- Locate pressurized water source or utilize water supply bladder with sink unit.
- Set up Sink Station.
- Utilize necessary set up equipment from.
- Set up Gray Water Bladder for sink station.
- Set up water heater and propane cylinder or equivalent.
- Check with Logistics If lighting will be needed. BoO site lighting may be adequate.

B. Disease & Bacteria Control

- Obtain bleach and H20 solution and sprayer to clean floors and surfaces.
- Provide toilet paper, trash bags, paper towel, bath towels, and "Wet Wipes" for hygiene.

C. Erect Portable Toilets

- Check with Logistics and determine if local vendor is supplying Portable Toilets.
- If a local vendor is not available, set up the toilet System.
- The toilet system utilizes individual urination & defecation packets packaged with systems.

D. Disposal of Human Waste (If the toilet system is not utilized)

- A 55-gallon drum or a waste container should be utilized to collect human waste after bathroom usage. If this is not available, a special holding area should be established.
- Pick-up of human waste shall be done on a daily basis if not twice daily.

D. Disposal of Human Waste (If the toilet system is not utilized) (cont.)

- The toilet system utilizes biodegradable products and can be discarded with other everyday trash.

BoO Considerations & Special Issues

The two most important issues facing the team members are health and safety. The following is a punch list that will help ensure the health and safety of the TRT personnel.

Security/Hazard Concerns

- Ensure all personnel in the Base of Operations are identifiable (badges, uniforms, etc.).
- Erect a security fence utilizing plastic fencing or barrier tape and fence posts around the BoO perimeter.
- Establish a single entry/control point.
- Identify availability of local or military security personnel.
- Mark or identify any personnel hazards within or adjacent to the Base of Operations (i.e. tripping hazards, utilities, etc.).
- Ensure fire extinguishers are available at the fuel storage area and throughout the base.
- Keep all tools, supplies and equipment covered or out of sight as much as possible (in the logistics area).
- Request additional lighting from local resources if necessary to ensure safety and/or security.
- Develop an emergency evacuation plan for the Base of Operations as soon as possible and brief ALL personnel.

Sanitation/Hygiene Needs

- Garbage bags and/or trashcans should be located throughout the Base of Operations.
- If possible, a trash truck or dumpster should be requested from local resources.

Sanitation/Hygiene Needs (cont.)

- Obtain a 55-gallon drum to incinerate trash. If a drum cannot be obtained a shallow pit can be dug and trash buried each night.
- Food waste will attract varmints and insects so it should be stored in closed containers and removed from the site daily. (Trash must be incinerated daily if pick-up is not available).
- Hand washing stations should be located in the following areas:
  - Entrance to meeting/eating tent
  - Entrance/exit to latrine facilities
- Decon & Boot washing station located at the entrance to the BoO.
- Provide trash bags, paper towels and/or "Wet Wipes" for hygiene.

Base of Operations Management

The TFCC is the main control point for the TRT operations. This control point can be as simple as a single tent or an existing, safe structure. The TFCC should become the command and coordination point for rescue operations. To reduce radio traffic as much as possible, telephones should be used to communicate with the BoO locations. The TFCC should be staffed 24-hours a day from the time of set-up to demobilization.
This is to maintain a contact point with the TRT for communications from the IST, local incident commander, or the home jurisdiction. In addition, emergency announcements such as severe weather or after shocks need to be sent out quickly.

Accountability of all TRT personnel should be done from the TFCC. The TRT should have a strict policy about leaving the BoO site. Only those personnel with an official reason should be authorized to leave the BoO. Any personnel leaving the BoO site should be identified in some manner and recorded in the TFCC.
When personnel return, their status should be changed to indicate their presence in the BoO. At any time, the Team Leader should be able to quickly identify the personnel in the BoO and those off-site for any reason. This is important in the event a quick evacuation must be accomplished, TRT management can account for all personnel.

Demobilization

Upon demobilization, the BoO site should be restored to its original condition. This includes properly policing for trash and other remnants left behind. The Team Leader should ensure that the site is returned to its original state or better than when the team arrived. Remember that the TRT should not be a burden to the locality. This includes not leaving behind a site that requires the local residents to clean up or restore the site to its former condition.

Glossary

Agency – an individual fire department or fire protection district. Several agencies will constitute a Technical Rescue Team.

BoO – Base of Operations: A base camp that will provide as a staging area for Technical Rescue Teams (TRT) and provide security, food, shelter and a place to rest for the members of the rescue team.

IST - Incident Support Team: The IST rapidly responds to an impending incident or one that has just occurred and assesses the need for and potential use of, FEMA US&R Task Forces or other resources. The IST then provides Federal, State, and local officials with technical assistance in the acquisition and utilization of ESF #9 resources through advice, Incident Command assistance, management, and coordination of US&R Task Forces and logistical support.

MABAS – Mutual Aid Box Alarm System: An organization consisting of many Fire Departments that have intergovernmental agreements to support each other with resources.

Muster Location – a central location where agencies meet and prepare to deploy to an incident.

Notification Plan - a plan by which all of a teams members and agencies are notified of a deployment.

PoD – Point of Departure: a central location where a team or teams depart for an incident from. This location may be the same as the Muster Location.

TFCC - Task Force Control Center: A location where Task Force Command staff and Communications is located.

TRT - Technical Rescue Team: A team trained in the four primary disciplines of technical rescue (Rope Rescue, Confined Space Rescue, Trench Rescue and Building Collapse Rescue), and consisting of a minimum of ten rescuers.

References

Fairfax County Fire & Rescue Department (2001). Task Force Base of Operations Set Up Procedures: Author

Federal Emergency Management Agency. (2001). Field Operations Guide 9356.1-FG: Author

Federal Emergency Management Agency. (2000). Urban Search and Rescue (US&R) Incident Support Team (IST) Operations Manual 9356.2-PR: Author

State TRT Steering Committee Letter (March 24, 2004)

Texas Task Force I. (2001). Base of Operations Manual: Author

Appendix A

Equipment Cache

Appendix B

Team Notification Plan

(Examples available on request)

Appendix C

Team Muster Plan

(Examples available on request)

Appendix C

Team Transportation Plan

(Examples available on request)

MABAS / CART

Urban Search & Rescue Teams

Annual Training Requirements

Each state-recognized TRT needs to conduct annual training in all four TRT disciplines: Rope, Confined Space, Trench and Structural Collapse. Each TRT's annual training program should:

- Follow the objectives of the IFSI Statewide WMD TRT programs and the OSFM TRT certification objectives.
- Annually validated the essential skills at the operations and technician level for each member.
- Provide each member with at least one annual opportunity to:
    - Enter a confined space an perform a simulated rescue
    - Go on line in a high-angle environment
    - Perform installation of at least one trench shore used by the TRT in a simulated or actual trench environment.
    - Perform shoring and/or breaching/breaking/tunneling in a simulated or actual collapse environment.
- Use checklists or forms to document the skills performed by each member and training sessions conducted.
- Institutionalize its practices regarding annual training requirement.

The MABAS TRT committee is working to expand the above general guidelines to ensure standardization of minimum team requirements and will produce a draft document at a later date.

MABAS and Statewide Mutual Aid

Team Participation Standards

December 10, 2002

Technical Rescue Team Response Criteria

Team Staffing:	Minimum for Response:	10 Tier III Trained Technicians
	Effective for Response	20 Tier III Trained Technicians
	Optimum Staffing of Entire Team	30 Tier III Trained Technicians

Team Vehicle: Ability to respond statewide with entire equipment inventory package, preferably by single self-contained unit, no more than two units (Tow vehicle & trailer considered one unit). Vehicles transporting TRT personnel should attempt to caravan together with the exception of the forward liaison and operation officers.

Communications: Capable of communicating on MABAS (IFERN) dispatch and tactical frequencies on mobile and portable radio units.

Participation: Must have a direct affiliation with a MABAS Division or a signed MOU with IEMA.

Capabilities: The optimum Technical Rescue Team shall be capable of search and rescue of entrapped victims during recovery operations. The Technical Rescue Team shall be capable of working in concert with specialty professional trades within the accepted practices taking measured risks in the mitigation of; confined space, trench, high angle, and structural collapse emergencies. All capabilities must meet or exceed NFPA standards. Training includes completion of WMD awareness course, hazardous materials to the operations Level, and Incident management system. Each TRT shall be capable of providing two forward officers (Strike Team Leader and Liaison officer).

Training based on performance objectives.

	Courses	Hours
Initial: Core Disciplines & Competency Levels	Technical Rescue Awareness	8
	Basic Terrorism Awareness	8
	Incident Management System	16
	Hazardous Materials Operations	40
	Confined Space Operations	40
	Confined Space Technician	40
	Rope Operations	40
	Rope Technician	40
	Trench Operations	40
	Trench Technicians	40
	Structural Collapse Operations	40
	Structural Collapse Technician	40
	Total Training Hours	**392**

Recurring Annual: Annually

Compliance: All IDOL, OSHA, CFR, NFPA, and OSFM requirements with documentation.

Inventory:

- Basic Technical Rescue Equipment Inventory – $196,764.20
- Basic Technical Rescue Team timber cache - TBD
- Urban Search & Rescue Equipment Inventory - $1.8 mil. (shared unit)
  (Approximate costs current as of – December 2002)

Revalidation: Team core competencies and capabilities – once every three (3) years

Equipment Maintenance and Repair

Each team must assume full responsibility for training certification records, equipment maintenance, insurance, repair and replacement.

Illinois Mutual Aid Box Alarm System Technical Rescue Team Locations