

**PHOENIX REGIONAL
STANDARD OPERATING PROCEDURES**

TREE RESCUE OPERATIONS

M.P. 204.13

07/11-R

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SCOPE

This procedure establishes a standard structure and guideline for all fire department personnel operating at incidents involving tree rescue operations. The procedure outlines responsibilities for first-responders, TRT units, Command Officers, and other fire department personnel responding to such incidents. All other Phoenix Fire Department procedures shall apply to tree rescue operations where applicable.

PURPOSE

The purpose of this procedure is to establish guidelines for the response of fire department personnel and equipment to tree rescue incidents. Because tree rescue operations present a significant danger to fire department personnel, the safe and effective management of these operations require special considerations. This procedure identifies some of the critical issues which must be included in managing these incidents.

TACTICAL CONSIDERATIONS

Due to the inherent dangers associated with these operations, the Phoenix Fire Department *Risk Management Profile* shall be applied to all tree rescue operations and shall be continuously re-assessed throughout the incident. A phased approach to tree rescue operations which include; Arrival, Pre-rescue operations, Rescue operations, and Termination, can be utilized to safely and effectively mitigate these high-risk / low-frequency events.

Phase I Arrival.

I. ESTABLISH COMMAND

- A. First arriving company officer shall assume *Command* and begin an immediate size-up of the situation.
- B. First arriving TRT unit that is staffed with a TRT Company Officer should be assigned *Rescue Sector*. The TRT Company Officer assigned as Rescue Sector should remain with his crew. Rescue Sector responsibilities include:
 - Assuming technical rescue operations control.
 - Identifying hazards and critical factors.
 - Developing a rescue plan and back-up plan.
 - Communicating with and directing TRT resources assigned to Rescue Sector.
 - Informing Command of conditions, actions, and needs during all phases of the rescue operation.
- C. Designate a *Safety Officer*. Considerations for Safety Officer include:
 - One of the Regional Special Operations qualified Safety Officers.
 - A Special Operations qualified Battalion Chief and/or FIT.
 - Any experienced TRT Company Officer assigned to the incident.

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D. Following the transfer of Command to a Command Officer, a *Technical Advisor* should be assigned to join the Command Team at their location to assist in managing personnel and resources engaged in the technical aspects of the incident. The Technical Advisor is responsible for ensuring that the rescue plan developed by Rescue Sector and communicated to Command is a sound plan in terms of the safety and welfare of both victim(s) and rescuers. Considerations for the Technical Advisor include:

- A Special Operations qualified Battalion Chief and/or FIT.
- One of the Regional Special Operations qualified Safety Officers.
- Any experienced TRT Company Officer assigned to the incident.

The Technical Advisor position within the Command Team should be filled prior to the implementation of any rescue plan proposed by Rescue Sector.

II. Size-Up

- A. Secure a witness or responsible party to assist in gathering information to determine exactly what happened. If no witnesses are present, Command may have to look for clues on the scene to determine what happened.
- B. Assess the immediate and potential hazards to the rescuers.
- C. Isolate immediate hazard area, secure the scene, and deny entry for all non-rescue personnel.
- D. Assess on-scene capabilities and determine the need for additional resources.

Phase II Pre-rescue Operations

It must be determined if this will be a RESCUE operation or a RECOVERY operation based on the survivability profile of the victim(s) which include factors such as the location and condition of the victim(s), and elapsed time since the accident occurred.

I. MAKE THE GENERAL AREA SAFE

- A. Establish a hazard zone perimeter 50 feet around the tree.
 - Keep all non-essential rescue personnel out of the hazard zone.
 - Remove all non-essential civilian personnel at least 150 feet away from the tree.

II. MAKE THE RESCUE AREA SAFE

- A. Maintain awareness of all electrical lines in the vicinity.
- B. Watch for falling debris, branches, or tree skirt which can become particularly problematic during windy conditions.

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C. Identify any other hazards that are present and ensure they are secured and made safe.

Phase III Rescue Operations

Technical rescue operations shall be conducted under the direction of Rescue Sector by trained Technical Rescue Technicians.

I. RESCUE SECTOR

Rescue Sector responsibilities shall include the following:

- Ensure that all personnel operating in Rescue Sector are accounted for and wearing appropriate PPE.
- Develop a rescue plan and a back-up plan.
- Ensure the plan and back-up plan, which include emergency procedures, are communicated to all personnel operating on the incident.

II. THE RESCUE PLAN

Rescue operations should be conducted with as little risk to the rescuers as necessary to affect the rescue. Low-risk operations may not always be possible but should be considered first. The order of rescue from low-risk to high-risk are:

A. Self-rescue.

If possible, talk the victim into self-rescue. Place a ground ladder or aerial platform ladder under the victim and then coach the victim to climb down.

B. Aerial Platform Ladder Truck.

Rescue personnel should consider any hazards such as power lines hidden in the tree, the angle of the ladder, and the distance an aerial platform ladder needs to extend to reach the victim. When possible, consider removing obstacles that may be in the way of an aerial platform ladder truck.

C. Ground Ladders.

If it is not possible to reach the victim with an aerial platform ladder truck, ground ladders should be placed against the tree. The first ladder should go under the victim; the second ladder should go along side and slightly above the victim. Both ladders should be secured to the tree. A piece of webbing or small piece of rope works well for securing the ladder to the tree.

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D. Climb the Tree.

If aerial platform ladder truck placement and ground ladder placement is not possible, the victim must be reached by climbing the tree. Tree climbing with approved equipment shall only be performed by trained TRT members. Rescue Sector shall assign two rescuers the task of climbing the tree and affecting the rescue. Consider that it may be necessary to remove fronds or branches from the tree to reach the victim and that tree climbing is a high-risk operation.

III. ASSESS THE VICTIM

When the rescuers reach the victim, a primary survey shall be completed and a determination as to the exact method of entrapment must be made. If the victim is conscious, rescuers should determine if the victim can assist in the rescue. If the victim is unconscious, the rescue must be completed quickly.

IV. RESCUE THE VICTIM

One rescuer should climb above and to the side of the victim and establish a point of attachment for a lowering system. At the same time, the other rescuer should climb to the victim and attach or "capture" the victim onto an approved rescue harness. On the ground, an approved and appropriate anchor and lowering system shall be established. Once the lowering system has been attached to the victim, the victim shall be disentangled from the tree, which may include cutting away any system the victim used to climb the tree, and lowered to the ground.

V. TREATMENT

- A. Complete a secondary survey on the victim.
- B. Provide for ALS level treatment and transportation to a hospital as indicated.

Phase IV Termination

- A. Ensure personnel accountability.
- B. Recover all tools and equipment used in the rescue/recovery. In cases of a fatality, consider leaving everything in place until the investigative process has been completed.
- C. Consider a Post Incident Critique (may be more appropriate at a later date).
- D. Return to service after returning all equipment to apparatus.

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ADDITIONAL CONSIDERATIONS

I. COMMAND STRUCTURE

- A. The first arriving unit shall assume *Command* of the incident. This unit shall remain in Command until Command is transferred to improve the quality of the Command organization. A Command Team shall be assembled to include, at a minimum, a Chief Officer and a Technical Advisor.
- B. Considerations for the *Technical Advisor* include:
- A Special Operations qualified Battalion Chief and/or FIT.
 - One of the Regional Special Operations qualified Safety Officers.
 - Any experienced TRT Company Officer assigned to the incident.
- C. The first arriving TRT unit that is staffed with a TRT Company Officer should be assigned *Rescue Sector*. Rescue Sector shall communicate directly with TRT units assigned to the various functions within Rescue Sector and shall keep Command informed during all phases of the rescue operation.
- D. Considerations for *Safety Officer* include:
- One of the Regional Special Operations qualified Safety Officers.
 - A Special Operations qualified Battalion Chief and/or FIT.
 - Any experienced TRT Company Officer assigned to the incident.
- E. *Treatment Sector* should be assigned to any ALS company assigned to the incident.

II. OTHER CONSIDERATIONS

- A. Consider the effects of inclement weather on the hazard profile, the victim(s), and the rescuers.
- B. Tree rescue incidents attract the news media; consider assigning a P.I.O.