

# Tempe Fire Department Policies and Procedures

## Helicopters

### 210.05

#### Rev 10-9-87

### TRANSPORTATION

Helicopter transportation may be indicated for patients within city areas when distance or delay factors affect ground ambulance transportation, when sufficient ambulances are unavailable, or when patients are in locations inaccessible to ground units.

While hospital helicopters are capable of carrying two litter patients, only one Priority 1 patient can be treated with adequate space. If necessary, use additional helicopters for multiple patient incidents. Helicopter transportation should be considered for:

- . Priority 1 patients.
- . Trauma patients requiring urgent surgery.
- . Patients requiring specialized treatment (OB, pediatric, burns, neurological, etc.).

### LANDING ZONES

Command will notify the Police Department that a helicopter is to be landed, and if PD is on the scene, Command will coordinate with them to assign personnel to close off access to the landing zone. This should include such entry points as alleys, private drives, and parking lots as well as public thoroughfares.

The selection of an appropriate landing zone is of critical importance in a field situation. A suitable landing area must be located and identified for the pilot.

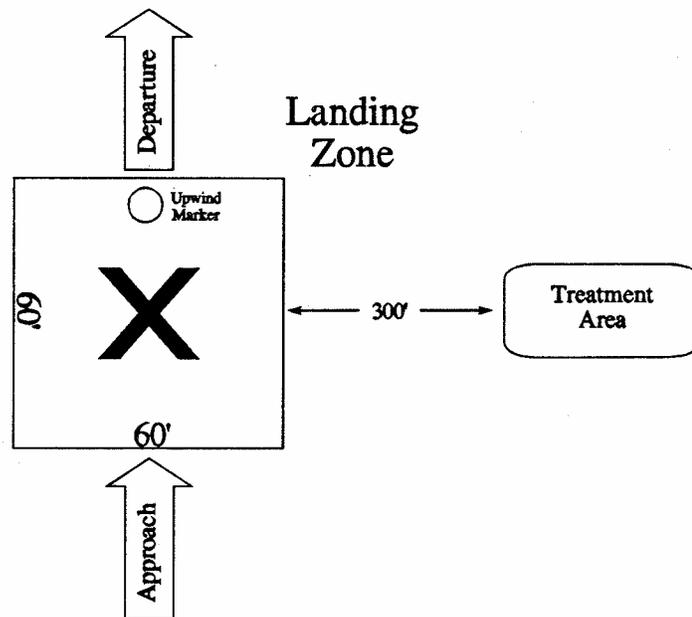
Command will assign personnel to select and identify a landing zone. The assigned personnel must have a portable radio, eye protection, ear protection, and high-visibility vests.

- . The landing zone must be relatively flat and free of obstructions for an area approximately 60 feet square (60' X 60'). See Figure 1. Check for overhead wires, poles, towers, and similar obstructions.
- . The approach and departure paths (into the wind) must be free of obstructions.
- . Approach and departure paths should not pass over a Treatment Area, Command Post, or other activity areas where noise and rotor wash will cause problems.
- . The landing zone and surrounding area must be free of small objects which can be blown around by rotor wash. Check for metal objects; secure loose clothing or blankets.
- . Avoid dusty locations if possible. If the landing area is very dusty, consider wetting it with a hose line before landing.
- . Keep all personnel out of the landing zone. Spectators must be kept at least 150 feet from the helicopter at all times.
- . Landing zone personnel should communicate with the pilot by radio, if possible, or by hand signals (Figure 2).
- . Landing zone personnel should be prepared to estimate wind speed and direction for the pilot. The upwind end of the landing zone should be indicated with a light or high visibility marker.

- . Any nearby obstructions must be indicated to pilot. Use spotlight at night to show wires, poles, etc. The pilot is the best judge of the ability to land in a given location.

Command will direct the ground ambulance initially dispatched to the incident to remain at the scene until the helicopter has lifted off. If for any reason the air ambulance is unable to transport, a ground unit should be immediately available.

- . Heli-pads exist at both Desert Samaritan and Tempe St. Luke's Hospitals. In incidents that occur within proximity of these locations, consideration should be given to transporting the patient by ground ambulance to the heli-pad and landing the helicopter there.
- . Do not attempt to "transfer" a patient to helicopter personnel too near or under the blades of the helicopter. The increased noise level will make verbal communication difficult.
- . Keep in mind that some helicopter medical personnel have special expertise that may be useful in field patient treatment (i.e., pediatrics, neo-natal).



**Figure 1**  
*Landing Zone*



**Clear To Start Engine**



**Take-off**  
Right hand behind back, left hand pointing up.



**Hold-Hover**  
Place arms over head with clenched fists.



**Move Upward**  
Arms extended, sweeping up.



**Move Downward**  
Arms extended, palms down, arms sweeping down.



**Move Right**  
Left arm horizontal, right arm sweeps upward to position over head.



**Move Left**  
Right arm horizontal, left arm sweeps upward to position over head.



**Move Forward**  
Combination of arm and hand movement in a collecting motion pulling toward body.



**Move Backward**  
Hands above arm, palms out using a shoving motion.



**Land**  
Arms crossed in front of body and pointing downward with back to wind.



**Shut-off Engine**  
Slash across throat.

**Figure 2**  
*Helicopter Hand Signals* **Safety Factors**

- A. Do not approach helicopter until pilot signals after landing.
- B. Establish eye contact with pilot before approaching if rotors are moving.
- C. Always approach from front, or 45 degree angle to front.

- D. Keep all personnel away from tail rotor.
- E. Remove any light objects or debris from landing area.
- F. Landing zone personnel must use eye protection or helmet face shields. Helmet chin straps tightened securely.
- G. Stage patients waiting to be loaded at least 150 feet away. Secure sheets and blankets, and cover eyes during landing.
- H. Beware, rotor wash from large helicopters is very strong. Small objects and clothing (caps, jackets, etc.) can be blown around easily.

### **Communications**

Air-to-ground communications should be used whenever possible to give landing instructions to approaching helicopters. Alarm will coordinate the establishment of air-to-ground communications.

The pilot of a helicopter approaching the scene will advise Alarm when ready to communicate with ground units. Alarm will assign the radio channel to be used and advise Command of the identity of the helicopter. Direct air-to-ground communications should be established between the helicopter and Command. Personnel at the landing area should have direct communications with the pilot before landing, whenever possible.

**FIRE CHANNEL 4 (154.28 MHz) IS THE PRIMARY CHANNEL FOR AIR-TO-GROUND COMMUNICATIONS AND LANDING INSTRUCTIONS.**

When helicopters are actively engaged in operations at the scene of an incident, Command should assign all helicopter communications to Channel 4 and designate a person to work exclusively with this channel.

Note: National Guard helicopters have no direct communications capability with Fire Department ground units. Landing instructions must be given by hand signals.

Helicopters will not land in the incident area without first making contact with ground units. If unable to make contact with on Fire Channel 4, the arriving helicopter shall circle or hover in the vicinity until contact is established.

Helicopters may be directed to land via hand or light signals when radio communication proves infeasible. Landings shall not be made in proximity to the incident without positive contact (radios or hand signals).