CITY OF JONESBORO - HELICOPTER STUDY 2013

Submitted by the Planning & Zoning Department

To: Metropolitan Area Planning Commission for Study & Review

From: Otis Spriggs, Director of Planning and Zoning

SAMPLE ORDINANCE SECTIONS:

Conditional Use Permit- Required for Off-Airport Helipad/Heliport uses for Modes of Flight

I. Purpose

This Ordinance is adopted pursuant to the Authority conferred by the Jonesboro City Council. It is hereby found that without proper regulations, said aircraft and facilities have the potential for endangering the lives and property of users of Jonesboro, AR and property or occupants of land in its vicinity; and that any site obstructions or site features may reduce the size of areas available for landing, takeoff, and maneuvering of aircraft, thus tending to destroy or impair the utility of the City of Jonesboro and the public investment therein. Accordingly, it is declared:

(a) because the creation or establishment of an helipad and development may have the potential of being a public nuisance and may injure the community:

(b) that it is necessary in the interest of the public health, public safety, and general welfare that the creation or establishment of heliports/helipad of any sort be regulated according to minimal standards established by the City of Jonesboro.

Definitions:

Heliport shall mean any area of land or water or a structural surface which is used or intended to be used for the landing and takeoff of helicopters and any appurtenant areas which are used or intended to be used for heliport buildings and other heliport facilities. The term shall also include "helistop."

Landing field shall mean any place on land or water, where aircraft may land, be repaired, take on fuel or take off, but shall not include facilities for the exclusive use of helicopters.

Airport or *airstrip* means any landing area, runway or other facility designed, used, or intended to be used either publicly or by any person for the landing and taking off of aircraft, including all necessary taxiways, aircraft storage and tie-down areas, hangars and other necessary buildings and open spaces.

Operator shall mean any person who pilots, controls or maintains, either directly or indirectly, an aircraft, landing field, heliport, or vehicle.

Ramp or *ramp area* shall mean those portions of the airport, both public and leased, designated for the parking and/or storage of aircraft.

Vehicle or *motor vehicle* shall mean any automobiles, golf carts, trucks, buses, motorcycles, horse-drawn vehicles, bicycles, push carts, fuel servicing vehicles, tugs, or any other device in or upon or by which any person or property is or may be transported, carried, or drawn upon land, excepting aircraft and railroad rolling equipment or other devices running only on stationary rails or tracks.

II. AREA MINIMAL STANDARDS

(a)No heliport or helipad shall be located within 1,000 feet of any religious facility, school, library, or public park, or within 1,000 feet of any lot, tract, or parcel upon which a residence or dwelling is located. The measurement of the 1,000 feet is to be made in the straight horizontal line from the edge of the heliport or helipad to the closest prohibited property line, provided that this provision shall not apply to those hospitals which maintain a helipad for medical emergency flight purposes. A proposed heliport or helipad shall have no substantial adverse impact exists on residences or businesses within the 1,000 foot requirement.

(1) A heliport is permanent facility where helicopters take off and land. The FAA defines a heliport as any formalized helicopter landing area. Additionally, any helicopter landing area offering fueling, passenger building, hangar and support services is considered a heliport. The FAA compares this with a bus stop/ bus terminal relationship in respect to services.

(2) A helipad describes the actual landing surface of the heliport. The FAA and other international regulators have adopted the term of Touchdown and Lift-off Area (TLOF) as the official term to describe all such areas.

(3) An emergency landing zone is a designated site in which public safety agencies select to evacuate trauma or disaster victims.

(4) A helistop refers to a minimally developed facility for boarding and discharging passengers or cargo.

(5) H/V: The ratio is listed as H:V, for example 8:1. The horizontal distance for the glide is 8 times that of vertical descent. In other words, the aircraft will glide horizontally 8 units for every 1 unit of descent.

III. HELIPORT SITE AND LANDINGS: PERSONAL USE

Recognizing the increasing use of helicopters in personal transportation, the following provisions shall apply to the establishment of heliports in the City of Jonesboro.

(a) Personal use heliports shall be permitted as an accessory use in the Commercial C-1, C-2, C-3 Zoning Districts and any properties zoned as Single Family only when licensed by and approved by the City of Jonesboro Planning and Zoning Department, and subject to the standards of the district in which it is located as well as fencing shall be required which does not interfere with the landing of the helicopters, whenever necessary to restrict pedestrians' access to the landing area.

(b) Minimum Residential property area should be at least 5 acres.

(b) Minimum size of landing area should be approximately two (2) times the length of the helicopter, and may be on a roof top (for Commercial Uses). In the case of roof top heliports, special consideration will be given to each site.

(c) The landing pad should be of a minimum size of 32 feet in diameter.

(d) The site should be approachable from at least two sides; and provide sufficient clearance as to allow take-offs and landings from the outer limits of the touchdown pad of an 8:1 ratio. No heliports shall be approved or licensed in violation of the 8:1 ratio. However, once established as a licensed facility, it shall be protected against any object violating the above ratio for a distance of five hundred (500) feet. The approach lanes for these landing facilities shall be considered or defined as an 8:1 incline plane in the direction of the designated approach, and departure flight paths which shall be two hundred (200) feet in width and shall extend outward five hundred (500) feet from the outer edge of the landing pad.

(e) A site located adjacent to water shall have a boat, such as a rowboat, tied at the landing pad to aid possible rescue operations.

(f) A wind direction indicator shall be provided at all heliports. In the case of night operation, the navigation facility shall be lighted. Shown on diagrams are the markings that are to be used to distinguish a heliport from an airport.

(g) Permits for establishing and maintaining sites shall be issued to the owner or lessee of a site by the Planning/Zoning Officer. All heliports/helipads must meet the any and all Fire Code Requirements of the local Fire District.

(h) Temporary landing sites for helicopters shall be permitted which would otherwise meet the requirements set by the city's Planning and Zoning Department, but for emergency and temporary purposes only. For this purpose temporary purposes shall mean landing no more frequently than two times per month.

(i) The permit shall be deemed automatically revoked if:

(1) Found in violation of any and all FAA requirements and owner revokes the license or refuses to re-license the site after one of its periodic inspections; or

(2) Thirty (30) days after the Planning/ Zoning Officer has notified the permit holder in writing that the site is no longer in compliance with the requirements set forth herein for the initial granting of the permit, provided the alleged defect has not been cured within said thirty (30) day period.

IV. COMMERCIAL USE

Exemptions:

(a) The C-1 Downtown core district is excluded from the distance requirement only for the location of helipads and heliports.

(b) Hospital facilities located at or near a hospital. Many hospital heliports are elevated or on rooftops. In addition to the normal provisioning for heliport operational requirements, patient handling and care considerations are important factors in the facility design. Such facilities shall be required to be approved as part of a site plan/permit approval process.

V. NOTIFICATION

The notification area shall be 1,000 feet measured from the subject property line. As required for a Conditional Use Permit, the established notification boundary of 200 feet of prospect site via certified

letter shall be adhered to. In addition, a courtesy notification of surrounding properties within 800 feet of the requested heliport/helipad must also occur, not restricted to certified letter.

VI. SUBMITTALS

An applicant for a helipad or heliport permit shall file an application as required in Article II Sec. 6 of the Jonesboro Code of Ordinances to the City Planner. The application shall contain the following:

(a) An FAA airspace letter-of-determination stating no objection, with or without conditions, to the proposed facility.

(b) A text describing the following information:

(1) The type, weight and noise emission level (obtained from the manufacturer or FAA) of helicopters anticipated to use the site;

(2) All potential users of the heliport/pad;

(3) The requested number of helicopter operations;

(4) The requested days and hours of operation of the facility;

(5) Estimated ground time;

(6) Where helicopters or tiltrotors will park, if applicable and how many may be grounded at any one time;

(7) Identification of service areas provided, but not limited to, customer waiting areas, fueling stations, storage tanks, maintenance sheds or hangers, weather instrumentation and wind indicators;

(8) An explanation of how the facility will be compatible with the purpose of this chapter.

c. A dimensioned surroundings plan, at one inch equals 200 feet scale, of the area within a 2,640-foot radius of the center of the helipad/heliport, showing the:

(1) Parcel boundaries and dimensions;

(2) Approach-departure path(s) (refer to FAA Advisory Circular);

(3) Obstructions, as defined in FAR Part 77, within and adjacent to the approach- departure path(s);

(4) Location of noise-sensitive land uses within 2,640 feet of the center of the helipad/heliport and within the approach-departure path(s); and

(5) Location of public rights-of-way within 300 feet of the center of the helipad.

d. A site plan, at one inch equals 40 feet scale, showing the:

(1) Landing area, including markings and identification;

(2) All Utility Easements shall be delineated on the site plan.

(3) Aircraft parking, maintenance and fueling areas, and peripheral areas;

(4) Location of fencing, screening and safety barriers;

(5) Points of access to the landing pad, i.e., gates, elevators and stairwells; and

(6) Location of accessory structures and equipment, including firefighting equipment (when applicable).

VII. CONDITIONAL USE APPROVAL

A conditional use permit for a heliport or helipad, or (Sec. 117-198), the permitted zones and locations (Sec 117-196) and the standards (Sec 117-170) of this chapter and be approved by the City Council in accordance with (Sec 117-199). The city may also provide other conditions and restrictions which the City determines, at the time of granting the specific use permit, are necessary to protect and provide for the health, safety, and general welfare of the community. (See proposed Permitted Use Tables Attached).

Conditional use permit approval shall be valid for three years.

VIII. REAPPLICATION FOR A HELIPORT/HELIPAD

An application for subsequent conditional use permits on the same site shall be subject to the same procedures and standards as a first-use permit. Upon inspection and renewal approval by the MAPC, the applicant will be granted a continuum.

Sec. 3-66. - Operation of helicopters, heliports.

(a) No person shall operate any heliport within the City of Jonesboro without first securing a heliport license from the city. An application for a heliport license shall contain the same information and shall be subject to the same approval procedure as is required in article III of this chapter.

(b) The operation and flight of helicopters within the city shall be in conformity with all applicable safety rules, regulations, manuals and directives of the Federal Aviation Administration and the provisions of the ordinances and the codes of the city, including but not limited to those regulations relating to minimum safe altitudes. In addition, where specific minimum safe altitudes, traffic patterns and approach routes for a heliport are prescribed by the city council with the approval of the Federal Aviation Administration, failure to comply therewith shall constitute a violation of this article.

Supporting Questions

1. What are the sizes of heliports?

A heliport is a permanent facility where helicopters take off and land. It can range from a specifically designated area that requires little or no external support to a location that supports scheduled air services with hangars, fuel and aircraft maintenance capabilities. Over 90% of current facilities serve single helicopters and provide no fuel or services.

In the United States, there are over 5,500 registered land-based heliports, many of which are on elevated structures. Future heliports may be very sophisticated, encompassing direct intermodal transportation links, more stringent security requirements, allowing direct interlining with scheduled airlines at airports, and the most advanced satellite-based instrument approach procedures facilitating all-weather operations. The end result is ease and convenience never before experienced by the traveling public.

2. What is an "Emergency Landing Zone?"

Such sites can go by many similar terms, but these are not heliports. Basically these are either predetermined or spontaneously designated sites which public safety agencies, in cooperation with emergency heliborne responders, select to evacuate trauma or disaster victims. For example, HAl has published a standard for Emergency Helicopter Landing Facilities (EHLF), that also includes a "Model Ordinance." This standard has been adopted by the National Association of Fire Chiefs as its policy with regard to establishing emergency helicopter access to rooftops of high-rise buildings.

3. What are the sizes of heliports?

All international standards have space requirements (both on land and in the air) for an obstacle-free area in order for the aircraft to take off and land. The standards for the Touchdown/Liftoff (TLOF) area are generally predicated on the size of the aircraft undercarriage or the rotor diameter. The obstacle-free areas surrounding the TLOF are generally determined by a multiplier of the aircraft's overall length and/or rotor system size. The use of the heliport (i.e., private, general aviation, hospital, and transport) may also determine the minimum size. These can vary from an open area of 65 feet by 65 feet for a small helicopter to 100 feet by 100 feet for a medium twin-engine helicopter to up to several acres for facilities serving multiple helicopters. Recommended standards vary by the anticipated use of the facility. Typically, a privately used heliport requires less space than would a facility intended for general aviation or commercial transport use.

4. What are the different types of heliports?

The type of heliport is determined by its intended use. They can be ground level, elevated, rooftop, or floating. As defined in the FAA's Heliport Design Advisory Circular, AC l50/5390-2B, most typical are:

A. *Prior Permission Required (PPR),* (formerly called "Private") facilities serve corporations, individual operators and their guests and make up the majority of all current heliports. They are typically privately funded, located on private/corporate property, and usually are not open to the general public.

B. *General Aviation (GA)* facilities are open to the public, and some may charge landing or other fees. They may be a combination of privately and publicly owned properties. If the FAA Airport Improvement Program (AlP) has funded the location, the facility must be public use and committed to operate for a specified period of time. GA facilities may vary from a single-rotorcraft heliport to an elaborate location

designed with multiple parking locations and intermodal links to light or heavy rail systems, ferries, highways, and airports. They can form part of a hub-and-spoke system of heliports that serve as feeders from major cities to airports, suburban to urban areas, and city-center to city-center locations.

C. *Transport Category* facilities are typically publicly owned or controlled, generally utilize scheduled operators, and are designed for accommodating larger rotorcraft and increased numbers of passengers. Transport Category heliports may include intermodal considerations, passenger waiting and ticketing areas, and provisions for the high security associated with direct linking of helicopters to major air carriers at airports.

D. *Hospital facilities* are located at or near a hospital. Many hospital heliports are elevated or on rooftops. In addition to the normal provisioning for heliport operational requirements, patient handling and care considerations are important factors in the facility design. Proximity to the trauma/emergency areas or ambulance drop-off and pick-up points must be considered. Access to many hospital heliports is generally restricted to Helicopter Emergency Medical Services (HEMS) or medical evacuation helicopters.

E. *Emergency Sites* are suitable clear and open areas close to or at the scene of an accident, medical emergency, or disaster that meets the criteria set by the HEMS company/operator and the pilot-in-command of the aircraft. While the sites may be part of a preplanned system along highways, at rest areas or in recreational areas, they are not designed for use other than in emergencies. Due to their nature, these sites are typically not subject to formal regulatory review and oversight.

F. *Official-Use facilities* are for police, fire, and sheriff's departments, as well as various federal, state, and local government agencies, and typically follow PPR criteria. Special permission is generally required for landing at these locations.

G. *Emergency Evacuation Facilities* are intended to facilitate bringing emergency personnel to a roof and removing building occupants. Local codes may require buildings over a predetermined height to provide a roof area with sufficient size and strength to land a helicopter. Some building owners have constructed private rooftop heliports that service the travel needs of the occupants as well as meet evacuation requirements.

H. *Temporary facilities* are defined in Federal Aviation Regulation (FAR) Part 157. The FAA does not require notification of intent to construct or activate any intermittent-use, Visual Flight Rules-only site which is used or intended to be used for less than one year. Intermittent use means use or intention to use for no more than three days in any one week and no more than 10 operations in anyone day.
State or local jurisdiction regulations will take precedence, which in some areas require permission for any landings (usually excluding medical and emergency situations).

5. Where can heliports be located?

The versatility of the rotorcraft allows heliport locations to be similarly flexible. They may be on ground level; elevated on buildings, parking garages, or bridges, or over or next to freeways and interstates; on airports; on docks, piers, barges, boats, offshore oil/gas rigs, or portable deck systems in jungles/mountains/marshes; and even on water for aircraft equipped with floats.

The location depends predominately on available air space, real estate priorities, and exact departure points/destinations of the passengers, or where services are required. For example, hospitals generally want the heliport as close as possible to the emergency treatment area for incoming patients. Corporate clients are interested in getting to and from meetings and conferences or connecting to longer-range aircraft. Forestry, exploration, and utility crews need to access the area in which they are working.

Heliports can be in cities, suburbs, or rural areas and are only limited by the availability of a suitable open area.

6. Who regulates heliports?

In the U.S. and its territories and possessions, the FAA regulates airspace, assuring its safe and efficient use. This includes interfacing with current or planned aeronautical uses. Land use issues are controlled by state and local regulation. Most countries utilize the International Civil Aviation Organization (ICAO) regulations.

Many municipalities make specific reference to heliports in their land-use regulations. Many authorities include and permit these landing areas as accessory uses of a primary land use. An example is a corporate heliport that serves the travel needs of the corporation's executives and clients. A comparison is made to the needs for parking lots, driveways and loading docks as other transportation-related accessories to serve corporate offices.

7. What are the benefits of a heliport?

A. Emergency/Disaster Relief
In addition to the daily business and private sector benefits, a system of strategically placed facilities can provide a means for adequately responding to emergencies. In the event of local or regional disasters (e.g., fire, earthquakes, floods, and industrial accidents), a system of rotorcraft landing/staging areas can be immediately available for saving lives. Nowhere has a lack of such a system been more evident than the hurricane disasters of 2005.

B. Emergency Medical
The use of helicopters as aerial ambulances has made the inclusion of a heliport at acute care and trauma centers a requirement in many states and countries. Hospitals around the world consider a heliport an essential part of the total patient care system, which has resulted in thousands of lives being saved.

c. Public Service
Many public service agencies (e.g., fire, law enforcement, and government wildlife and resource management authorities) use helicopters and heliports. Helicopters enable effective mission accomplishments.

D. Economic
Access to a heliport, and a regulatory environment that accommodates the permitting and development of heliports, will help attract businesses that use helicopters. A number of
U.S. and international corporations own, lease or charter helicopters for the transportation of their employees with time-critical functions, clients, and priority cargo.

E. Electronic News Gathering and Traffic Safety
Many network and local television and radio stations use helicopters and heliports for their support to provide up-to-the-second news, traffic reports and, in some cases, lifesaving information to the public.

F. Utility, Forest and Resource Management
Many heliports support helicopters that patrol and enable the repair of critical power transmission lines, fight forest fires, manage national forests, support logging operations, and survey vast areas without the need for disturbing the environment.

G. Energy

The offshore oil industry transports thousands of workers from shore stations to oil platforms around the world. Bases of operations are established in localities that best serve the rapid and efficient transportation needs of the industry and provide significant revenue for local communities. Onshore and offshore exploration for energy sources are dependent on helicopters and heliports

8.Where are preferred heliport locations?

The facility should be located and designed according to the needs of the users. The locations should be balanced against the likely environmental impact of the heliport. Hospitals generally need to have the heliport as close as practical to the emergency/trauma area for ease of patient transport. Corporate heliports are sometimes within walking distance or actually on the passenger destination buildings. City-center transportation centers and convention centers are natural locations for including a rotorcraft landing facility. Landing facilities at major airports are predominately in the general aviation area, allowing for direct access to corporate/charter aircraft as well as direct interlining with airlines when appropriate security measures are in place.
Strategically located heliports can form a system that provides a link in city-center to city-center transportation, airport links, and service to and from the passenger's origination points and destinations.

9. Aren't heliports noisy?

The sound levels of rotorcraft are similar to those of many items found in our daily lives. Planes, trains, automobiles, lawnmowers, motorcycles, buses, trucks, boats, and cars all regularly produce noise levels higher than those which the average person would hear from a rotorcraft. The relative distance, nature and intensity of the noise generated, height above the ground, model of the aircraft and sound attenuation factors of the terrain between the source and the receptor are all factors in the way sound is perceived.

A typical heliport operation produces an extremely transitory sound. The entire sound event lasts for approximately 45 seconds on landing or takeoff, although ground running can increase the time. At anyone point along the flight route, providing the observer is close enough to notice, the helicopter will typically be heard for 20 seconds or less. This is quite unlike other transportation uses such as streets, highways/interstate road systems, commuter/freight railways where sound production is almost constant. Special attention should be given to siting heliports in areas or corridors where the sound inherently produced by other sources provides a shielding or muffling effect of the sounds of the helicopters. Heavily industrialized areas, especially large industrial and commercial zones, make good sites for potential landing areas due to the relatively high ambient noise.

In essentially all metropolitan transportation systems, there are clearly defined corridors of motor vehicle, train, and waterborne traffic that provide excellent ingress and egress routes for helicopters. In addition to providing ambient noise that can shield aircraft sounds, these freeways, highways, railroads, and waterways, also offer an area of relatively unobstructed airspace that can be considered fairly permanent. Helicopter operators can also reduce the sounds of the helicopter significantly by the use of noise abatement techniques developed by essentially all of the helicopter manufacturers. This material has been widely distributed and promoted as part of the Helicopter Association International (HAl) "Fly Neighborly" program, which also contains information on noise impact in the community and methods for noise planning and assessment guidelines for heliports.

10. What are the exhaust emissions from helicopters?

Helicopters are predominately powered by gas turbine engines that produce very few pollutants. Much of this is due to the engine's high-combustion temperatures and its ability to bum fuel very efficiently. The type of fuel utilized by these engines is high-quality jet fuel. Properly stored, dispensed and used, it meets

the Environmental Protection Agency's (EPA's) high standards for use of such fuels. Gasoline powered helicopters produce emissions comparable to other similarly powered vehicles (e.g., cars, trucks, and boats).

11. How safe are heliports?

Nothing is more important to the residents of any community than their family's safety and their property. The FAA, using its own data and that of the National Transportation Safety Board (NTSB), investigated the relative risk a community has in relation to a helicopter landing area. This information and historical data reveal that typical heliports are extremely safe.
The FAA and many of the state and local governments are highly proactive when it comes to heliport safety. Additionally, FAA regulations are very strict when it comes to any unsafe actions undertaken by pilots.

12. Do heliports affect property values for adjacent or nearby properties?

Historical studies, as well as real estate appraisal guidelines, indicate that property values are not affected due to the proximity of a heliport/helistop. One of the highest per capita income areas in the country, Somerset County, New Jersey, has a large number of private and corporate heliports within some of the finest, and higher valued, estates in the county.

Recommendations to develop a Private Use Heliport:

The first question in heliport establishment should be: Will the heliport be for private or public use?

For Private Use Heliports:
1. Determine need for one's own helistop or heliport. Consider using an already established helicopter landing facility. including a private use facility. (Other facilities can be located by accessing the HAI Helicopter On-Line or the HAI Heliport Directory.

2. Obtain a copy of FAA Advisory Circular 150/5390-2B Heliport Decision Guide and use it as your guide.

3. Determine the helicopter size and weight for which the heliport will be required to support.

4. Determine the frequency of use.

5. Select site, prepare facility layout plan. approach & departure paths. obstructions, and surrounding land uses, including known and potential noise sensitive areas.

6. Prepare and submit three copies of FAA Form 7480-1, Notice of L:mding Area Proposal with the nearest Airport District Office. Anyone proposing to activate, construct, or deactivate a heliport is required to submit FAA Form 7480-1 within 90 days of (The:: form is not required for temporary landing sites, medical emergency sites, or emergency evacuation facilities under the provisions of FAR Part 157.

7. Research local ordinances and Stare laws [Q determine applicable permits and approvals. Coordinate land use compatibility and zoning approval with local government agencies. Determine and obtain any applicable exemptions or exceptions in accordance will correct procedures.

8. Be fully prepared for any public hearing to determine the fate of your project

9. Consult with local officials and community leaders including expected opponents and address all aspects of anticipated operations and their impact on the community.

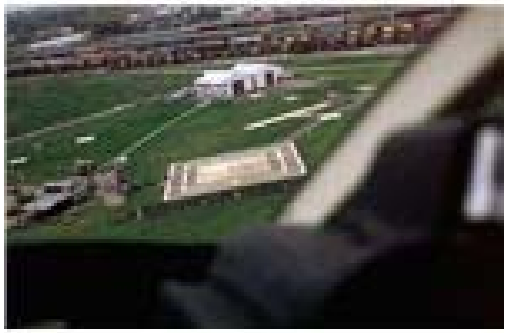
10. Comply with State heliport design and site criteria and obtain applicable licensing or certification. Some states with licensing requirements may not enforce licensing when a heliport is established. Operators would obtain and maintain current licensing of their heliports in states with licensing laws to avoid future embarrassments such as violations or heliport closure.

Condensed Article of Federal Regulations for Helicopter Landing Zones
(Please note it is advised to read the FAA Advisory Circular AC No: 150/5390-2C)

Federal Aviation Regulations for Helicopter Landing Zones
Written by: Jason C. Chavis

Like traditional runways, helipads and heliports require the maintenance of many regulations for safety and security of the aircraft and ground-based facilities. Federal aviation regulations on helicopter landing zones are not as intricate as their fixed-wing counterparts, but they are important.

Dimensions of the Landing Zone



Above: Heliport Landing Zone.

Federal aviation regulations on helicopter landing zones required certain dimensions be used when building and maintaining helipads and heliports. The landing area for the helicopter itself needs to be at least 20 feet wide and long in a square formation. A safety area of 35 feet on each side must be maintained with no buildings or obstructions. In order for the helicopter to conduct a proper landing and takeoff approach, the zone must also provide a 300 foot strip on either side of the landing area.

Equipment Necessary for Helipads and Heliports

Wind Sock.

According to federal aviation regulations on helicopter landing zones, there is certain equipment that must be installed at the location for safety. Every landing zone needs to have a wind indicator that is visible to the pilot in order to allow him or her to better conduct a proper approach. Helipads also need emergency equipment located within reasonable accessible reach to people on the ground, notably a general evacuation and rescue kit and a fire extinguisher. Warning signs are also required near the landing zone to inform people of the purpose of the area and to prevent people from smoking.

Required Markings to Enable Safe Helicopter Landings

Generally speaking, there is little regulation regarding exact markings required for a heliports, although mandates require some form of identification. According to federal aviation regulations on helicopter landing zones, the location in which the helicopter lands should include area markings and any local or state requirements. The majority of heliports are labeled with a number inside of a circle to reference the maximum weight limit of the landing zone, particularly important when a helicopter is landing on a building. For example, a *15* within a circle delineates 15,000 pounds. Hospitals usually use a large “H” designating the landing zone.

Landing Zone Lighting

Just like a traditional airport, helicopter landing zones require certain standards for lighting that enable craft to conduct a proper approach and touch-down. Heliports need to have a circle or square of lighting located around the surface of the landing area, designating the exact area in which the helicopter should touch-down. These lights used to be officially mandated the color yellow, however, the International Civil Aviation Organization and Federal Aviation Administration now recommend green lights. Both organizations also recommend using LED lights rather than incandescent due to the lifespan of the bulbs. In addition, the landing zone is required to light up the wind cone and also provide general flood lights to help illuminate the surrounding area on the ground.

Federal Administrative Requirements

As with any government agency, in order to build or maintain a heliport or helipad, certain administrative requirements must be filed with appropriate agencies. Paperwork and approval is required for environmental, population and zoning concerns. In addition, any changes or additions must be approved by regulatory agencies.

In all, federal aviation regulations on helicopter landing zones are mandated and enforced in an effort to keep both helicopters and the people on the ground safe. The regulations have successfully kept helicopter crashes to a minimum over the years.

Resources

"Helicopter Landing Areas" Interagency Helicopter Operations Guide:
http://www.nifc.gov/ihog/chapters/2006chapter08.pdf

"Airports and Heliports" California Department of Transportation:
http://www.dot.ca.gov/hq/planning/aeronaut/documents/Regs_pub.pdf

Resources

Chavis, Jason C. Bright Hub! "Federal Aviation Regulations for Helicopter Landing Zones." 19 Mar 2010. 31 Mar 2013. http://www.brighthub.com/science/aviation/articles/66702.aspx

Helicopter Association International. "Heliports: The 25 Most Asked Questions...And Answers." 2005.