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Heliport Design and Lighting Packages

Heliport Design

The following information is for the preliminary planning of a public use, general aviation heliport only. FAA recommendations and standards for heliport design are found in FAA Advisory Circular 150/5390-2B, from which these suggestions are taken.

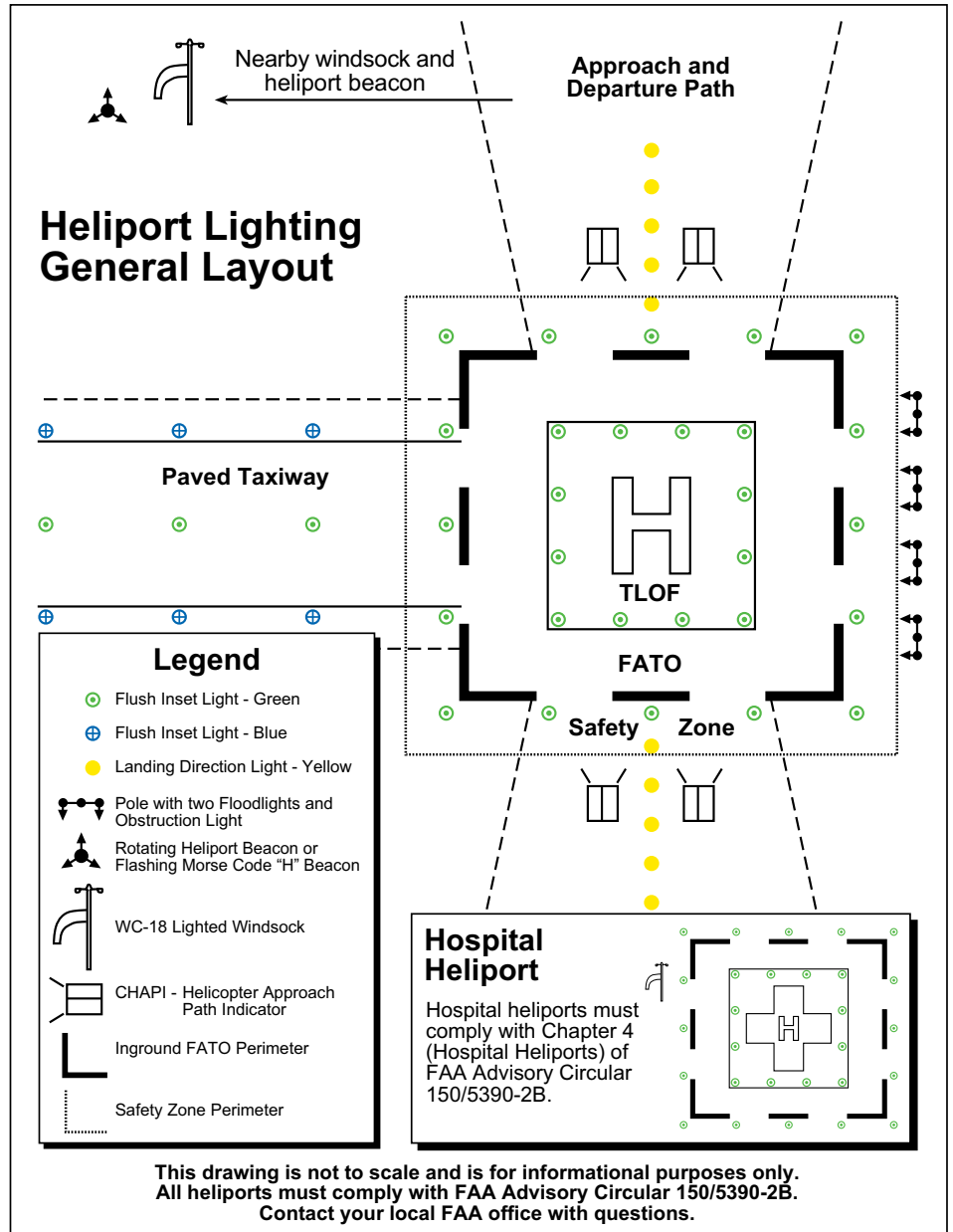
The heliport should include at least one touchdown and lift-off area (TLOF) centered in a final approach and takeoff area (FATO), a peripheral safety area and two or more approach and departure paths. The TLOF must be at least as long and wide as the rotor diameter of the largest helicopter to use the heliport. The FATO must be at least 1.5 times the overall length of the helicopter. The width of the safety area must be at least 0.33 times the rotor diameter, but not less than 20 feet (6 m). At least two approach/departure paths, with one aligned in the direction of the predominant wind, are required.

Lighting

For night operations, a minimum lighting system should include a peripherally lighted TLOF and FATO, a lighted wind indicator and a heliport identification beacon. Other useful visual aids include landing direction lights, floodlights, taxiway lights and a heliport approach path indicator (CHAPI). Obstruction lights must be installed where required. The recommended CHAPI power system is single phase 120/240 volts for VFR and 6.6 ampere series circuits for IFR.

FATO and TLOF Lights

A minimum of four flush or raised green light fixtures is recommended per side of a rectangular FATO and TLOF. A light is located at each corner with additional lights uniformly spaced between the corner lights with a maximum interval of 25 feet (7.5 m) between lights.



Lighted Wind Indicator

An FAA L807 Size 1 (about 22 ft overall height with an 8 ft, international orange windsock) is recommended, or the L806 (10 ft tall) may be substituted.

The L807 has a hinged pole and a rigid base, the L806 has a frangible base. The L807 must be outside the safety zone and away from flight paths.

Continued on back

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Heliport Identification Beacon

Located within 1/4 mi of the heliport, three sealed beam lights rotate at 10 to 15 rpm to produce 30 to 45 fpm in white, green and yellow. A beacon using Morse code signals is also available.

Landing Direction Lights

To identify alignment of the approach route, a line of five L860 or L861 lights with omnidirectional yellow lenses are spaced at 15 ft (4.5 m) intervals.

Floodlights

Mounted on buildings or poles, elevated floodlights should illuminate all of the operational area and should be hooded to prevent upward glare that would hinder the vision of approaching pilots.

Taxiway Lights

Taxiway center lines are defined with semi-flush L852A and L852B bi-directional or unidirectional green lights spaced at 50 ft (15 m) intervals. Blue lights set at the same intervals are used to define the edges of the taxi route.

Obstruction Lights

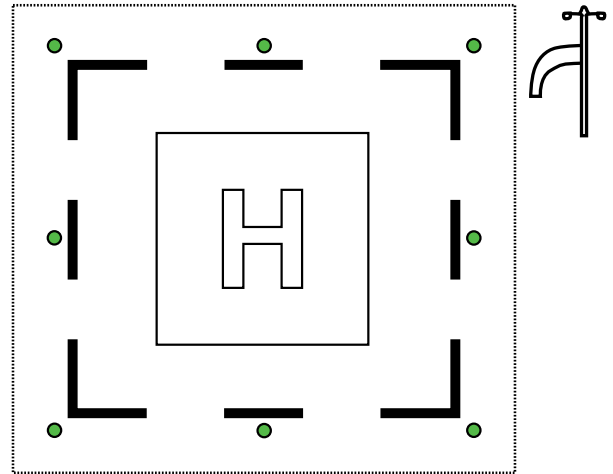
Difficult-to-see objects shall be marked with a red FAA approved obstruction light. Contact the local FAA office with additional questions.

Visual Glide Path Indicator

The heliport approach path indicator (CHAPI) provides pilots with visual course and descent cues. The optimum location of a CHAPI is on the extended center line of the approach path at a distance that brings the helicopter to a hover 3 to 8 feet (0.9 to 2.5 m) above the TLOF center.

Heliport Lighting System Packages

Basic packages may be customized and expanded to fit your needs. Call to discuss your requirements.



Typical System Layout

Basic Heliport System Packages

Package 1: Elevated 120 VAC Incandescent System

- Easy installation
- Easy maintenance
- Economical: uses off-the-shelf lamps



| Qty: | Item #: | Description: |
|------|--------------------|--|
| 8 | FL-860-G-69A-14 | L860: green, 69W, 14" height, A21 lamp, 1.5" frangible coupling |
| 8 | 35-1935AA-25 | Base plate for L868AA: 8.5" diameter, 7.25" BC |
| 8 | 35-868AA.5-5 | L868AA base: 8.5" x 5" deep, 1" grm @ 0°, 180° with 3/4" drain, 7.25" BC |
| 1 | WCH-806-1-EX-120-N | L806 Size 1, External Lighted Wind Cone Assembly (120V) |

Package 2: Elevated 120 VAC LED System

- Easy installation
- Lowered maintenance: LED life expectancy exceeds 100K hours
- Lowered operating costs: low power LED technology



| Qty: | Item #: | Description: |
|------|--------------------|---|
| 8 | HL-860-GL-120-14 | Heliport Elevated Perimeter: green, 120V LED |
| 8 | 35-1935AA-25 | Base plate for L868AA: 8.5" diameter, 7.25" BC |
| 8 | 35-868AA.5-5 | L868AA base: 8.5" x 5" deep, 1" grm @ 0°, 180° with 3/4" drain, 7.25" BC |
| 1 | WCH-806-1-EX-120-3 | Externally lit (LED), L806 wind cone with orange nylon wind sock (8 ft. long by 18 in. diameter at the mouth) and L810 LED obstruction light, 120 VAC operation |

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Heliport Design and Lighting Packages

Package 3: Elevated Low Voltage LED System

- Improved safety: low voltage DC operation
- Easy installation
- Lowered maintenance: LED life expectancy exceeds 100K hours
- Lowered operating costs: low power LED technology



| Qty: | Item #: | Description: |
|------|-------------------|--|
| 8 | HL-860-GL-12-14 | Elevated LED (5 watt) green perimeter light with AC-DC converter and 1.5" frangible coupling, 12 VDC operation |
| 8 | 35-1935AA-25 | Base plate for L868AA base: 8.5" diameter, 7.25" bolt circle |
| 8 | 35-868AA.5-5 | L868AA base: 8.5" diameter, 7.25" bolt circle, 5" deep, 3/4" drain, and 1" grommet at 0° and 180° |
| 1 | HL-HSC | Low Voltage System Controller with 12 VDC output, on/off switch, 150 watt power output capability |
| 1 | WCH-806-1-EX-12-3 | Externally lit (low voltage LED), L806 wind cone with orange nylon wind sock (8 ft. long by 18 in. diameter at the mouth) and L810 LED obstruction light, 12 VDC operation |

Package 4: Inset 120 VAC Halogen System

- Knockdown proof: low profile, used in high traffic areas
- Easy installation
- Easy maintenance
- Economical: uses off-the-shelf lamps



| Qty: | Item #: | Description: |
|------|--------------------|--|
| 8 | HL-ZA292A-G-50 | Green omni-directional light: 50W, 120V, anodized, 7.25" BC |
| 8 | 35-868AA.5-5 | L868AA base: 8.5" x 5" deep, 1" grm @ 0°, 180° with 3/4" drain, 7.25" BC |
| 1 | WCH-806-1-EX-120-N | L806 Size 1, External Lighted Wind Cone Assembly (120V) |

Package 5: Inset 120 VAC LED System

- Knockdown proof: low profile, used in high traffic areas
- Easy installation
- Low maintenance: LED life expectancy exceeds 100K hours
- Low operating costs: low power LED technology



| Qty: | Item #: | Description: |
|------|--------------------|---|
| 8 | HL-ZA292A-G-LP | Green omni-directional light: LED, anodized, with power converter, 7.25" BC |
| 8 | 35-868AA.5-5 | L868AA base: 8.5" x 5" deep, 1" grm @ 0°, 180° with 3/4" drain, 7.25" BC |
| 1 | WCH-806-1-EX-120-3 | Externally lit (LED), L806 wind cone with orange nylon wind sock (8 ft. long by 18 in. diameter at the mouth) and L810 LED obstruction light, 120 VAC operation |

Package 6: Inset Low Voltage LED System

- Safety: low voltage DC operation
- Knockdown proof: low profile, used in high traffic areas
- Easy installation
- Low maintenance: LED life expectancy exceeds 100K hours
- Low operating costs: low power LED technology



| Qty: | Item #: | Description: |
|------|-------------------|--|
| 8 | HL- ZA292A-G-LV | Green omni-directional LED (8 watt LED) inset light: anodized aluminum construction, 8" diameter, 7.25" bolt circle, 12 VDC operation |
| 8 | 35-868AA.5-5 | L868AA base: 8.5" diameter, 7.25" bolt circle, 5" deep, 3/4" drain, and 1" grommet at 0° and 180° |
| 1 | HL-HSC | Low Voltage System Controller with 12 VDC output, on/off switch, 150 watt power output capability |
| 1 | WCH-806-1-EX-12-3 | Externally lit (low voltage LED), L806 wind cone with orange nylon wind sock (8 ft. long by 18 in. diameter at the mouth) and L810 LED obstruction light, 12 VDC operation |

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