



HeliExperts
International
LLC

5/19/2017

Shrub Oak International School

Shrub Oak, New York



Public Hearing Helistop/ Heliport Overview



HeliExperts Background

- **Combined 85+ Years in Aviation**
- **Combined 40+ Years in Heliport Consulting**
- **900+ Heliports Designed**
- **3,000+ Heliports Visited or Audited Worldwide**
- **Clients Include**

Professional & Volunteer Affiliations



AIRCRAFT OWNERS AND PILOTS ASSOCIATION






Heliports & Helistops

REGULATIONS / CODES & BEST PRACTICES

Primary Helipoint Guidance in the United States

Federal Aviation Administration
Helipoint Design Guide, AC-150/5390-2C

National Fire Protection Association
Standard for Helipoints, NFPA-418



U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: Helipoint Design Date: 4/24/2012 AC No: 150/5390-2C
Initiated by: AAS-100 Change:


1. Purpose. This advisory circular (AC) provides standards for the design of helipoints serving helicopters with single rotors. Apply basic concepts to facilities serving helicopters with tandem (front and rear) or dual (side by side) rotors, however many standards will not apply.

2. Cancellation. This AC cancels AC 150/5390-2B, Helipoint Design, dated September 30, 2004.

3. Application. The Federal Aviation Administration (FAA) recommends the guidelines and specifications in this AC for materials and methods used in the construction of helipoints. In general, use of this AC is not mandatory. However, use of this AC is mandatory for all projects funded with federal grant monies through the Airport Improvement Program (AIP) and with revenue from the Passenger Facility Charge (PFC). See Grant Assurance No. 34, Policies, Standards, and Specifications, and PFC Assurance No. 9, Standards and Specifications. For information about grant assurances, see http://www.faa.gov/airports/aip/grant_assurances/. The use of terms implying strict compliance applies only to those projects. Other federal agencies, states, or other authorities having jurisdiction over the construction of other helipoints decide the extent to which these standards apply.

4. Principal changes.

- Changed the term for the helicopter overall length (OL) to 'D' or 'D-value.'
- Added definitions for design loads for static and dynamic load-bearing areas (LBA).
- Added guidance for pavement or structure larger than the touchdown and liftoff area (TLOF), but less than the size of the final approach and take off (FATO).
- Added guidance for turbulence effects.
- Added guidance to provide adequate clearance between parking areas and taxi routes and within parking areas.
- Added guidance for minimum dimensions of curved approach/departure airspace.
- Added guidance for Touchdown/Positioning Circle (TDPC) Marking.
- Added guidance for Flight Path Alignment Guidance markings and lights.
- Added an appendix providing guidance for Emergency Helicopter Landing Facility Requirements (EHLF).
- Added FATO to FATO separation distance for simultaneous operations.
- Revised standards for size of "H" for general aviation helipoints.
- Added increased TLOF size when the FATO of a hospital helipoint is not load bearing.



NFPA®
418
Standard for Helipoints
2016



Agencies & Organizations that will review and approve this heliport

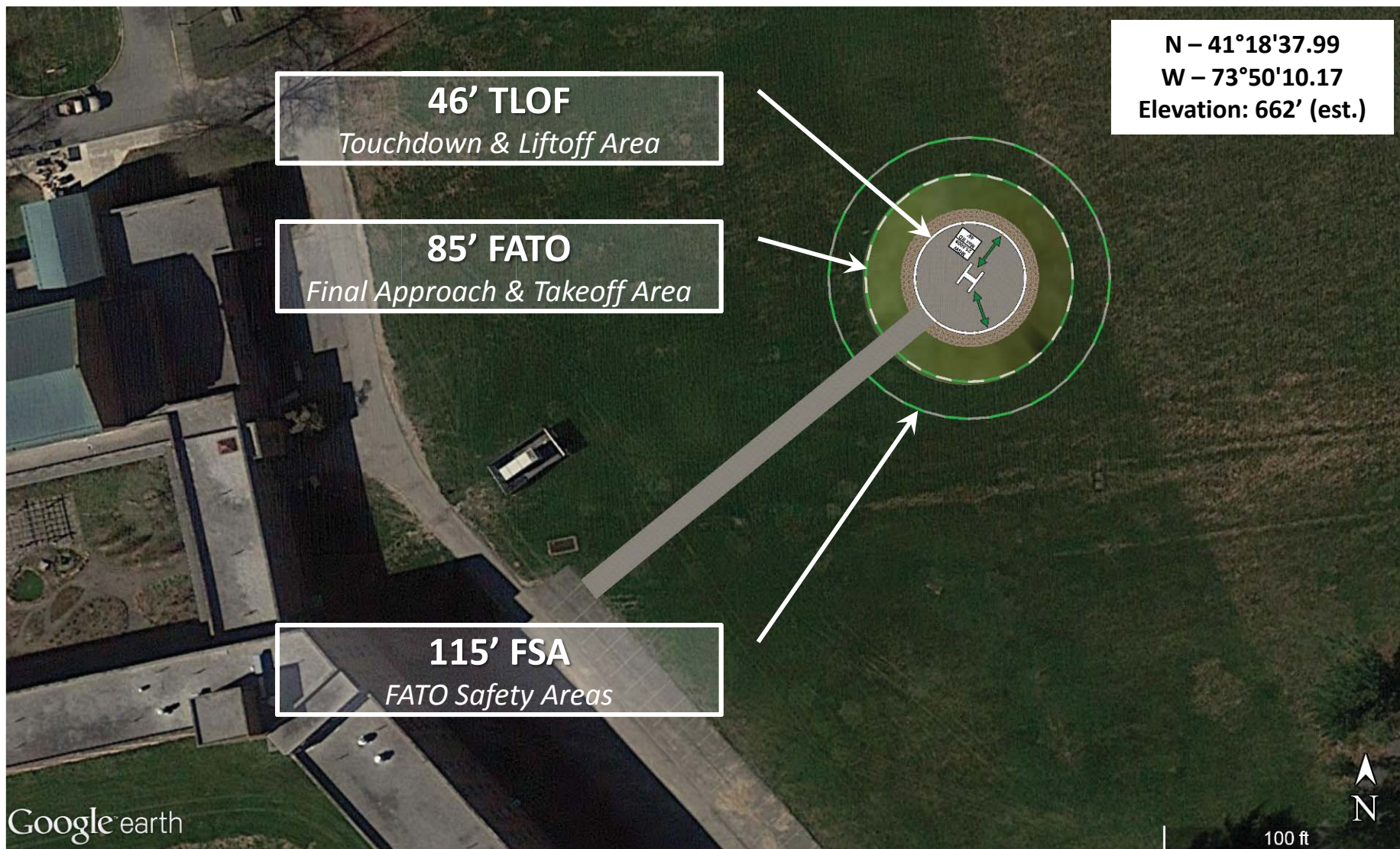
- **FAA:** Federal Aviation Administration
- **NFPA:** National Fire Protection Association
- **OSHA:** Occupational Safety & Health Administration
- **State:** NY State Department of Transportation
- **Local:** Local Municipality & Fire Marshall



PROPOSED SITE

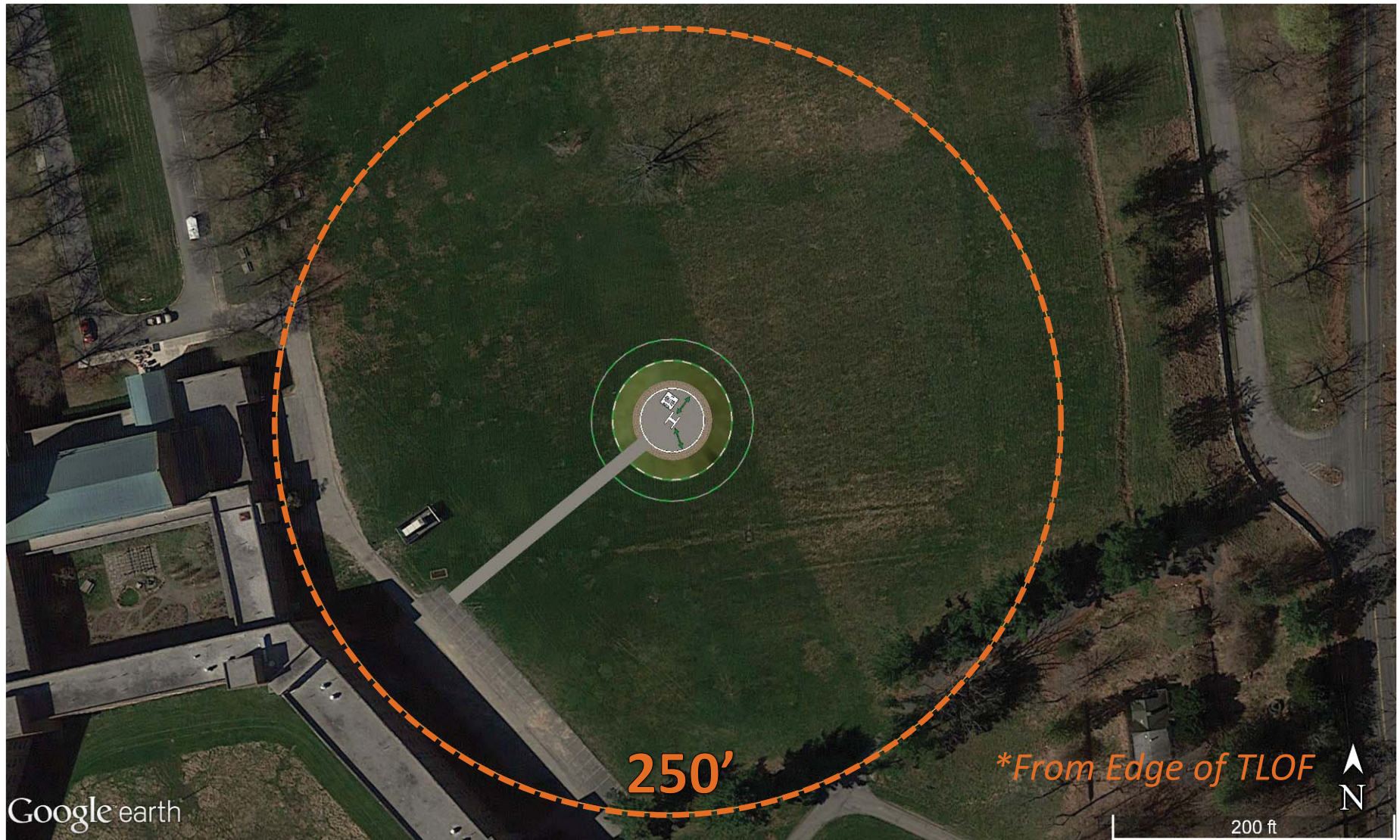


Proposed Site Location





Required Zoning Setback



Required Zoning Setback

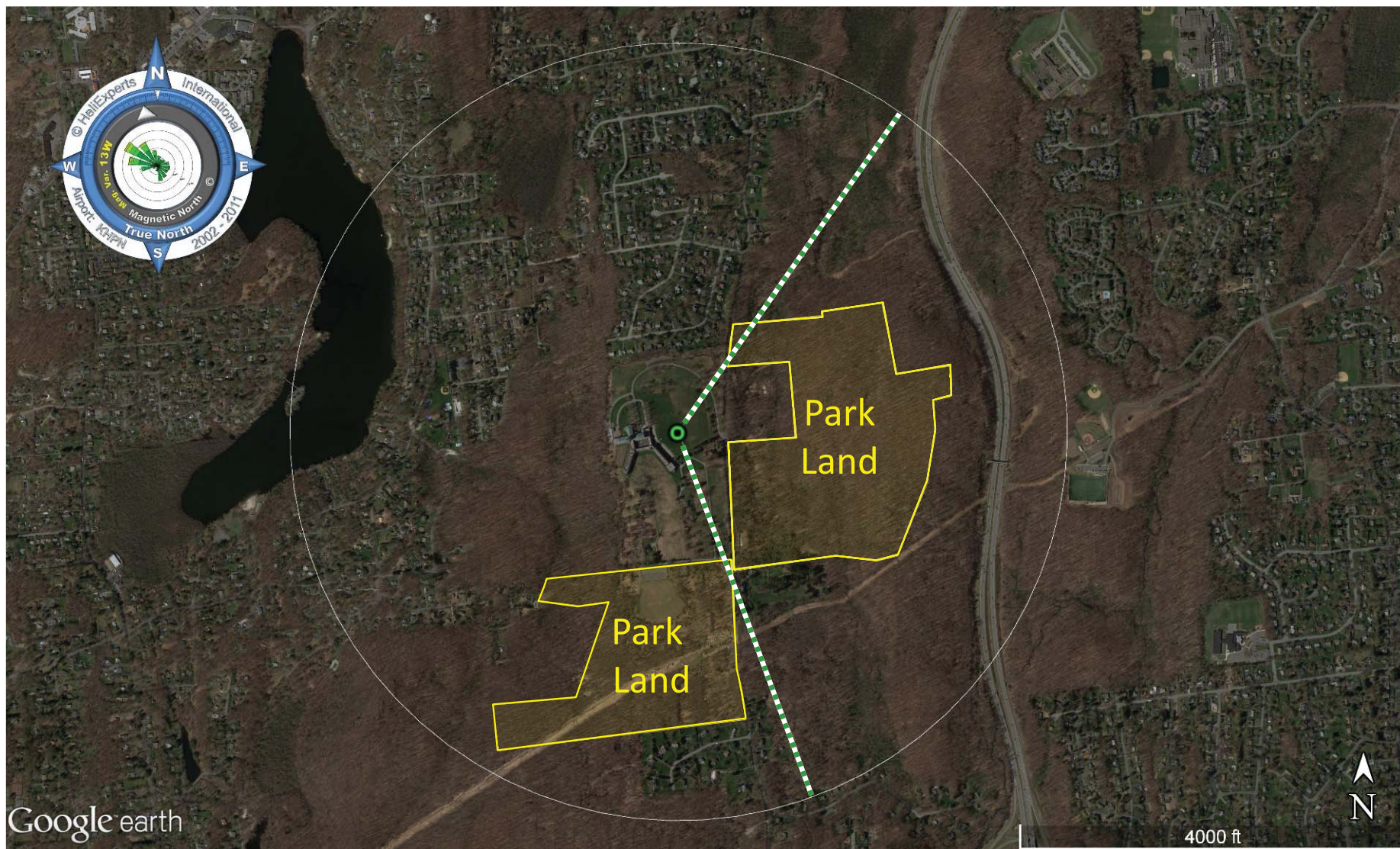


Supporting Airspace





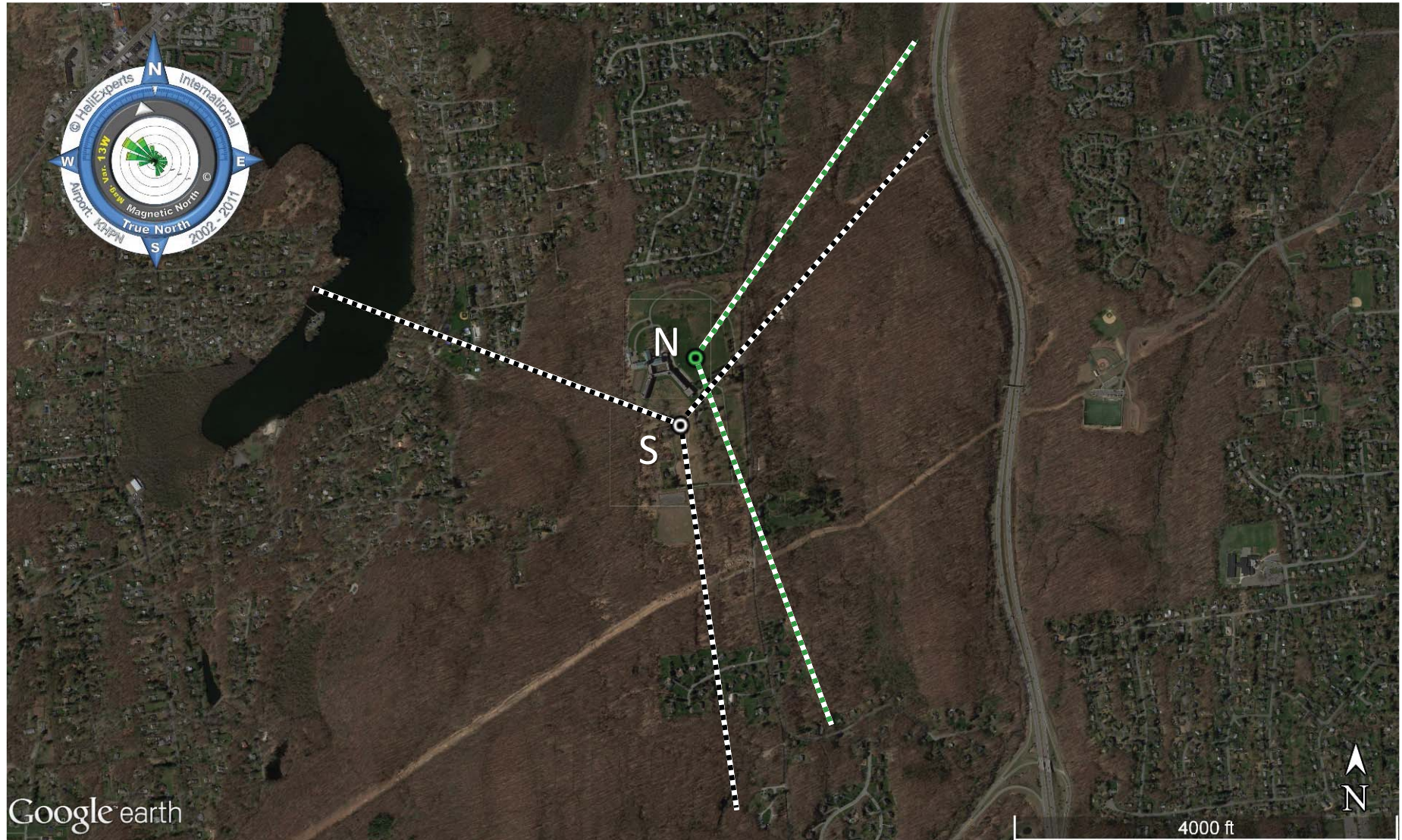
Proposed Approach/Departure Paths





Flight Path Comparison

North Site Vs. South Site





SAFETY



NTSB Accident Statistics

- **NTSB Retrospective Analysis**

Web Link: <http://www.nts.gov>

- **Between 1963 and 2013 (50 years)**
 - **11,618 helicopter accidents are on record (*NTSB Aviation Database)**
 - **185 were found to have occurred at a heliport (*USHST Study)**
 - e.g. landing at, operating at or taking off from



Statistics for Similar Heliports

- Number of the general public who have been hurt, injured or killed as a result of an accident occurring at a heliport designed and incorporated like the one proposed at Shrub Oak, New York.

ZERO

National Safety Council Review

“...we searched our holdings for documents detailing any injuries of persons from the general public by helicopters or in the vicinity of heliports.”

“The search located a number of documents addressing incidents resulting in injuries and fatalities to flight crew members and passengers.”

“However, we found no accounts of injuries to members of the general public, whether from direct contact with the helicopter itself or as the result of being distracted by the helicopter while driving.”



Raymond Syms, Managing Member
HeliExperts International LLC
28 Baruch Drive
Long Branch, NJ 07740

March 3, 2014

Dear Mr. Syms:

The mission of the National Safety Council is to save lives by preventing injuries and deaths at work, in homes and communities, and on the roads through leadership, research, education and advocacy. To support this mission, the Library of the National Safety Council gathers, catalogs and disseminates safety statistics, research and other information from a wide range of reputable sources.

As you requested, we searched our holdings for documents detailing any injuries of persons from the general public by helicopters or in the vicinity of heliports. The search located a number of documents addressing incidents resulting in injuries and fatalities to flight crew members and passengers. However, we found no accounts of injuries to members of the general public, whether from direct contact with the helicopter itself or as the result of being distracted by the helicopter while driving.

I hope this information is helpful. Please let me know if we can be of any further assistance.

Alaina Kolosh

Alaina Kolosh
Librarian, National Safety Council

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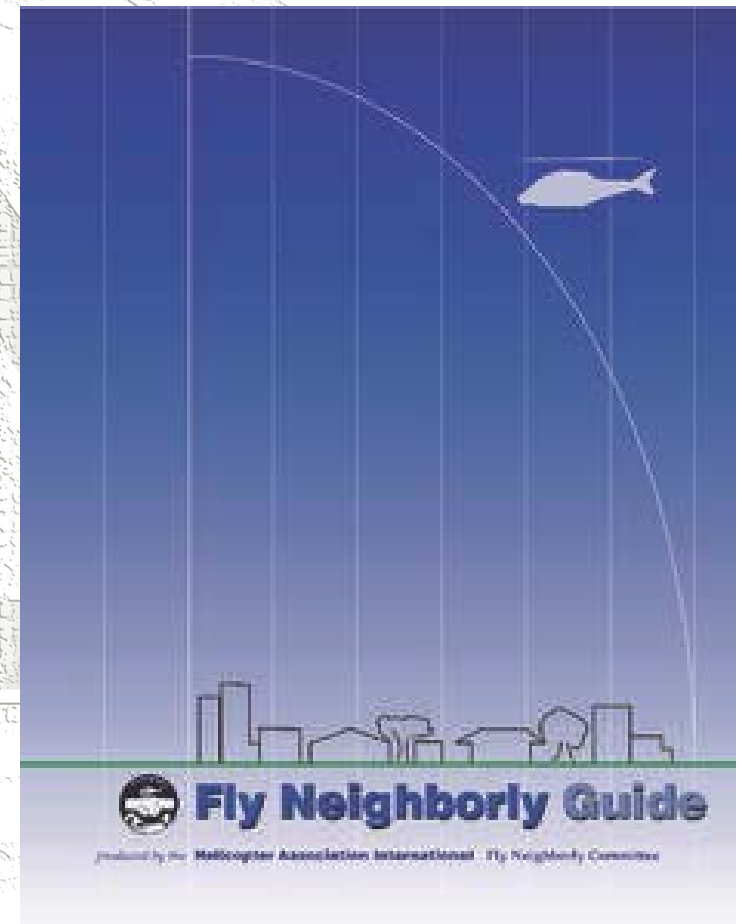


SOUND



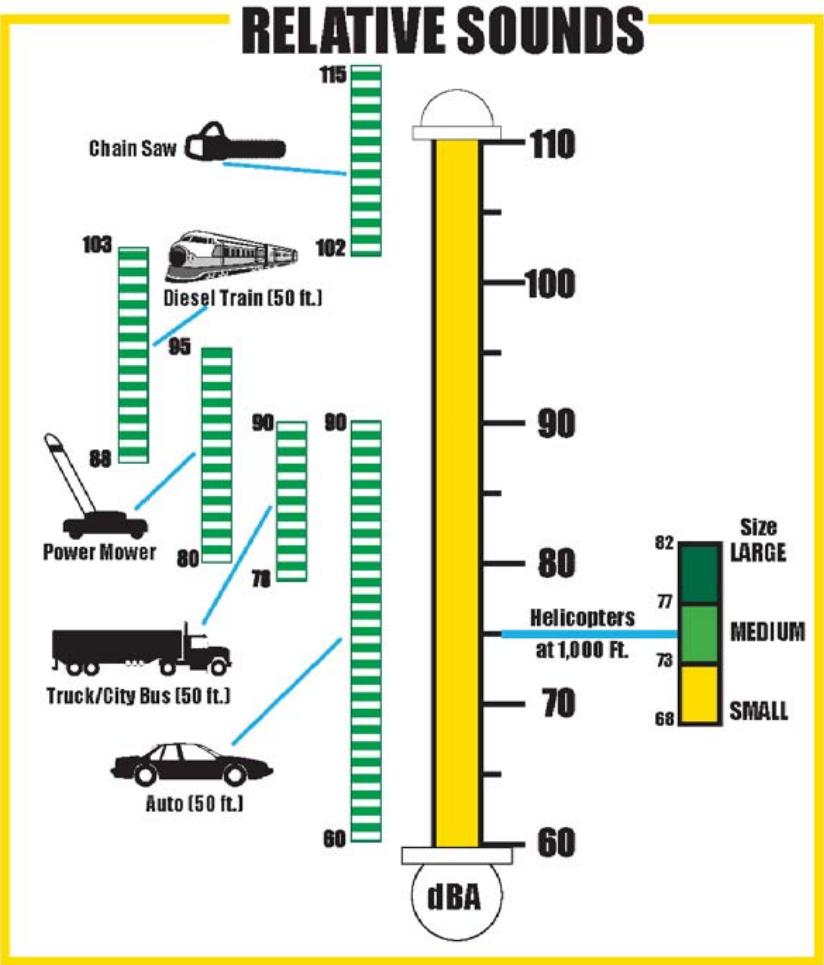
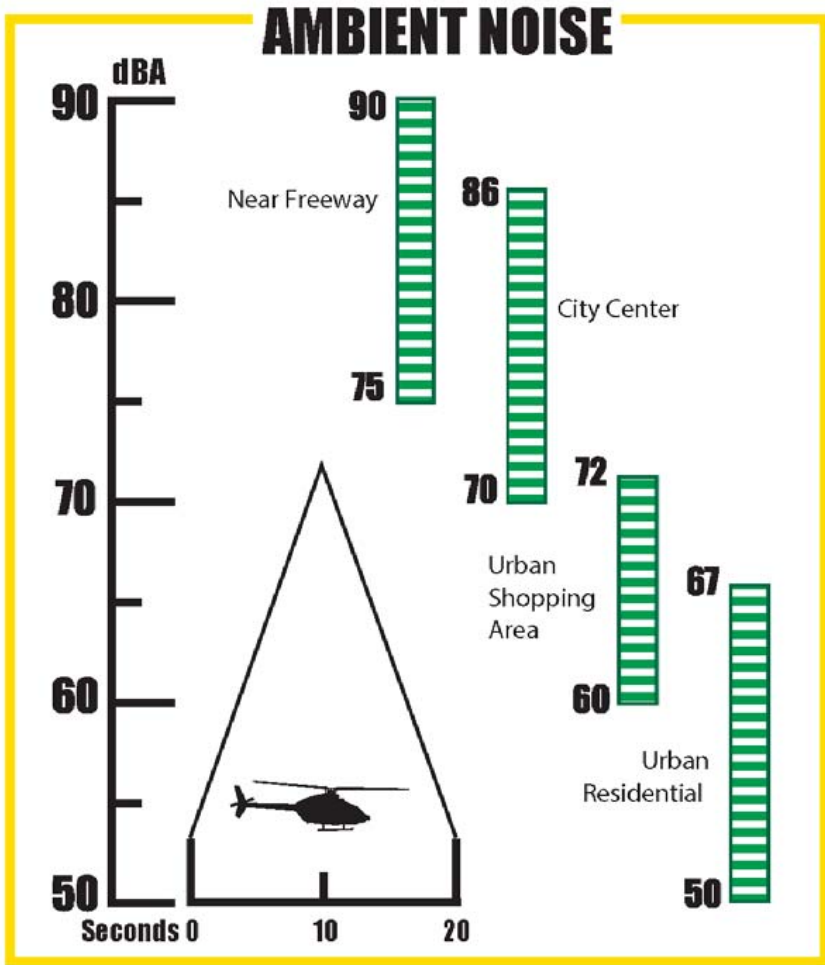
Noise Reduction

- **General Industry Standards**
 - HAI Fly Neighborly Guide



Comparison of Sounds

HELICOPTER SOUND COMPARISON



Bell Helicopter





Basic Rules of Sound

- Atmospheric conditions have a limited impact on sound traveling less than approximately 1,000 feet.
- For sound traveling less than 1,000 feet, sound levels will decrease by 6 dB (Decibels) every time the source to the listener's distance is doubled and increase by 6 dB every time the source to the listener's distance is halved.
- Rules of Thumb for Hearing Sound:
 - A 3 dB change in sound is generally inaudible except in a lab environment.
 - A 5 dB change in sound is generally the lowest level of change that is discernable by the human ear under normal conditions.



QUESTIONS