

Recommendation Document

Enhance Charting Symbology for *Known Abandoned Unlit Structures* on VFR Sectional Charts to Enhance Pilot Awareness.

Presented to: **ACM**

By: **Matthew Leeser- Aviation Safety Inspector**

Date: **October 27, 2022**



**Federal Aviation
Administration**



Objective

Provide awareness of Recommendation Document (RD) for initiative to enhance Charting Symbology for Known Abandoned Unlit Structures on VFR Sectional Charts.



Known Abandon Unlit Structures

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Obstacles Team AJV-A32



i Note: Energy Information Administration Documents

If you are looking for DOF file numbers to use in Energy Information Administration documents, please contact EIA Team Lead [Glenn McGrath](#).

Introduction

The Obstacles Team investigates and evaluates existing obstacles that may be hazardous to safe flight navigation. We receive obstacle data from a variety of sources both inside and outside the FAA. After determining proof of a completed structure by receiving supporting documentation and performing all necessary verification checks, the team assigns an accuracy code to the obstacle and enters it into the Obstacle Authoritative Source (OAS) as verified.

News

October 10, 2018 Addition of 56 Day DOF to ADDS.

January 30, 2018 New Daily Digital File CSV Format available.

June 19, 2018 DOF Data check elimination.

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Why

- **The NAS currently has numerous obstacles above 200 FT AGL that had previous lighting plans that are now abandoned and are no longer lit for conspicuity AGL.**
- **NOTE: A frequent reason for an obstacle to be unlit is simply that it is abandoned due to decommissioning and the proponent no longer ensures the obstacle remains lit.**



Advisory Circular 70/7460-1M Obstruction Marking and Lighting

Any temporary or permanent structure, including all appurtenances, that exceeds any obstruction standard contained in 14 CFR Part 77 or an overall height of 200 feet (60.96m) above ground level (AGL) should be marked and/or lighted. However, an FAA aeronautical study may reveal that the absence of marking and/or lighting will not impair aviation safety. Conversely, the object may present such an extraordinary hazard potential that higher standards may be recommended for increased conspicuity to ensure aviation safety. Recommendations for marking and/or lighting structures can vary, depending on terrain features, weather patterns, geographic location, number of structures, and overall design layout. The FAA may also recommend marking and/or lighting a structure that does not exceed 200 feet (60.96 m) AGL or 14 CFR Part 77 standards because of its particular location. The marking and lighting configurations are illustrated in Appendix A.



Chart Users Guide

Currently in the Chart Users Guide, a VFR sectional chart annotates obstacles above 200 FT AGL, but does not indicate if these obstacles are lit or unlit unless equipped with a high intensity strobe lighting system.

Obstacles less than 1000' AGL.



Sectional Charts, Terminal Area (TACs) and Caribbean Charts (CACs) typically show man-made obstacles extending more than 200' Above Ground Level (AGL), or more than 299' AGL in yellow city tint. Features considered to be hazardous obstacles to low-level flight are; smokestacks, tanks, factories, lookout towers, and antennas, etc.

Obstacles 1000' AGL or greater.



Man-made features used by FAA Air Traffic Control as checkpoints use a graphic symbol shown in black with the required elevation data in blue. The elevation of the top of the obstacle above Mean Sea Level (MSL) and the height of the structure (AGL) is also indicated (when known or can be reliably determined by a Specialist). The AGL height is in parentheses below the MSL elevation. In extremely congested areas, the FAA typically omits the AGL values to avoid confusion.



Group Obstacle Symbol

Whenever possible, the FAA depicts specific obstacles on charts. However, in high-density areas like city complexes, only the highest obstacle is represented on the chart using the group obstacle symbol to maximize legibility.

Obstacles under construction are indicated by placing the letters UC adjacent to the obstacle type.

5000
(1500) UC

If space is available, the AGL height of the obstruction is shown



Guy wires may extend outward from obstacles.

Obstacles with high-intensity strobe lighting systems may operate part-time or by proximity activation and are shown as follows:



Pilot Awareness

Pilots, particularly flying under VFR, are expecting to see obstacles, which are lit on sectional charts. An unlit obstruction greater than 200 FT AGL in the NAS may be a potential Hazard to VFR Navigation if pilots are not made properly aware.



Notice to Air Missions (NOTAMS)

- **Issued when there is a lighting outage**
- **Meant to be temporary**
- **There are a number of Permanent NOTAMS in the FAA system of unlit obstacles**

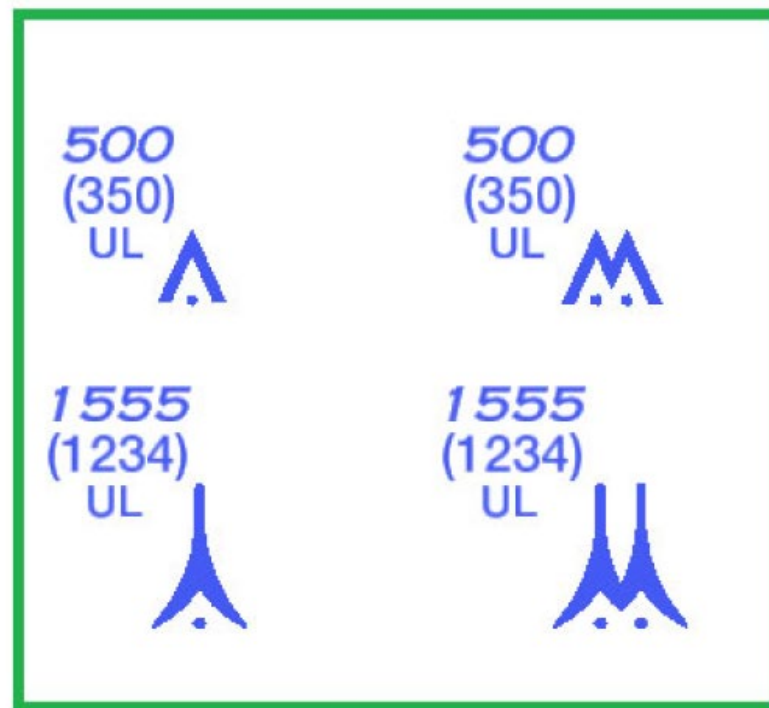


Proposal

- **This submission is to propose a distinction be made on VFR sectional charts to annotate which obstacles are Known Abandoned Unlit Structures.**
- **We recommend the following distinction made in the charting annotation to denote which structures are Known Abandoned Unlit Structures by adding a “UL” symbology next to/below the MSL and AGL height to indicate Known Abandoned Unlit Structures**



Known Abandoned Unlit Structures (UL)



UL Symbol using
original size of .06



Charting of structures under construction

Under Construction (UC) or reported and
position/elevation unverified



Questions



Dismantling

- The FAA does not have the authority to dismantle.
- FAA JO 7400.2

a. The FAA's authority to promote the safe and efficient use of the navigable airspace, whether concerning existing or proposed structures, is predominantly derived from Title 49 U.S.C. Section 44718 (Section 44718). It should be noted however, that Section 44718 does not provide specific authority for the FAA to regulate or control how land (real property) may be used in regard to structures that may penetrate navigable airspace.



FCC

- **The FAA is the “regulatory” authority in determining a tower’s marking and lighting requirements; however, the FAA has no “enforcement” authority.**
- **FCC power to levy fines and penalties for noncompliance.**
- **FCC is notified in process to identify towers that are permanently unlit**



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