



**PORT OF OAKLAND**  
**AVIATION PLANNING AND DEVELOPMENT**  
Oakland International Airport  
530 Water Street  
Oakland, CA 94607

**When Do I Need to File an FAA Form 7460-1?  
Objects Affecting Navigable Airspace (14CFR77)**

**June 2013**

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## **Background**

The Federal Aviation Administration (FAA) has jurisdiction over airspace in the U.S. It is the FAA's responsibility to define and provide airspace to allow aircraft to safely maneuver on take-off, departure, approach, landing, and enroute. As such, the FAA requires sponsors of new projects to notify them of proposed construction/alteration plans so that they can determine whether the proposed construction/alteration will be (1) an obstruction to air navigation, in which case the FAA may require appropriate obstruction marking and/or lighting, or (2) a hazard to air navigation (i.e., the project interferes with the safe and efficient use of airspace). FAA requirements and procedures are set forth in the Federal Aviation Regulations Part 77 (Objects Affecting Navigable Airspace), Subchapter C (Aircraft) of Title 14 (Aeronautics and Space) of the Code of Federal Regulations, or 14CFR77.

It is important to note that the FAA does not regulate land use or projects. As such, the FAA cannot legally prohibit or stop construction, even if it determines that a project is a hazard to air navigation. The FAA's recourse is to (1) negotiate with the project sponsor (in fact, most project sponsors are willing to negotiate, as it is difficult to obtain insurance on a project that has been determined to be a hazard to air navigation), or (2) if the sponsor proceeds with the project, adjust flight procedures to mitigate the hazard. In the case of airspace around an airport, the FAA may need to restrict approaches to certain runways during certain weather conditions (e.g., the FAA may need to raise the minimum descent altitude on instrument approach procedures to certain runways).

The FAA also enlists the help of airport owners/operators (e.g., the Port of Oakland) in protecting airspace for the safe and efficient use by aircraft. Because the Port receives federal grant funding for capital projects at Oakland International Airport, the Port is bound by FAA grant assurances. One of the grant assurances requires the Port to "take appropriate action to assure that such commercial airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards."

## **What kinds of proposed projects require notice to the FAA?**

Essentially, all proposed construction or alteration projects over a certain height (see below) require notice to the FAA, including, but not limited to, terrain modifications, buildings, construction equipment (e.g., construction cranes, graders, compacters, etc.) used to build a project, mobile objects (e.g., maritime cranes), tanks, light standards/luminaires, bridge structures, roadways (including the height of vehicles), railways (including the height of trains), antennas, etc.

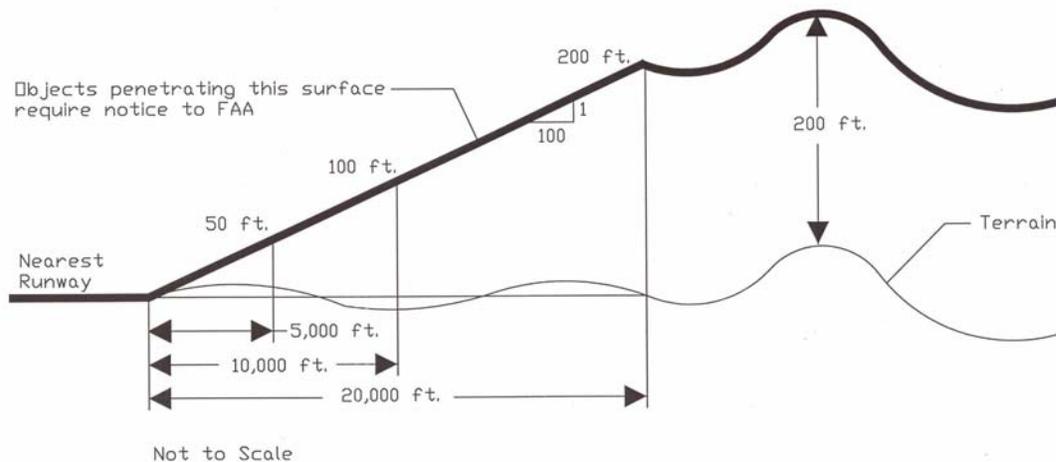
## How tall does my proposed project have to be before I notify the FAA?

The FAA requires that the project sponsor notify them of proposed construction or alterations using FAA Form 7460 (Notice of Proposed Construction or Alteration). In addition to general contact and project information, the most important data that must be provided on FAA Form 7460 are (1) the coordinates of the construction/alteration (in longitude and latitude, preferably down to hundredths of seconds) and (2) the proposed height of the construction/alteration above mean sea level (not above Port datum, the ground, or any other datum).

FAA Form 7460 must be filed for any construction/alteration at any of the following locations:

- (1) **On-Airport:** Any and all construction or alterations (essentially, all airside and landside projects not in an existing building, anywhere within the airport boundary).
- (2) **Off-Airport:** Any construction/alteration more than 200 ft. in height above ground level at the site, anywhere. (For example, a new 201 ft. tall structure (above the ground) at a site located 100 miles away from Oakland International Airport would likely not have any direct impact on the airspace around the Airport; however, it may have an impact on airspace around another airport/airports or enroute airspace; therefore, the FAA requires that FAA Form 7460 be filed for any construction/alteration more than 200 ft. in height above ground level at the site, anywhere.)
- (3) **Off-Airport:** Any construction/alteration penetrating an imaginary surface emanating from the edge of the nearest runway at a 100 to 1 slope out to 20,000 ft. from that runway.

In graphical form, any construction/alteration that penetrates the following requires notice to the FAA:



For on-Airport projects (i.e., at Oakland International Airport), FAA Form 7460 should be filed with the FAA's San Francisco Airports District Office:

Federal Aviation Administration  
San Francisco Airports District Office  
Attn.: Mr. Peter Hong  
1000 Marina Boulevard, Suite 220  
Brisbane, CA 94005-1853  
(650) 827-7624

For off-Airport projects, FAA Form 7460 should be filed on-line at <https://oeaaa.faa.gov>. Before e-filing, the project sponsor must become a registered user by completing a web-based form with contact information and selecting a user name and password. Project sponsors without internet access may file their FAA Form 7460 by mailing it to the following address:

Express Processing Center  
Federal Aviation Administration  
Southwest Regional Office  
Air Traffic Airspace Branch, ASW-520  
2601 Meacham Boulevard  
Fort Worth, TX 76137-0520

### **Are there any exceptions where I do not have to file FAA Form 7460?**

Yes, there is an exception where the FAA does not require FAA Form 7460 for a construction or alteration project, even when the above criteria are satisfied, but extreme caution is required. According to 14CFR77.15, FAA Form 7460 is not required for “any object that would be shielded by existing structures of a permanent and substantial character or by natural terrain or topographic features of equal or greater height, and would be located in the congested area of a city, town, or settlement where it is evident beyond all reasonable doubt that the structure so shielded will not adversely affect safety in air navigation.” By electing to use this exception and not file FAA Form 7460, the project sponsor (and/or possibly the permitting agency) is accepting responsibility for determining beyond all reasonable doubt that the proposed construction or alteration project is not an obstruction or hazard to air navigation. Because of this rather onerous requirement, it is usually better to plan ahead and submit FAA Form 7460, allowing the FAA to determine whether a proposed project might be an obstruction or hazard to air navigation. Stated another way, it is not recommended to use this exception under almost any circumstance.

### **How long does it take for the FAA to review FAA Form 7460?**

Project sponsors, including the Port of Oakland, should allow up to two months for the FAA to review FAA Form 7460, prepare an aeronautical study, and issue an FAA Notice of Determination with the results. FAA Form 7460 is relatively easy to complete as long as you know some basic details about the proposed construction/alteration (i.e., the location and height above mean sea level), which are usually available relatively early in the project development process. By submitting the form well in advance of the start of construction/alteration, the FAA can complete an aeronautical study, and the project sponsor can make adjustments (and re-file) if necessary. Please remember that although your project may be very important, the FAA receives hundreds of these forms each month from all over the western U.S. From their perspective, your project is no more or less important than those submitted on the other forms. Allow enough time (up to two months) for the FAA to review FAA Form 7460, prepare an aeronautical study, and issue an FAA Notice of Determination with the results.

### **What does the FAA check for?**

When FAA Form 7460 is submitted to the FAA, they undertake a comprehensive aeronautical study to check both visual and instrument flight paths for take-off, departure, approach, landing, and enroute. The FAA checks the requirements in 14CFR77 to determine if the proposed construction is a potential obstruction, in which case, they may require that the project be appropriately marked and lit. The FAA will also determine if the proposed construction/alteration is a potential hazard to air navigation using the requirements in FAA Order 8260.3B, U.S. Standard for Terminal Instrument Procedure (TERPS), and related orders. The FAA, in association with the Federal Communications Commission (FCC), also

checks for potential electronic interference with navigation aids, such as instrument landing systems, very high frequency omnidirectional ranges (VORs), radar antennas, etc. The results of the FAA's aeronautical study are returned to the project sponsor in an FAA Notice of Determination.

### **Tips for Completing FAA Form 7460**

Accuracy of latitude/longitude coordinates: We suggest that all coordinates submitted on FAA Form 7460 be presented and accurate to hundredths of seconds of latitude and longitude (e.g., N37°42'48.21" W122°12'54.13"). Because Part 77 and TERPS imaginary surfaces are quite complex, small changes in location can yield significant changes in the allowable height (i.e., where an object would not be considered an obstruction or hazard).

Elevations must be submitted with a reference datum of mean sea level: On FAA Form 7460, the elevation of the site must be submitted "above mean sea level" (or in FAA surveying terminology "above North American Vertical Datum of 1988" or "above NAVD 88"). Elevations should NOT be submitted in reference to the Port of Oakland datum or any other datum.

Complex structures: FAA Form 7460 requires project sponsors provide one elevation (above mean sea level) and one latitude/longitude coordinate to describe the proposed project. However, it is often difficult to describe more complicated projects, such as buildings, moveable gantry cranes, etc., with one elevation and coordinate. For these situations, it is recommended that the project sponsor file multiple forms to more fully define the project for the FAA to evaluate. For example, the project sponsor of a new building should file four separate forms with the four coordinates and four elevations for the four corners of the proposed building. For a movable crane, several forms should be filed with multiple coordinates and elevations defining the operating envelope of the crane. Each coordinate and associated elevation should be placed on a separate FAA Form 7460.

Getting help prior to submitting FAA Form 7460: The Aviation Planning and Development Department of the Port of Oakland is available to assist Port staff and project sponsors with understanding potential airspace issues and completing FAA Form 7460. We are pleased to review FAA Form 7460 prior to being submitted to FAA. Although we may be able to assist project sponsors in determining if a project might be an obstruction, the FAA is ultimately responsible for making this determination. For assistance, please contact:

#### Aviation Planning and Development

Mr. Hugh Johnson  
Senior Aviation Project Manager  
Port of Oakland  
530 Water Street, 6<sup>th</sup> Floor  
Oakland, CA 94607  
(510) 627-1449  
[hjohnson@portoakland.com](mailto:hjohnson@portoakland.com)

File FAA Form 7460 early: Please understand that it might take the FAA up to about 2 months to complete an aeronautical study for your project to determine if it is an obstruction or hazard. Remember, your emergency is not the FAA's emergency.

Guarantee the maximum height of your construction/alteration within stated tolerances: The FAA will assume that maximum elevation that you provide on FAA Form 7460 is subject to error (e.g., survey or construction error), and will add some amount to the elevation provided to account for any potential error.

It is therefore recommended that the project sponsor guarantee the height of the proposed construction/alteration (on FAA Form 7460) within certain tolerances (e.g., plus/minus 3 feet, plus/minus 10 feet, plus/minus 20 feet). In certain instances (e.g., depending on how close the construction/alteration is to being considered an obstruction or hazard), the FAA may require a post-construction/alteration survey to verify that the maximum height stated on FAA Form 7460 is indeed what was constructed. For further information on tolerances, please refer to FAA Order 8260.19, Flight Procedures and Airspace, Appendix 2 (Obstacle Accuracy, Standards, Codes, and Sources).

Port permit requirements relative to FAA Form 7460: Prior to issuance of a Port of Oakland building permit, the Port requires that the project sponsor provide (1) a copy of the FAA Form 7460 filed with the FAA, and (2) the results of the FAA aeronautical study (i.e., the FAA Notice of Determination). Please note that any FAA Form 7460 prepared and submitted by a Port tenant must be signed and stamped by a registered professional engineer or land surveyor (in the State of California).

For further information on Port permit requirements, please contact the Port's Permit Coordinator:

Mr. Joe Marsh  
Port of Oakland  
530 Water Street, 2<sup>nd</sup> Floor  
Oakland, CA 94607  
(510) 627-1480  
[jmarsh@portoakland.com](mailto:jmarsh@portoakland.com)

Before issuing local Notices to Airmen (NOTAMs) for temporary crane operations, please obtain a copy of the contractor's original FAA Form 7460 and FAA Notice of Determination.

Please remind your tenants of this important Port permit requirement.

How to obtain FAA Form 7460: The most recent version of FAA Form 7460 can be obtained on the FAA's web site at [www.faa.gov](http://www.faa.gov) (search for Form 7460).

## **Disclaimer**

The above information is believed to be accurate as of the date of this technical memorandum and is provided for educational purposes only. Please consult the latest version of 14CFR77 and instructions on FAA Form 7460. Also, please note that there may be other height restrictions for any particular site beyond those imposed by FAA (e.g., city general plans, local zoning ordinances, State requirements, county airport land use commission restrictions, etc.).