



U.S. Department
of Transportation
**Federal Aviation
Administration**

Memorandum

Subject: **ACTION:** Revised Policy for Application of
Volume 4, Paragraph 1.3, Federal Aviation
Administration (FAA) Order 8260.3B, United
States Standard for Terminal Instrument
Procedures (TERPS)
From: Manager, Flight Technologies and Procedures
Division, AFS-400
To: Program Director, Aviation System Standards,
AVN-1

Date: MAR 17 2005

Reply to
Attn. of:

Pursuant to Airport Obstructions Standards Committee (AOSC) Decision Document #2b, originally approved July 12, 2004, and revised September 13, 2004, the following guidance supersedes the departure obstacle clearance surface (OCS) evaluation criteria contained in paragraph 1.3 in volume 4 of terminal instrument procedures (TERPS). These criteria are effective immediately and will migrate to TERPS and associated criteria directives, and FAA Order 8260.46B, Departure Procedure (DP) Program. In case of conflict, these criteria will take precedence.

Criteria Synopsis: A departing aircraft is assumed to cross the departure end of runway (DER) at least 35 feet above DER elevation. This provides a minimum of 35 feet of required obstacle clearance (ROC), the separation between intended climb path and the OCS from the DER outward to absorb variations in static source to gear distance, variations in establishing the minimum 200 feet/nautical mile (NM) climb gradient, etc. Under the superseded criteria, obstructions that penetrate the OCS by 35 feet or less are removed from consideration through application of the option to raise the OCS origin height up to 35 feet above DER elevation. Therefore, pilots may not be aware there is less ROC than standard and do not adjust their takeoff accordingly.

This revised policy memorandum removes the option to raise the OCS origin elevation. Under the revised policy, the OCS always originates at the DER at DER elevation. If an obstacle penetrates the OCS by 35 feet or less, the pilot is presented with options for making takeoff adjustments to account for the infringement into the 35 feet of beginning ROC.

The "Revised Criteria" below replaces TERPS Volume 4, paragraph 1.3; paragraphs 1.3.1 and 1.3.2 remain unchanged. Evaluations of obstruction penetrations greater than 35 feet are unchanged.

Revised Criteria: (TERPS Volume 4, paragraph 1.3) Evaluate the 40:1 departure OCS originating at the DER threshold at DER elevation. Departure operations are unrestricted if the OCS is clear. If obstructions penetrate the OCS, reduce obstruction height or move/remove the obstruction to eliminate the penetration.

If the obstruction penetration cannot be eliminated and it penetrates the OCS by 35 feet or less, and the resulting climb gradient is required to a height greater than 200 feet (paragraph 1.3.1 applies to heights ≤ 200) above the DER elevation, publish the following options:

- 1. Case 1-Obstruction 3 statute mile (SM) or less from DER: A ceiling and visibility to allow "see and avoid" action to clear the obstruction,

or

Case 2-Obstruction more than 3 SM from DER: An option for visual climb over the airport (VCOA) or a textual/graphic departure route to avoid the obstacle.

and

- 2. Cases 1 and 2: Standard takeoff minimums and climb gradient required to clear the obstruction.

and

- 3. Cases 1 and 2: A value in hundreds of feet to reduce takeoff runway length to accommodate the penetrating obstacle based on a standard 200 feet/NM climb gradient.

Calculate the runway reduction value (n) using the following formula:

$$n = 30.38 \times (p + 35) \text{ (round to next higher 100' increment)}$$

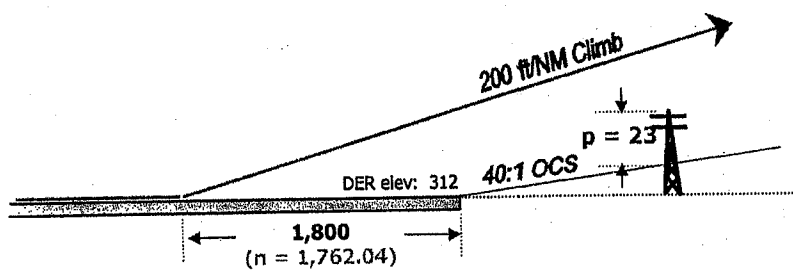
where p = amount of penetration

NOTE: 30.38 is 200 feet/NM gradient expressed as a slope value

Example Application. DER elevation is 312 feet and the 40:1 OCS is penetrated by 23 feet (p = 23). The penetrating obstruction cannot be eliminated or avoided by alternative routing.

$$n = 30.38 \times (23 + 35)$$

$$n = 1,762.04 \text{ rounds to } 1,800$$

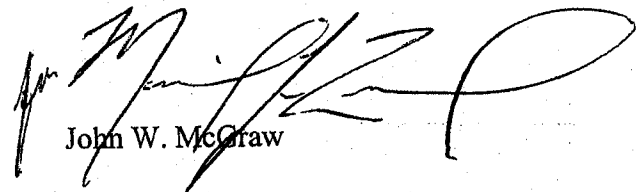


REQUIRED NOTE EXAMPLE

TAKEOFF MINIMUMS:

RWY 13: 400-2 or standard with minimum climb of 310 feet per NM to 900 feet. Alternatively, with standard takeoff minimums and a normal 200 feet/NM climb gradient, takeoff must occur no later than 1,800 feet prior to departure end of runway.

Please address questions regarding these criteria to Mr. Donald P. Pate, AFS-420, at (405) 954-4164.


John W. McGraw