

CHANGE

**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

8260.3B
CHG 22

National Policy

Effective Date:
04/01/2011

SUBJ: United States Standard for Terminal Instrument Procedures (TERPS)

1. Purpose. Order 8260.3B, United States Standard for Terminal Instrument Procedures (TERPS), contains criteria that must be used to formulate, review, approve, and publish procedures for instrument approach and departure of aircraft to and from civil and military airports. These criteria are for application at any location over which the Federal Aviation Administration (FAA) or Department of Defense (DoD) exercises jurisdiction.

2. Audience. The primary audience for this notice is Department of Defense (DoD), Federal Aviation Administration (FAA), and designated third party designers of instrument procedures. The secondary audience includes other Air Traffic Organization (ATO) Service Area offices and Flight Standards headquarters and regional office Divisions/Branches.

3. Explanation of Changes. Significant areas of new direction, guidance, policy, and criteria as follows:

a. Volume 1, Chapter 10, Radar Approach Procedures and Vectoring Charts. This chapter has been revised to incorporate guidance from the Flight Systems Laboratory (AFS-450) safety analysis report, Technical Memorandum on Risk Associated with Minimum Vectoring Altitude/Minimum Instrument Altitude (MVA/MIA) Rounding Methods, dated October 6, 2010 with December 15, 2010 addendum. This report concluded that under certain conditions there is no appreciable increase in risk when the final result of altitude calculations is rounded to the nearest 100-ft increment. This change rescinds and replaces all previous draft guidance related to the referenced safety analysis report and has intentionally limited applicability to ATC radar Vectoring Charts. This guidance does not support altitude selection for any other TERPS application

4. Distribution. We will distribute this Order to Washington headquarters to the Group and Team level in the Air Traffic Organization (Safety, En Route and Oceanic Services, Terminal Services, System Operations Services, Technical Operations Services, and Mission Support Services), Offices of Airport Safety and Standards, and Offices of Air Traffic Oversight; to the branch level in Offices of Airport Safety and Standards; Flight Standards Service; to the Aeronautical Navigation Products Office (AeroNav Products, AJV-3), and to the Regulatory Standards Division (AMA-200), at the Mike Monroney Aeronautical Center; to the branch level in the regional Flight Standards and Airport Divisions; to all Flight Standards District Offices (FSDOs); to the Team level in the Air Traffic Organization Service Areas (En-Route and

Oceanic, Terminal, and Technical Operations); to special mailing list ZVN-826; and Special Military and Public Addressees.

PAGE CONTROL CHART

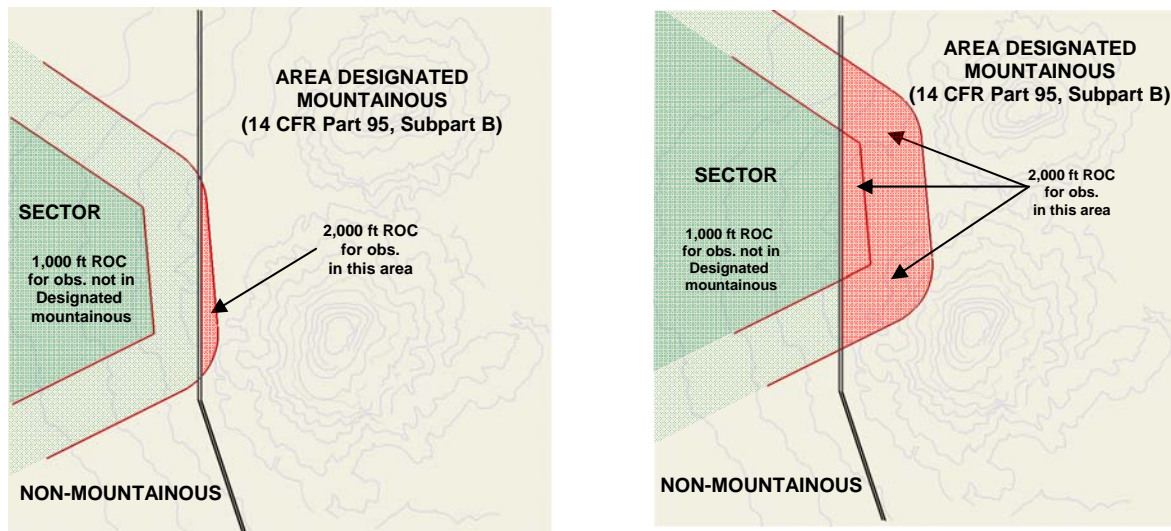
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Volume 1, Chapter 10 10-17 and 10-18	06/05/2009	Volume 1, Chapter 10-17 thru 10-20	04/01/2011



John M. Allen
Director, Flight Standards Service

- 10.2.5 Obstacle Clearance.** Required obstacle clearance depends on the radar adaptation and the relationship of the obstacle to those areas designated mountainous per 14 CFR Part 95 Subpart B.
- 10.2.5 a. Non-mountainous terrain.** Apply 1,000 ft ROC over obstacles in non-mountainous areas.
- 10.2.5 b. Mountainous terrain.** Apply 2,000 ft ROC over obstacles in designated mountainous areas. ROC may only be reduced when a reduction has been requested, approved, and documented in accordance with current Order 7210.3, *ATC Facility Operation and Administration* standards (to include associated Notices). Standard reduced ROC values are:
- 10.2.5 b. (1) Single sensor adaptation: Not less than 1,000 ft.
- 10.2.5 b. (2) Multi-sensor adaptation:
- 10.2.5 b. (2) a. Terrain. Not less than 1,500 ft (designated mountainous areas of the Eastern United States, Commonwealth of Puerto Rico, and Hawaii) or 1,700 ft (designated mountainous areas of the Western United States and Alaska).
- 10.2.5 b. (2) b. Man-made obstacles. Not less than 1,000 ft over the obstacle, but the MVA must also provide the minimum required 1,500/1,700 ROC over the terrain underlying the man-made structure.
- 10.2.5 c. When a sector/buffer/isolation area overlies** both non-mountainous and mountainous terrain, consider revising sector boundaries. Otherwise, apply the appropriate ROC based on the location of the obstacle. See figure 10-9.
- 10.2.6 Adverse Assumption Obstacle (AAO) considerations.** (USAF N/A). Apply AAO to terrain except those areas around primary/satellite airports exempted by Order 8260.19 and/or when applying 2,000 unreduced ROC.

Figure 10-9. Sector/Buffer Overlaying Both Mountainous and Non-Mountainous Areas



10.2.7 **Airspace.** Establish sector altitudes (to include isolation areas) to provide at least a 300-ft buffer above the floor of controlled airspace. When operationally required, altitudes may be reduced not lower than the floor of controlled airspace.

When consideration of floor of controlled airspace results in an exceptionally high altitude; e.g., in areas where the floor of controlled airspace is 14,500 MSL and operationally required to vector aircraft in underlying Class G (uncontrolled) airspace, two sector altitudes may be established. The first must be based on obstacle clearance and the floor of controlled airspace. A second lower altitude that provides obstacle clearance only may be established. The obstacle clearance only altitude must be uniquely identified; e.g., by an asterisk (*). Do not consider sector buffer areas for controlled airspace evaluations.

10.2.8 **Altitude Selection.** Specify sector altitudes (to include isolation areas) in the 100-ft increment that provides ROC over all obstacle(s) in the OEA.

10.2.8 **a. (USAF N/A).** Sector altitudes may be rounded to the nearest 100-ft increment over AAO obstacles when operationally required.

10.2.8 **b. (USAF and USN N/A).** For non-AAO obstacles, sector altitudes may be rounded to the nearest 100-ft where the entire sector (excluding buffer) or isolation area is;

10.2.8 **b. (1)** In the contiguous United States (not authorized in Alaska, Hawaii, or any other territory or possession) and documented to be within 65 nautical miles (NM) of an altimeter setting source which is issued by Air Traffic Control in accordance with Order JO 7110.65 chapter 2, section 7 and either;

- 10.2.8 b. (1) a. Outside of any area designated mountainous by 14 CFR Part 95, or;
- 10.2.8 b. (1) b. In an area designated mountainous where required obstacle clearance (ROC) is not reduced, or;
- 10.2.8 b. (1) c. In an area designated mountainous where for this purpose the terrain is considered not to be precipitous (i.e. no significant elevation changes greater than 1,500 feet) and at least 951 ft ROC is provided or;
- 10.2.8 b. (1) d. In an area designated mountainous where rounding provides ROC in accordance with table 10-1. Interpolation of this table permitted.

**Table 10-1. Minimum Obstacle Clearance (ft)
Based on ACT/distance from Altimeter Source.**

ACT (°C/°F)	Distance ≤ 65 NM
-40/-40	1851
-30/-22	1651
-20/-4	1451
-10/14	1251
0/32	1051
2/36	1051*
7/45	951

* 951 within 35 NM

Example: The ACT is determined to be -30°C. The controlling obstacle is a 2,549 MSL tower, and ROC is reduced to 1,800 ft. The minimum sector altitude may be rounded to 4,300 since it provides at least 1,651 ft clearance.

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