

Department of Transportation
 FEDERAL AVIATION ADMINISTRATION
IFR PILOT EXAM-O-GRAM® NO. 29
 WHEN AN ALTERNATE AIRPORT IS NOT REQUIRED

The instrument pilot must understand the rules pertaining to alternate airports set forth in FAR 91. Responses to questions in recent Instrument Written Tests concerning alternate airports indicate that many applicants are confused in this area. This Exam-O-Gram will attempt to clarify some of the points which have been giving applicants difficulty.

FAR 91.83 states that an alternate need not be listed under these conditions: the airport of first intended landing has a standard instrument approach procedure and the weather conditions for that airport are forecast to be, from two hours before to two hours after the estimated time of arrival, a ceiling of at least 1,000 feet above the lowest MEA, MOCA, or altitude prescribed for the initial approach segment of the instrument approach procedure for the airport and visibility at least three miles, or two miles more than the lowest authorized landing minimum visibility, whichever is greater.

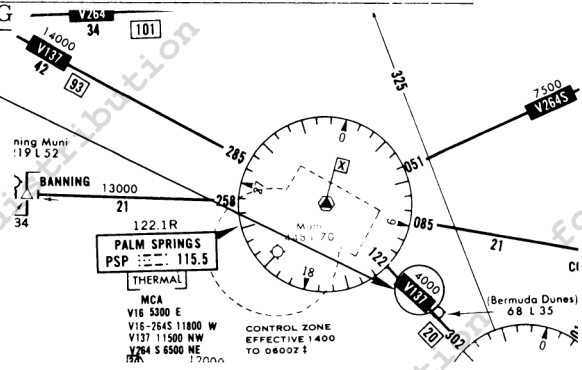
APPLYING FAR 91.83, SHOULD YOU USE A MEA, A MOCA, OR THE INITIAL APPROACH ALTITUDE TO DETERMINE THE MINIMUM CEILING AT PALM SPRINGS?

The MEA of 4,000 feet on V-137 is used. In this case, the MEA is lower than the Initial Approach Altitude (4,200 feet).

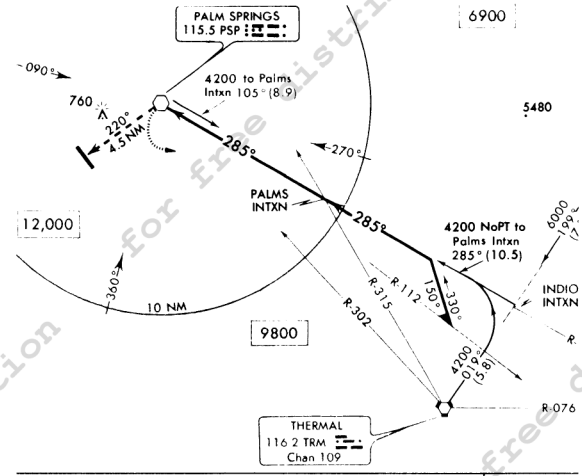
HOW CAN THE INITIAL APPROACH SEGMENT ALTITUDE BE DETERMINED?

In the initial approach, the aircraft has departed the enroute phase of flight and is maneuvering to enter the intermediate or final segment of the instrument approach. The procedure turn altitude, shown in the approach charts' profile views, is always an initial approach segment altitude. If no procedure turn is shown, inspect the charts' plan views. Transition, initial, and intermediate segments with their associated minimum altitudes are all found in the plan views. Transition and initial segment altitudes may be considered in applying FAR 91.83. Segments with the term "NoPT" cannot be used as an initial approach altitude since these may be intermediate segments.

IF THE FORECAST CEILING IS 4,800 FEET AND THE VISIBILITY IS 4 MILES FOR YOUR ETA AT PALM SPRINGS, IS AN ALTERNATE REQUIRED FOR CATEGORY "A" AIRCRAFT? Yes. Although the ceiling meets the requirements of FAR 91.83, the visibility does not. To determine the minimum ceiling required, proceed as follows: (1) Inspect the appropriate enroute and instrument approach charts for the destination airport, noting the altitudes given for the MEA, MOCA, and Initial Approach; (2) Select the lowest of these altitudes and add 1,000 feet; (3) Subtract the elevation of the airport and round-off to the next highest 100 foot figure. In the case of Palm Springs, this is 4,000 feet (lowest MEA), plus 1,000 feet, minus 448 feet (field elevation), or 4,552 feet. Since the forecast ceiling is given to the nearest 100 feet above the surface, a ceiling of at least 4,600 feet, forecast for two hours before to two hours after your ETA, is required. A ceiling of 4,500 feet could not be used since it would not be 1,000 feet above the MEA. The forecast visibility must be at least 5 miles. This is two miles more than the lowest visibility (3 miles) shown in the minimums section of the approach chart.



EXCERPT FROM ENROUTE CHART



		PALMS INTXN				ELEV 448
MISSED APPROACH		Remain within 10 NM				518 A
Left climbing turn to 5000 heading 090° intercept and climb via TRM R-302 to TRM VORTAC.						
	VOR	4200	4200	4200	4200	518 A
		220°	285°	105°		
CATEGORY		A	B	C	D	
*CIRCLING		2220-3 (1800-3)	2220-3¼ (1800-3¼)	2220-3½ (1800-3½)	2220-3¾ (1800-3¾)	
Use TRM altimeter setting when control zone not effective, except operators with approved weather reporting service.						
*Circling MDA raised 105 feet when control zone not effective, except operators with approved weather reporting service.						
▽△						

EXCERPT FROM APPROACH CHART

BELOW IS THE TERMINAL FORECAST VALID FROM TWO HOURS BEFORE UNTIL TWO HOURS AFTER YOUR ETA (21Z) AT PALM SPRINGS.

FT1
17Z FRI-05Z SAT
PSP 15005005RW-F. 20Z 20005005RW-. 22Z 04005RW-

IS AN ALTERNATE AIRPORT REQUIRED ON YOUR FLIGHT PLAN? Yes. The visibility meets the 5 mile requirement for Palm Springs but the ceiling does not. At your ETA (21Z), the ceiling forecast is adequate (5,000 feet), but one hour after your ETA the ceiling forecast is 4,000 feet. This is lower than the required minimum (4,600 feet); therefore, an alternate is required.

References:

1. Federal Aviation Regulation 91.83
2. Civil Use of U.S. Government Instrument Procedure Charts, AC 90-1A.

* Exam-O-Grams are non-directive in nature and are issued solely as an information service to individuals interested in Airman Written Examinations.

FAA Aeronautical Center
Flight Standards Technical Division
Operations Branch
P. O. Box 25082
Oklahoma City, Oklahoma 73125 (3/70)
Exam-O-Grams available free of charge -
single copy only per request. Permission
is hereby granted to reproduce this
material.