

that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying in the Commission's Public Reference Room. Copies of such filing will also be available for inspection and copying at the principal office of the NYSE. All submissions should refer to File No. SR-NYSE-00-28 and should be submitted by July 28, 2000.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.⁷

Margaret H. McFarland,

Deputy Secretary.

[FR Doc. 00-17145 Filed 7-6-00; 8:45 am]

BILLING CODE 8010-01-M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Advisory Circular 25-23, Airworthiness Criteria for the Installation Approval of a Terrain Awareness and Warning System (TAWS) for Part 25 Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of issuance of advisory circular.

SUMMARY: This notice announces the issuance of Advisory Circular (AC) 25-23, Airworthiness Criteria for the Installation Approval of a Terrain Awareness and Warning System (TAWS) for Part 25 Airplanes. The AC provides guidance for designing an acceptable installation for a TAWS that is compliant with Technical Standard Order (TSO) C151. The guidance provided is specific to installations of these systems on transport category airplanes.

DATES: Advisory Circular 25-23 was issued on May 22, 2000, by the Acting Manager of the Transport Airplane Directorate, Aircraft Certification Service, Federal Aviation Administration.

HOW TO OBTAIN COPIES: A paper copy of AC 25-23 may be obtained by writing to U.S. Department of Transportation, Subsequent Distribution Center, SVC-121.23, Ardmore East Business Center, 3341 Q 75th Avenue, Landover, Maryland 20785. The AC also will be available on the Internet at <http://www.faa.gov/avr/air/>

[airhome.htm](#), at the link titled "Advisory Circulars" under the "Available Information" drop-down menu.

FOR FURTHER INFORMATION CONTACT: For technical issues, contact J. Kirk Baker, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, Systems & Equipment Branch, ANM-130L, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5345; fax (562) 627-5210.

For other information contact: Jill DeMarco, FAA, Transport Airplane Directorate, Program Management Branch, ANM-114, 1601 Lind Avenue SW., Renton, Washington 98055-4056; telephone (425) 227-1313; fax (425) 227-1320.

SUPPLEMENTARY INFORMATION:

Discussion of Comments

On September 23, 1999, the FAA issued a notice of the availability of proposed Advisory Circular (AC) 25.XX, "Airworthiness Criteria for the Installation Approval of a Terrain Awareness and Warning System (TAWS) Approved under Technical Standard Order (TSO) C151." That notice was published in the **Federal Register** on September 30, 1999 (64 FR 52820) and requested public comment on the proposed AC document. Five commenters submitted comments to the proposed AC. A discussion and disposition of each comment follows.

Format of AC

Some commenters request that the format of the proposed AC be improved. One commenter requests that a table of contents or index be included.

The FAA concurs and has added a table of contents to the final document.

Guidance for Part 23 Airplanes

One commenter requests that the proposed AC be revised to include guidance on TAWS installations for airplanes certificated under 14 CFR part 23 (small airplanes).

The FAA does not concur with the commenter's request. The FAA currently is developing a separate AC that provides guidance specific to TAWS installations for part 23 airplanes. By issuing with two separate AC's, the FAA anticipates that there will be less confusion for applicants.

Definition of Class B TAWS Equipment

One commenter suggests that the definition of Class B TAWS equipment be revised to include a note indicating that Class B TAWS requires a GPS input but does not require a radio altitude

input. The commenter states that the inclusion of such a note will help to clarify the composition of Class B TAWS equipment.

The FAA agrees that clarification is appropriate. Paragraph 11.b.(2), "Radio Altimeter," of the final AC has been revised to specify that Class B equipment does not require a radio altitude input.

Regulatory References

One commenter requests that the reference to the requirements of § 91.223 in paragraph 5.a. be revised to add the words "or certified" in the phrase:

"§ 91.223 states that no person may operate a turbine-powered U.S.-registered airplane configured or certified with 6 or more passenger seats * * *."

The FAA disagrees with the addition of these words. The text, as presented in the AC, is quoted directly from § 91.223 of the regulations. An AC is not the vehicle for making changes to the text of current regulations.

System Criticality/Probability

One commenter requests clarification of the descriptions of failure probability that appear in paragraph 5.b., "System Criticality," of the proposed AC. The commenter suggests that the proposed text:

"* * * the applicant must demonstrate that the TAWS possesses a level of reliability commensurate with systems that have a failure probability of 10^{-4} or less per flight hour * * *"

be changed to:

"* * * have a failure probability due to undetected failures (latent failures) of 10^{-4} or less per flight hour."

The commenter also suggests similar changes in the probability descriptions that appear in paragraphs 7.c.(2) and 7.g.(1)(b).

On this same issue, another commenter points out that the reliability value of 10^{-3} , as stated in paragraph 7.c. of the proposed AC, is not consistent with the value of 10^{-4} , specified in paragraph 5.b.

The FAA concurs with these commenters' requests and has revised the final AC accordingly. [Although paragraph 5.b. (as it appeared in the proposed AC) has been eliminated in the final AC, the item noted by the commenter has been clarified and corrected in the final AC in paragraph 9., "System Safety Assessment."]

Project Specific Certification Plan (PSCP)

One commenter suggests that paragraph 7.b. of the proposed AC, concerning the Project Specific

⁷ 17 CFR 200.30-3(a)(12).

Certification Plan (PSCP), be revised to include "switches and annunciators" in the list of items that should be included in a comprehensive system description. Additionally, this commenter requests that this paragraph provide guidance on acceptable or desirable locations for the installation of TAWS controls, control panels, annunciators, displays, etc.

The FAA concurs and has revised paragraph 8.b.(1), "System Description," of the final AC accordingly.

Another commenter suggests revising paragraph 7.b. of the proposed AC by deleting the inclusion of information regarding software aspects of any certification and any certification-specific integrated circuits (ASIC). The commenter states that this issue is TSO-related and should be addressed as part of the TSO approval of the Line Replaceable Unit (LRU), not as part of the approval of the TAWS.

The FAA does not agree that the material should be deleted. Instead, the FAA has revised the final AC to clarify this issue. This information appears in paragraph 8.b.(3) of the final AC.

System Safety Assessment

One commenter requests that the text of the lead-in phrase in paragraph 7.c.(2) of the proposed AC, which concerns the System Safety Assessment, be revised to include the phrase highlighted below:

* * * Given that TSO-C151 requires 10^{-5} for unannunciated failure, HMI, and false alerts at the box level *as a result of a TAWS computer failure*, the box as installed must meet the following criteria * * *

The FAA does not concur. Restricting the annunciations to only those indicated as a result of a TAWS computer failure would be too limiting. The FAA's intent is for this criterion to be more comprehensive. The language as used the proposed AC is more open to the inclusion of other types of avionics architectures, such as modular types, that are being proposed today. This language has been retained in the final AC.

Another commenter suggests that paragraph 7.c.(2)(a) of the proposed AC be revised in the text concerning probability of failure of the availability of the TAWS function. The text in the proposed AC states:

"The probability of failure of the installed system to perform its intended function from a reliability/availability perspective * * * shall be less than or equal to 10^{-3} per flight hour."

However, this commenter requests that the reference to "availability" be deleted. The commenter considers this request reasonable because:

- The FAA in the past has never had any availability requirements for a GPWS system.
- Availability is more dependent on the inputs to the TAWS system than on the TAWS computer itself.
- If an aircraft's only source of air data to the TAWS system is not designed to meet this requirement, then the TAWS system will not meet this requirement.

This commenter further states that the FAA Master Minimum Equipment List (MMEL) policy allows the TAWS function to be inoperative for up to 10 flight days. The commenter questions why the AC guidance would require availability numbers when the MMEL does not require the same.

The FAA does not concur with this commenter's requests. Controlled flight into terrain (CFIT) continues to be a major contributor to commercial jet airplane hull losses and, therefore, constitutes a failure value of at least 10^{-3} for all of the functions of a TAWS system. Furthermore, this value is consistent with the expected value of the inputs to TAWS. If the sensor input does not meet this failure level, it should be replaced with one that does.

The FAA's Flight Standards Service determines the MMEL requirements established for GPWS. The determination is made separate from the determination of hazard level. The process used to establish relief under the MMEL does not consider the use of probabilities. Instead, it is based on the FAA's evaluation of the risks associated with the system's effect on the aircraft and, along with guidance from air traffic control, the pilot's ability to operate the aircraft.

Self-Test Functions

One commenter points out that the proposed AC does not consider self-test functions, and suggests that criteria for activation or inhibition of self-test functions in flight should be provided.

[For example, if a self-test function results in a failure to alert, then this should be inhibited during certain (or all) phases of flight.] The commenter suggests that the System Safety Assessment, as described in the AC, should consider whether credit may be taken for self-test functions in meeting the reliability rates provided.

The FAA concurs that self-test functions should be considered and has included reference to them in the final AC in paragraph 19., "Ground Test Considerations."

Software

One commenter suggests that paragraph 7.d. of the proposed AC, which addresses the verification of software requirements, is unnecessary. The commenter states that software requirements are already addressed in TSO-C151a, and requests that either the paragraph be deleted or revised to state that it applies to systems that do not meet TSO-C151a.

The FAA does not agree that the information should be deleted. However, the FAA has revised this information in the final AC to clarify the issue raised. Paragraph 10., "Software," of the final AC now states:

"The applicant should provide evidence that the TAWS software meets the requirements of TSO-C151a and that it meets the appropriate software levels for any added feature(s)."

Position Source

One commenter points out that vertical accuracy is also a consideration for the correct function of TAWS for various phases of flight. However, paragraph 7.e. of the proposed AC, which discusses position source, does not reference any criteria for required vertical accuracy for the correct function of TAWS. The commenter suggests that the AC should include such criteria.

The FAA concurs and has expanded the final AC to include the requested criteria for both vertical and horizontal position sources. This information is located in the final AC in paragraph 11., "Position Source."

Terrain Database

One commenter requests revision to the guidance in paragraph 7.f.(2) of the proposed AC, which addresses verification of the TAWS terrain database. The commenter states that the requirement to "include terrain and airport information of the area of intended operation" may result in additional and undesired STC limitations. For example, if an applicant certifies TAWS equipment on an airplane in the United States (and uses a "U.S. database") there is nothing to keep the operator from moving the airplane to another region of the world and the STC would still be valid. The commenter states that limiting an STC to a region of operation would be non-productive and undesirable. Therefore, the commenter suggests that the AC be revised to require that applicants verify that an obvious TAWS failure condition will be indicated to the pilot whenever an airplane is operated outside of the region that is covered by the terrain/airport database installed on the airplane.

The FAA concurs that clarification is necessary for this item. The final AC now directs applicants to the Instructions for Continued Airworthiness, which should identify the procedures for determining the status of the terrain database. The AC states that operators should use this information to determine if the current terrain database is appropriate for the area of intended operation. This information can be found in the final AC in paragraph 12.b., "Valid Regional Data."

Terrain Display

One commenter notes that paragraph 7.g.(1)(a) of the proposed AC states that any device approved under TSO-C151 must be capable of providing terrain, obstacle, and alerting data to display hardware that is already onboard the airplane. The commenter states that a TAWS designed to use its own proprietary display must also support existing display hardware in the aircraft. The commenter requests that this requirement not exclude dedicated displays.

The FAA concurs and has revised paragraph 13.a.(1), "Terrain Display," of the final AC accordingly.

Another commenter suggests that paragraph 7.g. of the proposed AC, which concerns display presentation criteria, be revised to address situations where the means of display is used for more than only the presentation of the terrain display. The commenter suggests

the addition of a new paragraph that states:

"The applicant should consider the selection of terrain display where the display is utilized for multiple functions. In these cases, a means should be provided to select and deselect the display of terrain."

The FAA concurs with this suggestion and has revised paragraph 13.a.(4) of the final AC accordingly.

One commenter requests a revision to paragraph 7.g.(2) of the proposed AC, which addresses the terrain display presentation. The commenter points out that paragraph 7.g.(2)(g) states that the terrain display should be "viewable in direct sunlight, and at least one display must be viewable by each pilot." The commenter requests that consideration be given for aircraft with only one display. Single displays are common in older aircraft, where weather radar PPI displays may be installed on only one side of the flightdeck. The commenter suggests that the wording be changed to "* * * at least one display must be viewable by one of the pilots."

The FAA concurs and has revised paragraph 13.b.(7), "Terrain Display Presentation," of the final AC accordingly.

One commenter suggests a revision to paragraph 7.g.(2)(h) of the AC, which concerns the display of a "failed and/or inoperative TAWS" indication to the flight crew. The commenter suggests that an "inhibited TAWS" should be indicated as well, and suggests that the text of the AC be changed to include this.

The FAA concurs and has revised paragraph 13.b.(8) of the final AC accordingly.

One commenter points out an inconsistency between guidance provided in paragraph 7.g.(2)(n) of the AC, concerning the selected colors of the terrain display, and the requirements of § 25.1322 ("Warning, caution, and advisory lights"). The commenter notes that § 25.1322 calls for indication lights to be red (for warnings) or amber (for cautions); however, paragraph 7.g.(2) of the AC appears to contradict this where it states, "TAWS equipment shall be designed to interface with a terrain display, either color or monochromatic." The commenter is concerned that the use of a monochromatic display would violate the regulations and, therefore, suggests that acceptability of monochromatic displays must be deleted.

The FAA concurs that clarification of this item is needed. The final AC has been revised to specify that the terrain display feature applies only to color displays. This information is found in paragraph 13.b.(14) of the final AC.

Pop-Up Mode Switching Functionality

One commenter requests that paragraph 7.g.(3)(a) of the proposed AC, which concerns pop-up mode switching functionality, be revised to address display systems that cannot accommodate annunciating the terrain display mode. The commenter suggests that this paragraph be revised to state:

"The terrain display mode should be annunciated on the display or, if not feasible on the display, with a mode annunciation light near the terrain display, or equivalent."

The FAA concurs with the commenter's suggestion and has revised paragraph 13.c.(1)(d), "Pop-Up Mode-Switching Functionality," of the final AC accordingly.

Another commenter requests that the AC provide guidance on acceptable default display ranges for this mode of operation.

The FAA concurs and has revised the final AC to include a new paragraph 13.c.(1)(f) to provide this guidance.

Another commenter requests that the criteria for automatic pop-up function be revised to state that the pop-up feature should automatically display TAWS-related information when a TAWS caution or warning alert occurs. The proposed AC, however, only mentions the TAWS caution alert.

The FAA disagrees. The required pilot response to a TAWS warning is an immediate climb to clear the terrain/obstacle. Pop-up of the display with a "warning" may distract the pilot. With a "caution" alert, there will be enough time for the pilot to evaluate the information on the display and determine if either a level-off is adequate or the initiation of a climb is necessary.

Alerts Within the Flightcrew's Primary Field of View

One commenter requests that paragraph 7.h.(2) of the proposed AC, which calls for the alerting system to be "within the flightcrew's primary field of view," be revised to include a definition of the "flightcrew's primary field of view." The commenter states that, on many retrofit installations, there is simply not any room available to install lights in today's generally accepted primary field of view. The commenter also requests that, if an applicant is retrofitting an airplane that has previously-installed alert lights, then the applicant should be allowed to use those previously-installed light locations.

The FAA agrees that clarification is appropriate. Paragraph 14, "Alerts," of the final AC has been modified to include the previously-installed light

locations, and to reference the human factors considerations in the applicant's certification plan as a method of determining the flight crew's primary field of view.

Alert Prioritization

One commenter points out what seems to be a conflict in the guidance concerning the number of aural alerts permitted at one time. The commenter notes that paragraph 7.i.(1)(a) of the proposed AC states that, on aircraft equipped with a TAWS, Predictive Windshear System (PWS), and a Traffic Collision Avoidance System (TCAS), "only one aural alert is given at any one time." However, the NOTE at the bottom of Table 2 states, "Voice callouts are allowed simultaneously with TCAS." The commenter requests clarification of this issue.

The FAA concurs that clarification is necessary. The FAA's intent is to prioritize callouts so that only one is given at any time. Therefore, Table 2 ("Recommended Voice Prioritization between the TAWS and Other Systems Installed") of the final AC has been revised to delete the references to simultaneous callouts.

Another commenter questions the material contained in Table 2 of the proposed AC. The commenter asks if the "PDA ('Too Low Terrain') Caution," shown as Priority Level 9 on the table, is considered a separate function or sub-function of the forward-looking terrain-avoidance (FLTA) function. In the table, the term "(FLTA)" follows the term "PDA * * * Caution." The commenter finds the meaning of this unclear. Additionally, this commenter questions whether Table 2 is intended to consider both Class A and Class B TAWS.

The FAA concurs that clarification of the information presented in Table 2 is appropriate. First, the FAA has deleted the term "(FLTA)" that appears in the Priority Level 9 column, as it is inappropriate in that section of the table. Second, the FAA has revised Table 2 to include indications in each Priority Level as to whether the guidance applies to Class A TAWS, Class B TAWS, or both systems.

System Inhibit

One commenter requests that paragraph 7.j. of the proposed AC, concerning system inhibit, be revised to clarify the system inhibit provisions for Class B TAWS systems. The commenter notes that TSO-C151 does not require Class B systems to inhibit the FLTA and PDA functions while maintaining basic GPWS functions, and requests that the AC specify this.

The FAA agrees and has clarified this information in the final AC in paragraph 16., "System Inhibit."

Flight Data Recorders

One commenter suggests deletion of paragraph 7.k. of the proposed AC, which addresses considerations relevant to flight data recorders. The commenter states that this is essentially an LRU issue and should be addressed via the TSO approval process. Since there are no FAA requirements to record TAWS FLTA alerts, this does not need to be addressed in the AC.

Similarly, another commenter notes that paragraph 7.k. implies that flight data recorders certificated under part 91 (and potentially all JAA-certificated flight data recorder installations) should have a means to record FLTA alerts as well as FLTA and/or PDA inhibits. The commenter states that this information is not recorded today in these installations and the format is not defined. The commenter requests that this paragraph be clarified as to its specific installation application.

The FAA does not consider that any change to the information concerning flight data recorders is necessary. The AC clearly specifies that the guidance applies only to aircraft that are defined by the requirements of § 25.1459 ("Flight recorders"). Furthermore, it specifies the recording requirements for the various alerts associated with TAWS. (This information is found in the final AC in paragraph 17, "Flight Data Recorder.")

Human Factors

One commenter requests clarification of paragraph 7.l. of the proposed AC, which addresses inclusion of human factors considerations as part of the certification program. The commenter suggests that the paragraph clarify the requirements for a first-time certification of a display design versus follow-on installations or minor display improvements. The commenter considers that follow-on certifications (i.e., same display design in different aircraft) and minor changes should not require the rigorous human factor review that a new display design should require.

The FAA agrees that clarification on this issue is necessary. The FAA has revised the final AC by eliminating the separate paragraph addressing human factors, and including the pertinent information in paragraph 8.f., "Testing Plan."

Flight Test Requirements

One commenter suggests that paragraph 7.m.(2), of the proposed AC,

which concerns flight test requirements, be revised to clarify that the "cases" listed are intended only to assist in determining flight test guidelines for potential TAWS configurations; however, the actual requirement for a flight test needs to be evaluated for each installation. The commenter is concerned that, with the cases written as they are, someone unfamiliar with TAWS may gain the impression that a flight test is required for every possible TAWS installation, which is not the case. To clarify this issue further, the commenter suggests that all of the "cases" listed be changed to "examples." Additionally, the commenter requests that a note be added to state that some installations may be a combination of these examples and, as such, all of the guidance should be considered when determining flight test requirements.

The FAA agrees with this commenter's suggestions and has revised in paragraph 20.a, "Flight Test Considerations," of the final AC accordingly.

One commenter requests clarification concerning the flight test requirements for follow-on installations of a previously approved TAWS in which a required sensor input has not been previously approved. The commenter assumes that bench testing of each model of sensors would be an acceptable means of compliance for these (thus, not requiring flight testing during installation of follow-ons).

The FAA agrees that clarification is required and has modified paragraph 20., "Flight Test," to include guidance in determining the scope of flight testing required.

One commenter requests clarification in paragraph 7.m.(2) concerning Case 5, which pertains to a follow-on installation of a previously-approved TAWS in which the radio altitude to the TAWS equipment has not been previously approved. The commenter states that this case should not be applicable to Class B TAWS, because Class B TAWS does not require a radio altitude input. The commenter suggests that the AC specify this.

The FAA agrees with the commenter and has revised the final AC to specify that this example is not for Class B equipment.

One commenter notes that the proposed AC does not consider systems able to account for altitude variations in cold weather (function similar to the Allied Signal Geometric Altitude), other than a note in the AFMS requirements. The commenter suggests that the AC provide guidance that describes this

function and any testing associated with it.

The FAA agrees with the commenter and has revised the final AC to add this guidance in new paragraph 20.g., "Pressure Altitude Variations in Cold Weather."

Ground Tests

One commenter requests clarification of whether the airworthiness considerations described in paragraph 7. of the proposed AC are to be construed as requiring verification by ground or flight test. The commenter notes that the AC does not explicitly consider any ground testing required for evaluation of an installation. The commenter suggests that some items that should be considered for ground testing are:

- An acceptable location of TAWS controls, displays, an annunciators;
- Exercise of self-test functions;
- Evaluation of identified failure modes;
- Evaluation of all discretes and TAWS interfaces;
- EMI/EMC testing, and
- Electrical transient testing.

The FAA concurs with the commenter's suggestion and has revised the final AC to include a new paragraph 19., "Ground Test Considerations," to include this information.

Forward Looking Terrain Avoidance (FLTA) Flight Test Requirements

One commenter suggests that the text of paragraph 7.m.(3)(a) of the proposed AC, which addresses FLTA flight test requirements, be changed from:

"Two tests are recommended * * *,"

to:

"Test runs are recommended to be level flight at approximately 500 feet above the terrain/obstacle of interest. The test runs should verify that all alerts (cautions and warnings) are given at an appropriate point in the test run; that all pop-up, auto range, or other display features are working; and that the display depicts the terrain accurately."

This commenter states that experience has shown that all FLTA features can be tested with level flight and there is no need to add the risk of descending toward the terrain/obstacle during the test flight.

The FAA concurs with the commenter's suggestion and has revised paragraph 20.b., "FLTA Flight Test Considerations," of the final AC accordingly.

Premature Descent Alert (PDA) Flight Test Requirements

One commenter requests that paragraph 7.m.(4) of the proposed AC, which concerns PDA flight test

requirements, be revised to specify that, depending on the system design, PDA flight tests may only need to be accomplished during a system's *initial* certification. The commenter states that, for the Honeywell Enhanced Ground Proximity Warning System (EGPWS) specifically, all of the inputs driving the PDA function can be tested via FLTA testing and altitude callout testing. Thus, once the function has been proven during the initial certification, follow-on certifications can be proven by alternative tests. The commenter requests that text be added to this section to allow such "alternative" means of testing for this system. This same commenter states that, with the Honeywell EGPWS, PDA testing can be performed most safely if the aircraft is more than 15 nautical miles (NM) from the nearest airport. The commenter requests that the AC be revised to allow PDA testing outside of 15 NM from the nearest runway to allow for testing at safer altitudes.

The FAA does not agree with the commenter's suggested changes. The FAA considers the commenter's requests to be too specific to one particular system design, and may not be appropriate for other designs. As for "alternative means of testing," the FAA points out that the guidance provided in this AC applies to one acceptable means, but not the only means, of compliance; therefore, applicants have the prerogative to apply for FAA approval of alternative means of compliance, which may include alternative testing methods.

Basic GPWS Flight Test Requirements

One commenter requests a change in the text of the first sentence of paragraph 7.m.(5)(c) of the proposed AC, which concerns negative climb rate or altitude loss after takeoff. The commenter requests that the text be changed from:

"This test is conducted immediately after takeoff before climbing above 700 AGL or above runway elevation."

to

"This test is conducted immediately after takeoff."

The commenter states that Honeywell has been able to develop tests of its EGPWS systems for this scenario that allow for higher altitude gain, thus reducing the risk of this test flight.

The FAA does not concur. The FAA considers the commenter's requests to be too specific to one particular system design, and may not be appropriate for other designs.

Another commenter suggests paragraph 7.m.(5)(f) of the proposed AC,

which concerns the Voice Callout "Five Hundred Feet" function, be revised to include the following note:

"If selected or utilized in the installation, this test should be conducted." The commenter states that not all operators elect the use of the 500-foot callout and, therefore, it is not possible to test this callout in those installations. As an alternative, the commenter suggests that this section could be changed simply to address "altitude callouts," and thus test all of the selected altitude callouts.

The FAA does not concur with this commenter's request. The Voice Callout "Five Hundred Feet" function is required by TSO C-151 for both the Class A and B TAWS.

Terrain Display Flight Test Requirements

One commenter states that, in some new display systems, it is possible to evaluate the new display via ground tests. Therefore, this commenter suggests that paragraph 7.m.(6) of the proposed AC be revised by adding a note to indicate that ground test evaluation of a display may be acceptable if it can be shown that all aspects or performance of the display can be evaluated via ground tests.

The FAA does not concur with the commenter's request. The guidance in this section of the AC is only for first-time evaluations of displays. The commenter's concerns are covered in the guidance contained in paragraph 18. ("System Evaluations with Simulators") and paragraph 19. ("Ground Test Considerations") of the final AC, which provide additional guidance for other types of evaluations.

Another commenter questions whether flight testing is necessary to verify terrain display requirements. This commenter states that the Allied Signal EGPWS allows readout, via an external PC and a terminal program, of all interfaces to the EGPWS LRU. This test will determine that all signals interface properly with the system. This system also will allow simulation of all parameters inside the EGPWS unit, so that different scenarios can be simulated. During this simulation, a check of all aural and visual alerts can be made, and the presentation of terrain on the display can be checked. The commenter considers it unnecessary to require verification of the TSO-ed software with real parameters. Therefore, the commenter requests that paragraph 7.m.(6) of the proposed AC be revised to include the acceptability of ground testing for the evaluation of displays.

The FAA does not concur. The FAA considers the commenter's request to be too specific to one particular system design, and may not be appropriate for other designs.

Issued in Renton, Washington, on June 29, 2000.

D.L. Riggin,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service
[FR Doc. 00-17243 Filed 7-6-00; 8:45 am]

BILLING CODE 4910-13-U

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Proposed Advisory Circular 25.335-1A, Design Dive Speed

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of Availability of Proposed Advisory Circular (AC) 25.335-1A, and request for comments.

SUMMARY: This notice announces the availability of and requests comments on a proposed advisory circular (AC) which sets forth an acceptable means, but not the only means, of demonstrating compliance with the provisions of part 25 of the Federal Aviation Regulations (FAR) related to the minimum speed margin between design cruise speed and design dive speed for transport category airplanes.

DATES: Comments must be received on or before September 15, 2000.

ADDRESSES: Send all comments on the proposed AC 25.335-1A to: Federal Aviation Administration, Attention: James Haynes, Airframe and Cabin Safety Branch, ANM-115, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW, Renton, WA 98055-4056. Comments may be inspected at the above address between 7:30 a.m. and 4:00 p.m. weekdays, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Jan Thor, Transport Standards Staff, at the address above, telephone (425) 227-2127.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to comment on the proposed AC by submitting such written data, views, or arguments, as they may desire. Commenters should identify proposed AC 25.335-1A and submit comments, in duplicate, to the address specified above. All communications received on or before the closing date for comments

will be considered by the Transport Standards Staff before issuing the final AC. The proposed AC can be found and downloaded from the Internet at <http://www.faa.gov/avr/air/airhome.htm>, at the link titled "Draft AC's." A paper copy of the proposed AC may be obtained by contacting the person named above under the caption **FOR FURTHER INFORMATION CONTACT**.

Discussion

Section 25.335(b) requires the design dive speed, V_D , of the airplane to be established so that the design cruise speed is no greater than 0.8 times the design dive speed, or that it be based on an upset criterion initiated at the design cruise speed, V_C . At altitudes where the cruise speed is limited by compressibility effects, § 25.335(b)(2) requires the margin to be not less than 0.05 Mach. Furthermore, at any altitude, the margin must be great enough to provide for atmospheric variations (such as horizontal gusts and the penetration of jet streams), instrument errors, and production variations. This AC provides a rational method for considering the atmospheric variations.

Issued in Renton, Washington, on June 27, 2000.

Donald L. Riggin,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service, ANM-100.

[FR Doc. 00-17244 Filed 7-6-00; 8:45 am]

BILLING CODE 4910-13-M

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Environmental Impact Statement: Albany County, NY

AGENCY: Federal Highway Administration (FHWA), DOT

ACTION: Notice of intent.

SUMMARY: The FHWA is issuing this notice to advise the public that an environmental impact statement will be prepared for a proposed highway project in the Town of Bethlehem, Albany County, New York.

FOR FURTHER INFORMATION CONTACT:

Thomas C. Werner, Regional Director, New York State Department of Transportation, 84 Holland Avenue, Albany, New York 12208, Telephone: (518) 474-6178

or

Harold J. Brown, Division Administrator, Federal Highway Administration, New York Division, Leo W. O'Brien Federal Building, 9th Floor, Clinton Avenue and North

Pearl Street, Albany, New York 12207, Telephone: (518) 431-4127.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the New York State Department of Transportation (NYSDOT) will prepare an environmental impact statement (EIS) on a proposal to improve State Route 85 in the Town of Bethlehem, Albany County, New York. The proposed improvement will involve the construction and rehabilitation of the existing route from the vicinity of its intersection with Route 140, to the Albany City Line, a distance of about 2.6 miles. Improvements to the highway are necessary to address identified transportation problems within the corridor and to accommodate the existing and projected traffic demands. In addition to the highway improvements, the project may include the widening of the existing Route 85 bridge over the Normanskill or the construction of a new parallel structure, and the rehabilitation or replacement of the existing Route 85 structure over the Thruway and the construction of a new parallel structure over the New York State Thruway.

Alternatives under consideration include (1) taking no action; (2) construction of a two lane limited access highway on new location from the Route 140 intersection to the vicinity of the existing Route 85 over Normanskill bridge (effectively extending the existing two lane facility); (3) providing a four lane facility by the construction of a new four lane limited access highway on new location from the Route 140 intersection to the vicinity of the existing Route 85 bridge over the Normanskill and then the construction of two additional lanes parallel to the existing two lane limited access highway to the vicinity of the Albany City Line. Incorporated into and studied with the various build alternatives will be design variations of grade, alignment, and local access.

Letters describing the proposed action and soliciting comments will be sent to appropriate Federal, State, and local agencies, and to private organizations and citizens who have previously expressed interest in this proposal. No formal Scoping Meeting is planned at this time. A public information meeting will be held after additional study. After the Draft Environmental Impact Statement (DEIS) is prepared, it will be made available for agency and public review and comment. In addition, a public hearing will be held for which a public notice will be given of the time and place of the hearings.