

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 73

[Docket No. 26141; Notice No. 90-5]

RIN 2120-AD54

Temporary Prohibited Areas; 1990 Goodwill Games in the State of Washington

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This notice proposes a Special Federal Aviation Regulation (SFAR) for the period July 11, 1990, through August 6, 1990, to establish temporary prohibited areas overlying competition sites and other locations during the 1990 Goodwill Games in the State of Washington. The FAA, based on the recommendations of the Department of Defense (DOD) and the Goodwill Games Law Enforcement Joint Operations Committee (JOC), believes these prohibited areas are necessary: (1) For the security and protection of participating athletes, dignitaries, and other persons attending the Goodwill Games; (2) to minimize the possibility of interference with sporting activities, participants, and spectators; (3) for the protection of security and law enforcement aircraft operating within these areas; and (4) to prevent any unsafe congestion of sightseeing and other aircraft over those locations.

DATES: Comments must be received on or before March 26, 1990.

ADDRESSES: Comments on the proposal may be mailed or delivered in triplicate to the Federal Aviation Administration, Office of the Chief Counsel, Attention: Rules Docket (AGC-204), Docket No. 26141, 800 Independence Avenue, SW., Washington, DC 20591. Comments may be examined in Room 915G weekdays between 8:30 a.m. and 5 p.m., except on Federal holidays.

FOR FURTHER INFORMATION CONTACT: Mr. Richard K. Kagehiro, Air Traffic Rules Branch, ATO-230, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591, telephone (202) 267-8783.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in this proposed rulemaking by submitting such written data, views, or arguments, as they may desire. Comments should identify the regulatory

docket or notice number and be submitted in triplicate to the Rules Docket address specified above. All comments received on or before the closing date for comments will be considered by the Administrator before taking further rulemaking action. Persons wishing the FAA to acknowledge receipt of their comment submitted in response to this notice must include a self-addressed, stamped postcard on which the following statement is written: "Comments to Docket Number 26141." The postcard will be date/time stamped and returned to the commenter. The proposals in this notice may be changed as a result of comments received. All comments submitted will be available in the Rules Docket, both before and after the closing date for the comments, for examination by interested persons. A report summarizing substantive public contact with FAA personnel concerned with this rulemaking will be filed in the docket.

Availability of NPRM

Any person may obtain a copy of this NPRM by submitting a request to the Federal Aviation Administration, Office of Public Affairs, Attention: Public Information Center, APA-200, 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267-3484. Communications must identify the notice number of this NPRM.

Persons interested in being placed on a mailing list for future notices should also request a copy of Advisory Circular No. 11-2A which describes the application procedure.

Background

The 1990 Goodwill Games competitive events will be held in the vicinity of Seattle, Pasco, and Spokane, Washington, from July 20 until August 5, 1990. It is anticipated that the participation of athletes and other representatives from the Soviet Union and approximately 50 other countries in sporting and cultural events will generate a high degree of public interest and may result in an unsafe congestion of sightseeing and other aircraft over the competition sites and other locations. Additionally, the DOD and the JOC, which are involved in providing for the security and protection of participants and spectators at the Goodwill Games, have requested the FAA to establish operating restrictions within the airspace overlying competition sites, athlete housing, and other venues for the period July 11 through August 6. The additional time that the restrictions are proposed to be in effect, both before and after the scheduled dates for the

competitive events of the Goodwill Games, will accommodate the arrival and departure of the participants. The DOD and the JOC believe it is necessary to restrict operations within the airspace from the surface to approximately 2,000 feet above the surface to provide a safe environment for security aircraft and to facilitate the monitoring and identification of aircraft operating within airspace overlying the Goodwill Games events. Additionally, the proposed restrictions will minimize the possibility of interference with sporting activities, participants, and spectators.

Need for Rulemaking

Although § 91.91(a)(3) of the FAR provides for the establishment of temporary flight restrictions to prevent an unsafe congestion of aircraft above an incident or event of a high degree of public interest, such restrictions established under the provisions of § 91.91(a)(3) would not apply to: (1) Operations under an ATC-approved instrument flight rules flight plan; (2) operations by accredited news media representatives in accordance with a flight plan filed with an appropriate ATC or Flight Service Station facility; (3) operations conducted to or from an airport within the temporary flight restriction area and not for the purpose of observing the events; and (4) operations by incident, event, or law enforcement personnel.

The FAA believes that the extent of the restrictions established under the provisions of § 91.91 is not sufficient to fulfill the security requirements of the DOD and the JOC. The majority of the proposed temporary prohibited areas would be in areas in which two-way radio communications with air traffic control is not required. The DOD and JOC have indicated that, without the proposed prohibited areas, they lack the ability to obtain necessary information regarding aircraft that may be operating within the airspace immediately overlying competition sites and housing areas. Although the establishment of temporary prohibited areas over the competition sites and other venues would result in the restriction of aircraft operations, access to these areas would be accommodated with an appropriate authorization from the JOC. Additionally, ATC, under an agreement with the JOC would retain, for the most part, the ability to direct aircraft through the prohibited areas in accordance with normal traffic flows.

Accordingly, the FAA proposes to establish temporary prohibited areas overlying athlete housing and Goodwill Games competition sites. The temporary

prohibited areas would generally be circular areas of 1-nautical mile in radius from the surface to approximately 2,000 feet above the surface. Aircraft operations through, into, or out of these temporary prohibited areas would not be allowed during the effective dates of the proposed SFAR unless specifically authorized by the JOC.

The locations and dimensions of the temporary prohibited areas would be charted for use by all pilots. Requests for access to the airspace areas could be filed under procedures to be determined.

The JOC is evaluating the need for a continuous-use designation for certain proposed prohibited areas. The possibility exists that certain prohibited areas may accommodate occasional unrestricted use during those times when the event facilities are not in use. Only those sites at which unrestricted operations would not derogate the security and protection of athletes and other participants would be considered for limited free access. Should it be determined that a continuous-use designation for a prohibited area would not be necessary, the designated times of use for that prohibited area could be specified in a Notice to Airmen (NOTAM).

Environmental Effects

This proposed action would establish prohibited areas for security purposes and would curtail or limit certain aircraft operations within designated areas rather than require aircraft to operate along specified routings or in accordance with specific procedures. Additionally, this proposed action would be temporary in nature and effective only for the time necessary to provide for the security and protection of participants and spectators at the Goodwill Games. Air traffic control, under an agreement with the JOC would retain the ability to direct aircraft through the prohibited areas in accordance with normal traffic flows. The FAA believes, therefore, that the proposed establishment of temporary prohibited areas would have minimal impact on ATC traffic procedures or routings.

Further, the FAA believes that this action would probably result in a reduction in aircraft activity in the vicinity of the Goodwill Games events by eliminating the means and the opportunity for sightseeing aircraft to overfly and view those events. Since the incentive to overfly those areas of high-interest would be removed, the FAA believes that the number of aircraft operations in the vicinity of the Goodwill Games events would be lower

than would have occurred if the prohibited areas were not in place and noise levels associated with that greater aircraft activity would also be reduced. Additionally, aircraft avoiding the prohibited areas would not be routed over any particular area or confined to operate within certain airspace. This action would, therefore, not result in any long-term action which would routinely route aircraft over noise-sensitive areas. For the reasons stated above, the FAA concludes that this proposed rule would not significantly affect the quality of the human environment.

Federal Implications

The regulations proposed herein would not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Conclusion

This proposed action would establish prohibited areas for the security and protection of participants and spectators at the Goodwill Games and would be temporary in nature. For these reasons the FAA has determined that this proposed rule would not be major under Executive Order 12291; would not be significant under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and would not warrant the preparation of a regulatory evaluation as the anticipated impact is temporary and minimal. Additionally, the FAA certifies that this proposal, if adopted would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 73

Aircraft flight, Airspace, Aviation safety, Air traffic control, Security measures.

The Proposed Special Federal Aviation Regulation (SFAR)

In consideration of the foregoing, the FAA proposes to amend 14 CFR part 73 as follows:

PART 73—[AMENDED]

1. The authority citation for part 73 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510, 1522; Executive Order 10854; 49 U.S.C. 106(g)

(Revised Pub. L. 97-449, January 12, 1983); 14 CFR 11.69.

2. By adding Special Federal Aviation Regulation No. ____ to read as follows:

SFAR No. — Temporary Prohibited Areas; 1990 Goodwill Games in the State of Washington

1. Marymoor

Boundaries. That airspace within a 1-nautical mile radius of lat. 47°40'09" N., long. 122°07'11" W.

Designated altitudes. Surface to 2,000 feet MSL.

Time of designation. Continuous. Effective from July 11, 1990, through August 6, 1990.

Using agency. Goodwill Games Law Enforcement Joint Operations Committee (JOC), Seattle, Washington; and Air Traffic Manager, Seattle-Tacoma International Airport Traffic Control Tower, Federal Aviation Administration, Seattle, Washington.

2. Shilshole Marina

Boundaries. That airspace bounded by a line beginning at lat. 47°38'39" N., long. 122°25'00" W.; thence clockwise along a 3-nautical mile radius of lat. 47°41'35" N., long. 122°24'09" W.; to lat. 47°44'15" N., long. 122°22'45" W.; to lat. 47°42'20" N., long. 122°22'50" W.; thence clockwise along a 1-nautical mile radius of lat. 47°41'35" N., long. 122°24'09" W.; to lat. 47°40'36" N., long. 122°24'38" W.; to the point of beginning.

Designated altitudes. Surface to 2,000 feet MSL.

Time of designation. Continuous. Effective from July 11, 1990, through August 6, 1990.

Using agency. Goodwill Games Law Enforcement Joint Operations Committee (JOC), Seattle, Washington; and Air Traffic Manager, Seattle-Tacoma International Airport Traffic Control Tower, Federal Aviation Administration, Seattle, Washington.

3. Seattle Center

Boundaries. That airspace with a 1-nautical mile radius of lat. 47°37'00" N., long. 122°21'21" W.

Designated altitudes. Surface to 1,800 feet MSL.

Time of designation. Continuous. Effective from July 11, 1990, through August 6, 1990.

Using agency. Goodwill Games Law Enforcement Joint Operations Committee (JOC), Seattle, Washington; and Air Traffic Manager, Seattle-Tacoma International Airport Traffic Control Tower, Federal Aviation Administration, Seattle, Washington.

4. University of Washington

Boundaries. That airspace within a 2-nautical mile radius of lat. 47°39'15" N., long. 122°17'55" W.

Designated altitudes. Surface to 2,000 feet MSL.

Time of designation. Continuous. Effective from July 11, 1990, through August 6, 1990.

Using agency. Goodwill Games Law Enforcement Joint Operations Committee (JOC), Seattle, Washington; and Air Traffic

anager, Seattle-Tacoma International Airport Traffic Control Tower, Federal Aviation Administration, Seattle, Washington.

Connelly Center

Boundaries. That airspace within a 1-nautical mile radius of lat. 47°36'42" N., long. 122°19'08" W.

Designated altitudes. Surface to 1,800 feet MSL.

Time of designation. Continuous. Effective from July 11, 1990, through August 6, 1990.

Using agency. Goodwill Games Law Enforcement Joint Operations Committee (JOC), Seattle, Washington; and Air Traffic Manager, Seattle-Tacoma International Airport Traffic Control Tower, Federal Aviation Administration, Seattle, Washington.

6. Stan Sayres

Boundaries. That airspace within a 1-nautical mile radius of lat. 47°34'25" N., long. 122°16'55" W.

Designated altitudes. Surface to 1,500 feet MSL.

Time of designation. Continuous. Effective from July 11, 1990, through August 6, 1990.

Using agency. Goodwill Games Law Enforcement Joint Operations Committee (JOC), Seattle, Washington; and Air-Traffic Manager, Seattle-Tacoma International Airport Traffic Control Tower, Federal Aviation Administration, Seattle, Washington.

7. Federal Way

Boundaries. That airspace within a 1-nautical mile radius of lat. 47°18'14" N., long. 122°20'22" W.

Designated altitudes. Surface to 1,600 feet ASL.

Time of designation. Continuous. Effective from July 11, 1990, through August 6, 1990.

Using agency. Goodwill Games Law Enforcement Joint Operations Committee

(JOC), Seattle, Washington; and Air Traffic Manager, Seattle-Tacoma International Airport Traffic Control Tower, Federal Aviation Administration, Seattle, Washington.

8. Tacoma Dome

Boundaries. That airspace within a 1-nautical mile radius of lat. 47°14'41" N., long. 122°26'02" W.

Designated altitudes. Surface to 2,000 feet MSL.

Time of designation. Continuous. Effective from July 11, 1990, through August 6, 1990.

Using agency. Goodwill Games Law Enforcement Joint Operations Committee (JOC), Seattle, Washington; and Air Traffic Manager, Seattle-Tacoma International Airport Traffic Control Tower, Federal Aviation Administration, Seattle, Washington.

9. Cheney Stadium

Boundaries. That airspace within a 1-nautical mile radius of lat. 47°14'16" N., long. 122°29'37" W.

Designated altitudes. Surface to 1,500 feet MSL.

Time of designation. Continuous. Effective from July 11, 1990, through August 6, 1990.

Using agency. Goodwill Games Law Enforcement Joint Operations Committee (JOC), Seattle, Washington; and Air Traffic Manager, Seattle-Tacoma International Airport Traffic Control Tower, Federal Aviation Administration, Seattle, Washington.

10. Enumclaw

Boundaries. That airspace within a 1-nautical mile radius of lat. 47°11'44" N., long. 122°57'58" W.

Designated altitudes. Surface to 2,000 feet MSL.

Time of designation. Continuous. Effective from July 11, 1990, through August 6, 1990.

Using agency. Goodwill Games Law Enforcement Joint Operations Committee (JOC), Seattle, Washington; and Air Traffic Manager, Seattle-Tacoma International Airport Traffic Control Tower, Federal Aviation Administration, Seattle, Washington.

11. Spokane

Boundaries. That airspace within a 1-nautical mile radius of lat. 47°40'08" N., long. 117°24'05" W.

Designated altitudes. Surface to 3,700 feet MSL.

Time of designation. Continuous. Effective from July 11, 1990, through August 6, 1990.

Using agency. Goodwill Games Law Enforcement Joint Operations Committee (JOC), Seattle, Washington; and Air Traffic Manager, Spokane International Airport Traffic Control Tower, Federal Aviation Administration, Spokane, Washington.

12. Pasco (Vista)

Boundaries. That airspace within a 1-nautical mile radius of lat. 46°14'00" N., long. 119°12'00" W.

Designated altitudes. Surface to 2,000 feet MSL.

Time of designation. Continuous. Effective from July 11, 1990, through August 6, 1990.

Using agency. Goodwill Games Law Enforcement Joint Operations Committee (JOC), Seattle, Washington; and Air Traffic Manager, Tri-Cities Airport Traffic Control Tower, Federal Aviation Administration, Pasco, Washington.

Issued in Washington, DC on February 15, 1990.

Jerry W. Ball,

Acting Manager, Airspace Rules & Aeronautical Information Division.

[FR Doc. 90-4048 Filed 2-21-90; 8:45 am]

BILLING CODE 4910-13-M

NPRM 90-4

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration
14 CFR Part 25

[Docket No. 26140; Notice No. 90-4]

RIN 2120-AC43

**Type and Number of Passenger
 Emergency Exits Required in
 Transport Category Airplanes**

AGENCY: Federal Aviation
 Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking
 (NPRM).

SUMMARY: This notice proposes to revise the current requirements for the passenger emergency exits of transport category airplanes and to adopt two new exit types into the regulations. These proposals are intended to provide more consistent standards with respect to the passenger seating allowed for each exit type, and the type and number of exits required for passenger seating configurations. This notice also proposes to reduce the maximum inflation time of an escape slide to reflect the current state-of-the-art. This NPRM is one of several which are currently in process in the areas of design, training and maintenance resulting from the Public Technical Conference on Emergency Evacuation of Transport Airplanes held in Seattle, Washington, September 3-6, 1985.

DATES: Comments must be received on or before August 21, 1990.

ADDRESSES: Comments on the proposal may be mailed in duplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attention: Rules Docket (AGC-204), Docket No. 26140, 800 Independence Avenue SW., Washington, DC 20591, or delivered in duplicate to FAA Rules Docket, Room 915G, 800 Independence Avenue SW., Washington, DC 20591. Comments delivered must be marked: Docket No. 26140. Comments may be inspected in Room 915G weekdays, except Federal holidays, between 8:30 a.m. and 5:00 p.m. In addition, the FAA is maintaining an information docket of comments in the Office of the Regional Counsel (ANM-7), FAA, Northwest Mountain Region, 17900 Pacific Highway South, C-68966, Seattle, Washington 98168. Comments in the information docket may be inspected in the Office of the Regional Counsel weekdays, except Federal holidays, between 7:30 a.m. and 4:00 p.m.

FOR FURTHER INFORMATION CONTACT:
 Franklin Tiangsing, Regulations Branch,
 (ANM-114), Transport Airplane
 Directorate, Aircraft Certification

Service, FAA, 17900 Pacific Highway South, C-68966, Seattle, Washington, 98168; telephone (206) 431-2121.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in this proposed rulemaking by submitting such written data, views, or arguments as they may desire. Comments relating to environmental, energy, or economic impact that might result from adoption of proposals contained in this notice are invited. Substantive comments should be accompanied by cost estimates. Commenters should identify the regulatory docket or notice number and submit comments, in duplicate, to the Rules Docket address specified above. All comments received on or before the closing date for comments will be considered by the Administrator before taking action on the proposed rulemaking. The proposals contained in this notice may be changed in light of the comments received. All comments will be available in the Rules Docket, both before and after the closing date for comments, for examination by interested persons. A report summarizing each substantive public contact with FAA personnel concerning this rulemaking will be filed in the Rules Docket. Commenters wishing the FAA to acknowledge receipt of their comments must submit with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 26140." The postcard will be date/time stamped and returned to the commenter.

Availability of NPRM

Any person may obtain a copy of this NPRM by submitting a request to the Federal Aviation Administration, Office of Public Affairs, Attention: Public Inquiry Center, APA-430, 800 Independence Avenue SW., Washington, DC 20591 or by calling (202) 267-3484. Communications must identify the notice number of this NPRM. Persons interested in being placed on a mailing list for future rulemaking documents should also request a copy of Advisory Circular No. 11-2A, Notice of Proposed Rulemaking Distribution System, which describes the application procedures.

Background

The Federal Aviation Regulations (FAR) currently define five specific sizes of emergency exits for transport category airplanes, ranging from a Type A exit (usually a door) which is a minimum of 42 inches wide by 72 inches

high, to a Type IV exit (usually a hatch) which is a minimum of 19 inches wide by 26 inches high. Section 25.807 contains a table which specifies the type and number of emergency exits that are required for certain passenger seating configurations. When this table was developed in 1951, it addressed the largest passenger seating configuration then envisioned. As larger airplanes were developed, the table was revised and a second table was added in 1967. The first table, which is contained in § 25.807(c)(1), specifies the exits required for airplanes with passenger seating configurations up to 179 passengers. The second table, which is contained in § 25.807(c)(2), supplements the first table by specifying the number of additional passenger seats, up to a total of 299, that may be installed for various types of additional exits. Section 25.807(c)(3) further specifies that each exit must be either a Type I or Type A when the passenger seating capacity exceeds 299.

Although an exit may exceed the minimum dimensions specified for a particular type, no additional passenger seats may be installed based on that exceedance unless the exit qualifies in all respects as one of the larger exit types.

Note that all references to the types and numbers of required passenger emergency exits in part 25 and this notice refer to the exits required in *each* side of the fuselage, not the total for the airplane.

Part 25 also contains requirements for the installation of emergency escape slides, one of which is that the door-mounted slides must inflate within 10 seconds after deployment from the door. Part 25 currently contains no specific maximum inflation time for off-wing mounted slides; however, Technical Standard Order (TSO) C69a, which contains design standards for escape slides, specifies a maximum inflation time of 15 seconds for off-wing escape slides.

The FAA held a public technical conference in Seattle, Washington, in September 1985, to review the existing safety regulations and practices regarding the emergency evacuation of transport airplanes. As a result of the conference, three working groups were formed to review the current safety regulations and to recommend changes. These three groups were Design and Certification, Operators and Training, and Maintenance and Reliability. The Design and Certification Working Group was subdivided into three subgroups: Evacuation Demonstrations, Emergency Exits, and Evacuation Slides. The

Emergency Exits Subgroup recommended, in part, that the regulations relative to passenger emergency exits be revised to provide design flexibility, and that the escape slide inflation time requirement be revised to reflect the current state-of-the-art.

Part 23 of the FAR was recently amended (Amendment 23-34; 52 FR 1806; January 15, 1987) to provide standards for type certification of propeller-driven, multi-engine airplanes of 19,000 pounds or less maximum weight and seating for 19 or fewer passengers, in the Commuter Airplane Category. As a result of this rulemaking, an applicant for type certification of an airplane of this class has the option of demonstrating compliance with the Commuter Airplane Category Standards of part 23 or Transport Category Airplane Standards of part 25. Due to the separate evolution of the respective standards of parts 23 and 25, there are certain differences for airplanes with 19 or fewer passenger seats in the existing emergency egress requirements of the two parts. Included in these differences are the numbers and sizes of emergency exits. None of the changes proposed in this notice affect the existing emergency egress requirements for such airplanes; however, the FAA is preparing separate rulemaking which would give part 23 applicants the option of complying with the emergency egress requirements of part 25 in lieu of those of part 23.

Discussion

The table in § 25.807(c)(1) does not define specific ratings for the various exits because the number of additional passenger seats allowed when more exits are installed is not uniform. For example, a Type I and a Type III exit are required for a maximum passenger seating capacity of 79 and adding another Type I to this exit configuration would allow up to 139 passenger seats, an increase of 60. On the other hand, adding another Type I exit to an exit configuration of one Type I and two Type III exits increases the maximum permissible passenger seating capacity from 109 to 179, an increase of 70. The table in § 25.807(c)(2) would only permit 45 additional passenger seats for a Type I exit when the airplane passenger seating capacity exceeds 179. Under existing regulations, the passenger rating of a Type I exit, therefore, varies from 45 to 70, depending on airplane exit configuration and the total passenger seating capacity. As proposed, the passenger rating of a Type I exit would be standardized at 45.

As proposed, §§ 25.807(c) (1), (2), and (3) would be revised to provide a simple,

consistent set of standards while still retaining an equivalent level of safety. Replacing the existing tables with specific ratings for each type of exit would enable the airplane manufacturer to design an airplane with any combination of exits the manufacturer chooses, subject to certain specified constraints. Airplanes with exit configurations that are not specifically defined in the current tables, such as the Airbus Model A-310, British Aerospace Model BAe.146, and Boeing Models 757 and 767, would no longer have to be approved under the equivalent safety provisions of § 21.21(b)(1). The following table compares the existing required exit combination for airplanes up to 179 passengers and the proposed changes.

Exit type				Maximum passenger capacity	
I	II	III	IV	Existing § 25.807(c)(1)	Proposed regulation
			1	9	9
		1		19	19
	1			39	40
1		1		79	80
1		2		109	110 or 115
2		1		139	125
2		2		179	155 or 160

There are several limitations on exit configuration that are implicit in the existing passenger capacity table in current § 25.807(c)(1). For example, the table does not permit the use of Type IV exits with more than 9 seats. This limitation would be retained as proposed § 25.807(g)(2). There must be at least two pairs of exits for any passenger seating configuration above 19. (In addition, certain exit types and quantities must be installed depending on the actual passenger seating configuration.) These limitations would be retained in the proposed §§ 25.807(g) (4), (5), and (6). Proposed § 25.807(g)(5) would also retain the existing requirement that there must be at least one Type I or larger exit in each side of the fuselage for passenger seating capacities of 40 or more except that the requirement would apply to capacities of 41 or more rather than 40 or more. Proposed § 25.807(g)(6) would retain the existing requirement that there must be at least two Type I or larger exits for passenger seating capacities greater than 109, except that the requirement would apply to capacities of 110 or more rather than 109 or more.

As noted above, § 25.807(c)(3) currently specifies that each exit must be a Type A or Type I for passenger seating capacities over 299. That limitation was introduced, along with the definition of Type A exits, with Amendment 25-15 (32 FR 13255;

September 20, 1967), when the first wide-body airplanes were being proposed. Because these airplanes would have twin aisles, the large Type A exits were adopted to permit simultaneous side-by-side egress of passengers from both aisles. Although there was no operational experience at that time with such airplanes, it was considered that they should not have a large number of small exits. Subsequent experience with the Airbus Model A-310 and Boeing Model 767 airplanes has shown that Type III overwing exits can also be effective exits in twin-aisle airplanes. The FAA, therefore, is proposing to permit limited use of Type III exits in airplanes with passenger seating capacities greater than 299. Existing § 25.807(c)(3) would be deleted, and proposed § 25.807(g)(7) would limit the number of Type III exits for which credit would be given. To ensure that adequate evacuation capability is maintained in the event a primary exit became unusable, proposed § 25.803(g)(8) would require that at least two of the larger exits (Type A, Type B, or Type C exits which are described below) would have to be installed to receive full passenger seating credit for those exits. (If only one Type A, B, or C exit were installed, the exit would be considered to be a Type I exit and credited accordingly.)

The FAA has reviewed the results of previous evacuation demonstrations involving airplanes with two adjacent Type III exits. From this review, it is noted that two adjacent Type III exits consistently fail to provide a rate of egress that is double that of a single Type III exit. Typically, some evacuees must bypass one exit in order for there to be a steady flow through the other exit. There is generally a rate of egress through the exit which some must bypass that is equal to that through a single similar exit; however, the rate of egress through the second exit is consistently less. The combined passenger rating of a pair of adjacent Type III exits would, therefore, be reduced from a total of 70 to 65 in accordance with proposed § 25.803(g)(7). For purposes of compliance with this requirement, two Type III exits located within three passenger seat rows of each other would be considered to be adjacent. The pertinent parameter is the number of seat rows; however, with typical row spacing this would be about 90 to 100 inches between adjacent vertical edges of the two exits. Proposed § 25.803(g)(7) would also specify that the combined passenger rating for all Type III exits could not exceed 70. As noted

above, all references are to the number of exits in each side of the fuselage.

In order to provide for emergency exit design flexibility, § 25.807(a) would be revised to include new Type B and Type C exits. These exits would be larger than Type I exits but smaller than Type A exits. They would be similar to exits that have been previously approved by exemption or under the equivalent level of safety provisions of § 21.21(b)(1).

The proposed Type B exit would be required to meet the same criteria as those for a Type A exit except that its minimum width would be 32 inches in lieu of 42 inches, and the maximum allowable corner radii would also be changed. Like Type A exits, Type B exits would have to be equipped with dual-lane escape slides. Exemption No. 1573 was granted to permit type certification of the McDonnell Douglas Model DC-10 with a passenger rating of 80 for such exits. One configuration of the Boeing Model 757 was also approved with exits which would meet the proposed definition of a Type B exit under the equivalent safety provisions of § 21.21(b)(1). Those exits were granted a passenger rating of 75, based on the egress rate demonstrated at that time.

In a report entitled *Study of FAR 25.807(c) Emergency Exits* dated May 1975, the FAA Civil Aeromedical Institute (CAMI) recommended adding several exit sizes to the regulations, including two that correspond to the proposed Type B and C exits.

Based on a series of passenger evacuation rate tests conducted with exit widths of 26 to 42 inches, CAMI recommended a passenger rating of 80 for an exit that is 32 inches wide and equipped with a dual-lane escape slide. Because of the differences in motor skills and reaction to situations typically exhibited in testing involving people, there is some variation in the data presented in the CAMI report concerning evacuation rate versus exit size.

Considering the variation in the CAMI test data and the data on which approval of the DC-10 and Boeing Model 757 doors was based, a passenger rating of 75 is proposed for Type B exits. This would ensure that the passenger rating is appropriate for all such exits regardless of the size of the airplane in which they are installed or minor differences among the exits of different airplane models.

The CAMI testing showed that exits similar to Type I exits, but with additional width, provide greater passenger egress rates than those with the minimum width of 24 inches. CAMI, therefore, recommended that exits which are a minimum of 30 inches in

width should have a passenger rating of 50. That would be 5 greater than that for Type I exits with the minimum 24 inches in width. Their recommendation was based on the time of 20 seconds currently allowed for door opening and erection of the assist means. The FAA also proposed to increase the minimum height of Type I exits to 60 inches in 1966; however, as discussed in the preamble to Amendment 25-15 (32 FR 13255; September 20, 1967), the proposal was withdrawn in light of test data showing that the greater height would provide no material improvement in passenger egress rate. This finding was corroborated by the later CAMI testing.

The proposed Type C exits would be similar to the existing Type I exits, except that their minimum width would be 30 inches in lieu of 24 inches, and the maximum time allowed for door opening and erection of the assist means (exit preparation time) would be reduced from 20 seconds to 10 seconds (see §§ 25.809 (f)(1)(ii) and (h)). In addition, non-overwing Type C exits would have to have assist means, with the 10-second exit preparation time demonstrated in each of the attitudes corresponding to collapse of one or more legs of the landing gear.

Exemption No. 3639, which was recently granted for the British Aerospace Model BAe.146, allows a maximum passenger seating capacity of 109 with two exits on each side of the fuselage, or 54.5 passenger seats per exit. These exits are 30.5 inches wide and are 72 inches high on the left-hand side of the fuselage and 58 inches high on the right-hand side. They are equipped with automatically deployed, inflatable, self-supporting escape slides.

In another configuration, the Boeing Model 757 was approved for as many as 219 passenger seats, with four exits on each side of the airplane, or approximately 55 passenger seats per exit. Three of the four exits are similar to the proposed Type C exits. Exits Nos. 1, 2, and 4 are over 30 inches in width and have power assist means for opening in an emergency. It was demonstrated during full-scale demonstrations that these doors could be opened and ready to accept evacuees in approximately 8.2 seconds. The No. 3 exit is less than 30 inches in width; however, it does exceed the minimum width for a Type I exit. That exit was demonstrated to be usable within 12 seconds.

In view of the above, a passenger rating of 55 is proposed for Type C exits.

The FAA also proposes to make extensive non-substantive, editorial changes to enhance the clarity of those sections involved with emergency exits.

Those changes would not impose any additional burden on any persons. For example, §§ 25.807(a)(7) (iii) through (ix) have been distributed to §§ 25.785, 25.809 and 25.813 as applicable. In this way the flight attendant seat, passageway, assist means and assist space requirements for all exits are located in the same pertinent section.

The FAA proposes to revise §§ 25.809 (f)(1)(ii) and (h) to require that the non-overwing escape slides, except at Type C Exits, inflate within 6 seconds and overwing escape slides, except at Type C exits, inflate within 10 seconds. This will reduce the time necessary to prepare the escape system to accept evacuees in an emergency by 4 seconds for non-overwing escape slides and by 5 seconds for overwing escape slides. The assist means at all Type C exits must be erected within 10 seconds from the time the opening means of the exit is actuated.

A number of conforming changes to other sections have also been proposed to include reference to Type B and C exits as well as the existing types. The FAA proposes to revise §§ 25.811(e) (2) and (4) by including Type B and Type C exits. The FAA also proposes to revise § 25.812(g)(1)(ii) to require that the width of the illumination be commensurate with the exit type installed over the wing. Finally, the FAA proposes to add the Type A, Type B and Type C exits to § 25.813(a).

Regulatory Evaluation

Economic Impact

There are two emergency exit subsystems that are impacted by these proposals, the exit doors and the escape slides.

Escape Slides

The escape slide proposals will reduce the time required to inflate the slides, thereby allowing a faster emergency evacuation and the saving of some lives that otherwise might be lost. The technology to accomplish this reduction in inflation time is available and will not add to the cost of the slide subsystem. The proposals basically update slide requirements to current technology. Since the cost of the improved slides is the same as those for current slides, it is obvious that these proposals will have a positive benefit to cost ratio.

Exits

There are several proposals relating to exit doors, some of which may impose a cost on the industry and others which are likely to reduce their cost.

The proposals relating to the addition of Type B and C exits will provide the industry with increased flexibility in designing the exit configuration for a given number of passengers. Since the current level of safety will be maintained and the cost of the exit configurations using Type B and C exits are likely to be less costly than if these exits were unavailable, the benefits of these proposals exceed the costs.

The proposals relating to Type I exits may increase the cost to the industry in certain instances. The current regulations allow an increase in passenger seating configuration when adding a pair of Type I exits, ranging from 45 to 70, depending on airplane exit configuration and the total passenger seating capacity. The proposed amendment would limit the allowed increase for a pair of Type I exits to 45 passengers.

The FAA believes that limiting a Type I exit to 45 passengers will improve safety. It is clear that 45 passengers can evacuate through a Type I exit more expeditiously than can a greater number. Speed in an evacuation can lead to the saving of life such as in conditions of fire or a water environment. An airplane having two Type I exits and two Type III exits, under current regulations, can have 179 passengers. The proposed regulations would limit this to 155 or 160 passengers (depending on whether the Type III exits are adjacent), a reduction of 11-13 percent which would likely reduce the evacuation time also by approximately 11-13 percent.

It is difficult to determine how many persons may be saved prospectively by implementation of this proposal. The most recent analysis in regards to evacuation under fire conditions was done by the National Bureau of Standards (NBS). The NBS analyzed historical fire incidents involving fire fatalities for the 1965 to 1982 period and estimated how many lives could be saved if passengers had additional time to escape as a result of improved seat cushions. ("Decision Analysis Model for Passenger-Aircraft Fire Safety with Application to Fire Blocking of Seats" National Bureau of Standards, March 1984, NBSTR 84-2817, DOT/FAA/OT-84/8.) Having more time to evacuate an airplane is not the same as being able to evacuate an airplane faster but can serve as a proxy for estimating benefits. The NBS estimated that of 712 fire fatalities in the period 1965 to 1982, 109 persons could have been saved if there were 20 additional seconds of evacuation time. This is a rate of 3 lives saved per 100 million enplanements.

In 1985, there were about 477,000 seats in the air carrier fleet and there were 373 million passenger enplanements or 782 passenger enplanements per seat. The proposal for Type I exits would allow an airplane with two Type I exits and two Type III exits to have 155 or 160 passengers rather than 179 passengers. (For purposes of the analysis, the 155 passenger capacity will be used. All current widely used transports with 2 pairs of Type III exits have them located within 3 seat rows of each other.) Therefore an airplane having this configuration could be allocated 121,210 enplanements for 1985 (782 enplanements per seat times 155 seats per airplane). The number of enplanements for the above configuration is actually lower since most operators do not put as many seats in their airplane as the number of exits would allow, but the above figure can serve as an approximation.

The FAA believes that the reduction in fatalities would be about the same for the reduced number of seats that the proposal would allow for Type I exits as for the improved seat cushions, i.e., a reduction in fatalities of 3 persons per 100 million passenger enplanements or about 3.6 persons per thousand airplanes (3 times 121,210 enplanements divided by 100,000). If the life of an airplane is 20 years, the number of people saved per thousand airplanes is 72. For the purpose of analysis, the FAA assigns a value of \$1 million to a statistical life. This is the minimally accepted value used in Government policy analysis. Using a value of life of \$1 million, the benefits per airplane over 20 years is \$72,000 before discounting and \$27,600 after discounting (10 percent discount rate).

The FAA has made safety improvements to the aviation system since the 1965-1982 historical data base. These improvements include emergency lighting, fire blocking of seats, a windshear alerting system, improvements in crew training, safer airplane and improved air traffic control. The FAA estimates that the future casualty loss rate will be about half that of the historical rate. Therefore, the appropriate benefits per exit over 20 years is \$13,800 after discounting.

Costs

The cost of the proposal relating to Type I exits are those relating to either having additional exits or those of a different type to accommodate a specific passenger load. It may be that it will not be necessary to change an exit configuration if the appropriate passenger capacity is selected. The FAA believes that costs will not exceed

estimated benefits but solicits comments on how the new requirements can be made sufficiently flexible so as to maximize safety benefits. In this context, it should be noted that the proposed Type C exit is similar in size to the Type I exit except that it is six inches wider. Each pair of Type C exits installed in an airplane would allow an increase in seating configuration of 55 passengers. Therefore, an airplane with two pairs each of Type C and Type III exits could have a maximum seating configuration of 180 passengers (two times 55 plus two times 35) which is one greater than currently allowed for an airplane with two pairs each of Type I and Type III exits. If the two Type III exits are within three rows of each other, then the total would be reduced to 175. Theoretically, the former airplane would require 12 more inches of fuselage be devoted to exits than the latter airplane. In practice, for reasons such as providing easier passage for passengers and service equipment, airplane manufacturers often make their Type I exits the size of the proposed Type C exit or larger. For example, on one popular standard fuselage airplane with two pairs of Type I exits and one pair of Type III exits, the Type I exits are either 30 by 65, 30 by 72, or 34 by 72. If this airplane were to be certificated under the proposed regulations, there would be virtually no increase in cost to the manufacturer and the seating capacity of the airplane would be six greater than currently allowed by part 25. In another example, six of the eight Type I exits on another standard fuselage airplane range in size from 30 by 65 to 33 by 72. These exits would qualify, in size, as Type C exits.

Comparison of Benefits and Costs

The benefits for an airplane having two Type I exits and two Type III exits, assuming a seating capacity of 180, is about \$13,800. It is believed that the proposal is sufficiently flexible so that it will generate positive net benefits. However, the FAA welcomes public comment on how the flexibility of the rule can be improved so as to maximize net benefits.

International Trade Impact Analysis

The proposal is unlikely to have a significant impact on international trade. If foreign states do not certify to U.S. standards, U.S. manufacturers may bear some additional cost to meet foreign standards. On the other hand, foreign manufacturers would have to bear some additional cost to meet U.S. standards. Although trade is not in balance, the detrimental impact to U.S.

manufacturers is not expected to be significant.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress to ensure that small entities are not unnecessarily and disproportionately burdened by Government regulations. The RFA requires agencies to review rules which have "a significant economic impact on a substantial number of small entities." The proposal would impact airplane manufacturers that certify their airplanes to part 25 requirements. The FAA size threshold for a small airplane manufacturer is one having 75 employees or less. There are no manufacturers of part 25 airplanes having less than 75 employees. Therefore, the proposal does not have "a significant impact on a substantial number of small entities."

Federalism Implications

The regulations proposed herein would not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Conclusion

For the reasons given earlier in the preamble, the FAA has determined that this is not a major regulation as defined in Executive Order 12291. The FAA has determined that this action is significant as defined in Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). In addition, it is certified under the criteria of the Regulatory Flexibility Act that this regulation, at promulgation, will not have a significant economic impact, positive or negative, on a substantial number of small entities.

List of Subjects in 14 CFR Part 25

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendments

Accordingly, the FAA proposes to amend part 25 of the Federal Aviation Regulations (FAR), 14 CFR part 25, as follows:

PART 25—[AMENDED]

1. The authority citation for part 25 continues to read as follows:

Authority: 49 U.S.C. 1344, 1354(a), 1355, 1421, 1423, 1424, 1425, 1428, 1429, 1430; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); and 49 CFR 1.47(a).

2. By amending § 25.783 by revising paragraph (h) to read as follows:

§ 25.783 Doors.

(h) Each passenger entry door in the side of the fuselage must qualify as a Type A, Type B, Type C, Type I, or Type II passenger emergency exit and must meet the applicable requirements of § 25.807 through § 25.813.

3. By amending § 25.785 by revising the introductory text of paragraph (h) to read as follows:

§ 25.785 Seats, berths, safety belts, and harnesses.

(h) Flight attendant seats in passenger compartments must be near required floor level exits. A flight attendant seat must be located adjacent to each Type A or Type B emergency exit. Each flight attendant seat must be equipped with a restraint system consisting of a combined safety belt and a shoulder harness unit with a single-point release. There must be means to secure each combined safety belt and shoulder harness, when not in use, to prevent interference with rapid egress in an emergency. In addition,

4. By amending § 25.803 by revising paragraph (e)(1) to read as follows:

§ 25.803 Emergency evacuation.

(1) The escape route must be at least 42 inches wide at Type A, Type B, or two adjacent Type III passenger emergency exits and must be at least 24 inches wide at all other passenger emergency exits, and

5. By revising § 25.807 to read as follows:

§ 25.807 Emergency exits.

(a) *Type*. For the purposes of this part, the types of passenger emergency exits are defined as follows:

(1) *Type I*. This type is a floor level exit with a rectangular opening of not less than 24 inches wide by 48 inches high, with corner radii not greater than one-third the width of the exit.

(2) *Type II*. This type is a rectangular opening of not less than 20 inches wide by 44 inches high, with corner radii not greater than one-third the width of the exit. Type II exits must be floor level exits unless located over the wing, in

which case they may not have a step-up inside the airplane of more than 10 inches nor a step-down outside the airplane of more than 17 inches.

(3) *Type III*. This type is a rectangular opening of not less than 20 inches wide by 36 inches high, with corner radii not greater than one-third the width of the exit, and with a step-up inside the airplane of not more than 20 inches. If the exit is located over the wing, the step-down outside the airplane may not exceed 27 inches.

(4) *Type IV*. This type is a rectangular opening of not less than 19 inches wide by 26 inches high, with corner radii not greater than one-third the width of the exit, located over the wing, with a step-up inside the airplane of not more than 29 inches and a step-down outside of the airplane of not more than 36 inches.

(5) *Ventral*. This type is an exit from the passenger compartment through the pressure shell and the bottom fuselage skin. The dimensions and physical configuration of this type of exit must allow at least the same rate of egress as a Type I exit with the airplane in the normal ground attitude, with the landing gear extended.

(6) *Tail cone*. This type is an aft exit from the passenger compartment through the pressure shell and through an openable cone of the fuselage aft of the pressure shell. The means of opening the tailcone must be simple and obvious and must employ a single operation.

(7) *Type A*. This type is a floor level exit with a rectangular opening of not less than 42 inches wide by 72 inches high, with corner radii not greater than one-sixth of the width of the exit.

(8) *Type B*. This type is a floor level exit with a rectangular opening of not less than 32 inches wide by 72 inches high, with corner radii not greater than 6 inches.

(9) *Type C*. This type is a floor level exit with a rectangular opening of not less than 30 inches wide by 48 inches high, with corner radii not greater than one-third the width of the exit.

(b) *Step down distance*. Step down distance, as used in this section, means the actual distance between the bottom of the required opening and a usable foothold, extending out from the fuselage, that is large enough to be effective without searching by sight or feel.

(c) *Over-sized exits*. Openings larger than those specified in this section, whether or not of rectangular shape, may be used if the specified rectangular opening can be inscribed within the opening and the base of the inscribed rectangular opening meets the specified step-up and step-down heights.

(d) *Asymmetry.* Exits of an exit pair need not be diametrically opposite each other nor identical in size and location on both sides.

(e) *Uniformity.* Exits must be distributed as uniformly as possible, taking into account passenger distribution.

(f) *Location.*

(1) Each required passenger emergency exit must be accessible to the passengers and located where it will afford the most effective means of passenger evacuation.

(2) If only one floor level exit per side is prescribed, and the airplane does not have a tail cone or ventral emergency exit, the floor level exits must be in the rearward part of the passenger compartment unless another location affords a more effective means of passenger evacuation.

(3) Where more than one floor level exit per side is prescribed, at least one floor level exit per side must be located near each end of the cabin, except that this provision does not apply to combination cargo and passenger configurations.

(g) *Type and number required.* The maximum number of passenger seats permitted depends on the type and number of exits installed in each side of the fuselage. Except as provided in paragraphs (g)(1) through (g)(9) of this section, the maximum number of passenger seats permitted for each exit of a specific type installed in each side of the fuselage is as follows:

Type A.....	110
Type B.....	75
Type C.....	55
Type I.....	45
Type II.....	40
Type III.....	35
Type IV.....	9

(1) For a passenger seating configuration of 1 to 9 seats, there must be at least one Type IV or larger exit in each side of the fuselage. For airplanes on which the vertical location of the wing does not allow the installation of overwing exits, an exit of at least the dimensions of a Type III exit must be installed instead of each Type IV exit.

(2) For a passenger seating configuration of more than 9 seats, each exit must be a Type III or larger exit.

(3) For a passenger seating configuration of 10 to 19 seats, there must be at least one Type III or larger exit in each side of the fuselage.

(4) For a passenger seating configuration of 20 to 40 seats, there must be at least two exits, one of which must be a Type II or larger exit, in each side of the fuselage.

(5) For a passenger seating configuration of 41 to 110 seats, there must be at least two exits, one of which must be a Type I or larger exit, in each side of the fuselage.

(6) For a passenger seating configuration of more than 110 seats, the emergency exits in each side of the fuselage must include at least two Type I or larger exits in each side of the fuselage.

(7) The combined maximum number of passenger seats permitted for all Type III exits is 70, and the combined maximum number of passenger seats permitted for two Type III exits located within three passenger seat rows of each other is 65.

(8) If a Type A, Type B, or Type C exit is installed, there must be at least two Type C or larger exits in each side of the fuselage.

(9) If a passenger ventral or tail cone exit is installed and that exit provides at least the same rate of egress as a Type III exit with the airplane in the most adverse exit opening condition that would result from the collapse of one or more legs of the landing gear, an increase in the passenger seating configuration is permitted as follows:

(i) For a ventral exit, 12 additional passenger seats.

(ii) For a tail cone exit incorporating a floor level opening of not less than 20 inches wide by 60 inches high, with corner radii not greater than one-third the width of the exit, in the pressure shell and incorporating an approved assist means in accordance with § 25.809(f)(1), 25 additional passenger seats.

(iii) For a tail cone exit incorporating an opening in the pressure shell which is at least equivalent to a Type III emergency exit with respect to dimensions, step-up and step-down distance, and with the top of the opening not less than 56 inches from the passenger compartment floor, 15 additional passenger seats.

(h) *Excess exits.* Each emergency exit in the passenger compartment in excess of the minimum number of required emergency exits must meet the applicable requirements of § 25.809 through § 25.812, and must be readily accessible.

(i) *Ditching emergency exits for passengers.* Whether or not ditching certification is requested, ditching emergency exits must be provided in accordance with the following requirements, unless the emergency exits required by paragraph (g) of this section already meet them:

(1) For airplanes that have a passenger seating configuration of nine seats or less, excluding pilot seats, one

exit above the waterline in each side of the airplane, meeting at least the dimensions of a Type IV exit.

(2) For airplanes that have a passenger seating configuration of nine seats or less, excluding pilot seats, one exit above the waterline in a side of the airplane, meeting at least the dimensions of a Type III exit for each unit (or part of a unit) of 35 passenger seats, but not less than two such exits in the passenger cabin, with one on each side of the airplane. The passenger seat/exit ratio may be increased through the use of larger exits, or other means, provided it is shown that the evacuation capability during ditching has been improved accordingly.

(3) If it is impractical to locate side exits above the waterline, the side exits must be replaced by an equal number of readily accessible overhead hatches of not less than the dimensions of a Type III exit, except that for airplanes with a passenger configuration of 35 seats or less, excluding pilot seats, the two required Type III side exits need be replaced by only one overhead hatch.

6. By amending § 25.809 by revising the introductory text of paragraph (f), (f)(1), (f)(1)(ii) and (h) to read as follows:

§ 25.809 Emergency exit arrangement.

* * * * *

(f) Each landplane Type C exit plus all emergency exits of the other types (other than exits located over the wing) more than 6 feet from the ground with the airplane on the ground and the landing gear extended must have an approved means to assist the occupants in descending to the ground as follows:

(1) The assisting means for each passenger emergency exit must be a self supporting slide or equivalent; and, in the case of a Type A or Type B exit, it must be capable of carrying simultaneously two parallel lines of evacuees. In addition, the assisting means must be designed to meet the following requirements:

* * * * *

(ii) Except for assisting means installed at Type C exits, it must be automatically erected within 6 seconds after deployment is begun. Assisting means installed at Type C exits must be automatically erected within 10 seconds from the time opening means of the exit is actuated.

* * * * *

(h) If the place on the airplane structure at which the escape route required in § 25.803(e) terminates is more than 6 feet from the ground with the airplane on the ground and the landing gear extended, means must be provided to assist evacuees (who have

used the overwing exits) to reach the ground. If the escape route is over the flap, the height of the terminal edge must be measured with the flap in the takeoff or landing position, whichever is higher from the ground. The assisting means must be of such length that the lower end is self-supporting on the ground after collapse of any one or more landing gear legs and must be automatically erected within 10 seconds after actuation of the inflation system. For Type C exits located over the wings, assisting means must be provided irrespective of the distance above the ground with the airplane on the ground and the landing gear extended. Additionally, the assisting means must be automatically erected within 10 seconds from the time the opening means of the exit is actuated.

7. By amending § 25.811 by revising the introductory text of paragraphs (e)(2) and (e)(4) to read as follows:

§ 25.811 Emergency exit marking.

- (e) (2) Each Type A, Type B, Type C or Type I passenger emergency exit operating handle must—
(4) Each Type A, Type B, Type C, Type I, or Type II passenger emergency

exit with a locking mechanism released by rotary motion of the handle must be marked—

8. By amending § 25.812 by revising paragraph (g)(1)(ii) to read as follows:

§ 25.812 Emergency lighting.

- (g) (1) (ii) Not less than 0.05 foot-candle (measured normal to the direction of incident light) along the 30 percent of the slip-resistant portion of the escape route required in § 25.803(e) that is farthest from the exit for the minimum required width of the escape route.

9. By amending § 25.813 by revising paragraphs (a) and (b) to read as follows:

§ 25.813 Emergency exit access.

(a) There must be a passageway between individual passenger areas, and leading from the nearest main aisle to each Type A, Type B, Type C, Type I, and Type II emergency exit. If two or more main aisles are provided, there must be a cross aisle leading directly to each passageway between the exit and the nearest main aisle. Each passageway leading to a Type A and Type B exit must be unobstructed and at

least 36 inches wide. Other passageways and cross aisles must be unobstructed and at least 20 inches wide. Unless there are two or more main aisles, each Type A and Type B exit must be located so that there is passenger flow along the main aisle to that exit from both the forward and aft direction.

(b) Adequate space to allow crewmember(s) to assist in the evacuation of passengers must be provided as follows:

- (1) The assist space must not reduce the unobstructed width of the passageway below that required for the exit.
(2) For each Type A and Type B exit, assist space must be provided at each side of the exit regardless of whether the exit must comply with § 25.809(f).
(3) For any other type exit that must comply with § 25.809(f), space must be provided on at least one side of the passageway.

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Thomas E. McSweeney, Acting Director, Aircraft Certification Service.

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