

# Proposed Rules

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This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 25

[Docket No. NM436; Special Conditions No. 25-10-01-SC]

#### Special Conditions: Boeing Model 747-8 Airplanes, Systems and Data Networks Security—Isolation or Protection From Unauthorized Passenger Domain Systems Access

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed special conditions.

**SUMMARY:** This action proposes special conditions for the Boeing Model 747-8 airplane. This airplane will have novel or unusual design features associated with connectivity of the passenger domain computer systems to the airplane critical systems and data networks. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for these design features. These proposed special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

**DATES:** Comments must be received on or before January 24, 2011.

**ADDRESSES:** Comments on this proposal may be mailed in duplicate to: Federal Aviation Administration, Transport Airplane Directorate, *Attention:* Rules Docket (ANM-113), Docket No. NM436, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; or delivered in duplicate to the Transport Airplane Directorate at the above address. All comments must be marked Docket No. NM436. Comments may be inspected in the Rules Docket weekdays, except Federal holidays, between 7:30 a.m. and 4 p.m.

**FOR FURTHER INFORMATION CONTACT:** Will Struck, FAA, Airplane and Flight Crew Interface Branch, ANM-111, Transport

Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2764; facsimile (425) 227-1149.

#### SUPPLEMENTARY INFORMATION:

##### Comments Invited

The FAA invites interested persons to participate in this rulemaking by submitting written comments, data, or views. The most helpful comments reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data. We ask that you send us two copies of written comments.

We will file in the docket all comments we receive as well as a report summarizing each substantive public contact with FAA personnel concerning these proposed special conditions. The docket is available for public inspection before and after the comment closing date. If you wish to review the docket in person, go to the address in the **ADDRESSES** section of this notice between 7:30 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

We will consider all comments we receive on or before the closing date for comments. We will consider comments filed late if it is possible to do so without incurring expense or delay. We may change the proposed special conditions based on comments we receive.

If you want the FAA to acknowledge receipt of your comments on this proposal, include with your comments a pre-addressed, stamped postcard on which the docket number appears. We will stamp the date on the postcard and mail it back to you.

##### Background

On November 4, 2005, The Boeing Company, P.O. Box 3707, Seattle, WA 98124, applied for an amendment to Type Certificate Number A20WE to include the new Model 747-8 passenger airplane. The Model 747-8 is a derivative of the 747-400. The Model 747-8 is a four-engine jet transport airplane that will have a maximum takeoff weight of 975,000 pounds and new General Electric GENx-2B67 engines. The Model 747-8 will have two flight crew and the capacity to carry 660 passengers.

#### Type Certification Basis

Under the provisions of Title 14, Code of Federal Regulations (14 CFR) 21.17, Boeing must show that the Model 747-8 (hereafter referred to as the 747-8) meets the applicable provisions of part 25, as amended by Amendments 25-1 through 25-117, except for §§ 25.809(a) and 25.812, which will remain at Amendment 25-115. These regulations will be incorporated into Type Certificate No. A20WE after type certification approval of the 747-8.

In addition, the certification basis includes other regulations, special conditions and exemptions that are not relevant to these proposed special conditions. Refer to Type Certificate No. A20WE for a complete description of the certification basis for this model airplane.

If the Administrator finds that the applicable airworthiness regulations (*i.e.*, 14 CFR part 25) do not contain adequate or appropriate safety standards for the 747-8 because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

In addition to the applicable airworthiness regulations and special conditions, the 747-8 must comply with the fuel vent and exhaust emission requirements of 14 CFR part 34 and the noise certification requirements of 14 CFR part 36.

Special conditions, as defined in § 11.19, are issued under § 11.38, and become part of the type certification basis under § 21.101.

Special conditions are initially applicable to the model for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same or similar novel or unusual design feature, or should any other model already included on the same type certificate be modified to incorporate the same or similar novel or unusual design feature, the special conditions would also apply to the other model under § 21.101.

#### Novel or Unusual Design Features

The Boeing Model 747-8 airplane will incorporate the following novel or unusual design features: Digital systems architecture composed of several connected networks. The proposed network architecture would be used for a diverse set of functions, including:

1. Flight-safety related control, communication, and navigation systems (Aircraft Control Domain),
2. Airline business and administrative support (Airline Information Domain),
3. Passenger information and entertainment systems (Passenger Entertainment Domain), and
4. The capability to allow access to or by external network sources.

### Discussion

The proposed Model 747-8 integrated network configuration may allow increased connectivity with external network sources and will have more interconnected networks and systems, such as passenger entertainment and information services, than previous 747-8 airplane models. This may allow the exploitation of network security vulnerabilities and increase risks potentially resulting in unsafe conditions for the airplane and its occupants. This potential exploitation of security vulnerabilities may result in intentional or unintentional destruction, disruption, degradation, or exploitation of data and systems critical to the safety and maintenance of the airplane. The existing regulations and guidance material did not anticipate these types of system architectures. Furthermore, 14 CFR regulations and current system safety assessment policy and techniques do not address potential security vulnerabilities which could be exploited by unauthorized access to airplane networks and servers. Therefore, these special conditions and a means of compliance are proposed to ensure that the security (*i.e.*, confidentiality, integrity, and availability) of airplane systems is not compromised by unauthorized wired or wireless electronic connections between airplane systems and networks and the passenger domain.

### Applicability

As discussed above, these proposed special conditions are applicable to Boeing Model 747-8 airplanes. Should Boeing apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design features, these proposed special conditions would apply to that model as well under the provisions of § 21.101.

### Conclusion

This action affects only certain novel or unusual design features of the Boeing Model 747-8 airplane. It is not a rule of general applicability.

### List of Subjects in 14 CFR Part 25

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The authority citation for these Special Conditions is as follows:

**Authority:** 49 U.S.C. 106(g), 40113, 44701, 44702, 44704.

### The Proposed Special Conditions

Accordingly, the Federal Aviation Administration (FAA) proposes the following special condition as part of the type certification basis for the Boeing Model 747-8 airplane.

The design must prevent all inadvertent or malicious changes to, and all adverse impacts upon, all systems, networks, hardware, software, and data in the Aircraft Control Domain and in the Airline Information Domain from all points within the Passenger Information and Entertainment Domain.

Issued in Renton, Washington, on November 30, 2010.

**Jeffrey E. Duven,**

*Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.*

[FR Doc. 2010-30993 Filed 12-8-10; 8:45 am]

**BILLING CODE 4910-13-P**

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 71

[Docket No. FAA-2010-1180; Airspace Docket No. 10-AWP-15]

### Proposed Establishment of Area Navigation (RNAV) Routes; Western United States

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** This action proposes to establish seven High Altitude Area Navigation (RNAV) routes in the Western United States (U.S.). These new routes would provide pilots and air traffic controllers with efficient direct routes enhancing safety and improving the efficient use of the National Airspace System (NAS).

**DATES:** Comments must be received on or before January 24, 2011.

**ADDRESSES:** Send comments on the proposal to the U.S. Department of Transportation, Docket Operations, M-30, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001; *telephone:* (202) 366-9826. You must identify FAA Docket No. FAA-2010-1180 and Airspace Docket No. 10-AWP-15 at the beginning of your comments. You may

also submit comments through the Internet at <http://www.regulations.gov>.

**FOR FURTHER INFORMATION CONTACT:** Ken McElroy, Airspace Regulation and ATC Procedures Group, Office of Mission Support Services, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; *telephone:* (202) 267-8783.

### SUPPLEMENTARY INFORMATION:

#### Comments Invited

Interested parties are invited to participate in this proposed rulemaking by submitting such written data, views, or arguments as they may desire. Comments that provide the factual basis supporting the views and suggestions presented are particularly helpful in developing reasoned regulatory decisions on the proposal. Comments are specifically invited on the overall regulatory, aeronautical, economic, environmental, and energy-related aspects of the proposal.

Communications should identify both docket numbers (FAA Docket No. FAA-2010-1180 and Airspace Docket No. 10-AWP-15) and be submitted in triplicate to the Docket Management Facility (*see ADDRESSES* section for address and phone number). You may also submit comments through the Internet at <http://www.regulations.gov>.

Commenters wishing the FAA to acknowledge receipt of their comments on this action must submit with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to FAA Docket No. FAA-2010-1180 and Airspace Docket No. 10-AWP-15." The postcard will be date/time stamped and returned to the commenter.

All communications received on or before the specified closing date for comments will be considered before taking action on the proposed rule. The proposal contained in this action may be changed in light of comments received. All comments submitted will be available for examination in the public docket both before and after the closing date for comments. A report summarizing each substantive public contact with FAA personnel concerned with this rulemaking will be filed in the docket.

#### Availability of NPRMs

An electronic copy of this document may be downloaded through the Internet at <http://www.regulations.gov>. Recently published rulemaking documents can also be accessed through the FAA's Web page at [http://www.faa.gov/air\\_traffic/publications/airspace\\_amendments/](http://www.faa.gov/air_traffic/publications/airspace_amendments/).