

construction, reconstruction, or significant expansion of the runway or taxiway began on or after January 1, 1988.

(b) Each certificate holder must maintain its safety areas as follows:

(1) Each safety area must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations.

(2) Each safety area must be drained by grading or storm sewers to prevent water accumulation.

(3) Each safety area must be capable under dry conditions of supporting snow removal and aircraft rescue and firefighting equipment and of supporting the occasional passage of aircraft without causing major damage to the aircraft.

(4) No objects may be located in any safety area, except for objects that need to be located in a safety area because of their function. These objects must be constructed, to the extent practical, on frangibly mounted structures of the lowest practical height, with the frangible point no higher than 3 inches above grade.

(c) FAA Advisory Circulars contain methods and procedures for the configuration and maintenance of safety areas acceptable to the Administrator.

#### § 139.311 Marking, signs, and lighting.

(a) *Marking.* Each certificate holder must provide and maintain marking systems for air carrier operations on the airport that are authorized by the Administrator and consist of at least the following:

(1) Runway markings meeting the specifications for takeoff and landing minimums for each runway.

(2) A taxiway centerline.

(3) Taxiway edge markings, as appropriate.

(4) Holding position markings.

(5) Instrument landing system (ILS) critical area markings.

(b) *Signs.* (1) Each certificate holder must provide and maintain sign systems for air carrier operations on the airport that are authorized by the Administrator and consist of at least the following:

(i) Signs identifying taxiing routes on the movement area.

(ii) Holding position signs.

(iii) Instrument landing system (ILS) critical area signs.

(2) Unless otherwise authorized by the Administrator, the signs required by paragraph (b)(1) of this section must be internally illuminated at each Class I, II, and IV airport.

(3) Unless otherwise authorized by the Administrator, the signs required by paragraphs (b)(1)(ii) and (b)(1)(iii) of this section must be internally illuminated at each Class III airport.

(c) *Lighting.* Each certificate holder must provide and maintain lighting systems for air carrier operations when the airport is open at night, during conditions below visual flight rules (VFR) minimums, or in Alaska, during periods in which a prominent unlighted object cannot be seen from a distance of 3 statute miles or the sun is more than six degrees below the horizon. These lighting systems must be authorized by the Administrator and consist of at least the following:

(1) Runway lighting that meets the specifications for takeoff and landing minimums, as authorized by the Administrator, for each runway.

(2) One of the following taxiway lighting systems:

(i) Centerline lights.

(ii) Centerline reflectors.

(iii) Edge lights.

(iv) Edge reflectors.

(3) An airport beacon.

(4) Approach lighting that meets the specifications for takeoff and landing minimums, as authorized by the Administrator, for each runway, unless provided and/or maintained by an entity other than the certificate holder.

(5) Obstruction marking and lighting, as appropriate, on each object within its authority that has been determined by the FAA to be an obstruction.

(d) *Maintenance.* Each certificate holder must properly maintain each marking, sign, or lighting system installed and operated on the airport. As used in this section, to “properly maintain” includes cleaning, replacing, or repairing any faded, missing, or non-functional item; keeping each item unobscured and clearly visible; and ensuring that each item provides an accurate reference to the user.

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(e) *Lighting interference.* Each certificate holder must ensure that all lighting on the airport, including that for aprons, vehicle parking areas, roadways, fuel storage areas, and buildings, is adequately adjusted or shielded to prevent interference with air traffic control and aircraft operations.

(f) *Standards.* FAA Advisory Circulars contain methods and procedures for the equipment, material, installation, and maintenance of marking, sign, and lighting systems listed in this section that are acceptable to the Administrator.

(g) *Implementation.* The sign systems required under paragraph (b)(3) of this section must be implemented by each holder of a Class III Airport Operating Certificate not later than 36 consecutive calendar months after June 9, 2004.

### § 139.313 Snow and ice control.

(a) As determined by the Administrator, each certificate holder whose airport is located where snow and icing conditions occur must prepare, maintain, and carry out a snow and ice control plan in a manner authorized by the Administrator.

(b) The snow and ice control plan required by this section must include, at a minimum, instructions and procedures for—

(1) Prompt removal or control, as completely as practical, of snow, ice, and slush on each movement area;

(2) Positioning snow off the movement area surfaces so all air carrier aircraft propellers, engine pods, rotors, and wing tips will clear any snowdrift and snowbank as the aircraft's landing gear traverses any portion of the movement area;

(3) Selection and application of authorized materials for snow and ice control to ensure that they adhere to snow and ice sufficiently to minimize engine ingestion;

(4) Timely commencement of snow and ice control operations; and

(5) Prompt notification, in accordance with §139.339, of all air carriers using the airport when any portion of the movement area normally available to them is less than satisfactorily cleared for safe operation by their aircraft.

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(c) FAA Advisory Circulars contain methods and procedures for snow and ice control equipment, materials, and removal that are acceptable to the Administrator.

### § 139.315 Aircraft rescue and fire-fighting: Index determination.

(a) An index is required by paragraph (c) of this section for each certificate holder. The Index is determined by a combination of—

(1) The length of air carrier aircraft and

(2) Average daily departures of air carrier aircraft.

(b) For the purpose of Index determination, air carrier aircraft lengths are grouped as follows:

(1) Index A includes aircraft less than 90 feet in length.

(2) Index B includes aircraft at least 90 feet but less than 126 feet in length.

(3) Index C includes aircraft at least 126 feet but less than 159 feet in length.

(4) Index D includes aircraft at least 159 feet but less than 200 feet in length.

(5) Index E includes aircraft at least 200 feet in length.

(c) Except as provided in §139.319(c), if there are five or more average daily departures of air carrier aircraft in a single Index group serving that airport, the longest aircraft with an average of five or more daily departures determines the Index required for the airport. When there are fewer than five average daily departures of the longest air carrier aircraft serving the airport, the Index required for the airport will be the next lower Index group than the Index group prescribed for the longest aircraft.

(d) The minimum designated index shall be Index A.

(e) A holder of a Class III Airport Operating Certificate may comply with this section by providing a level of safety comparable to Index A that is approved by the Administrator. Such alternate compliance must be described in the ACM and must include:

(1) Pre-arranged firefighting and emergency medical response procedures, including agreements with responding services.

(2) Means for alerting firefighting and emergency medical response personnel.