

## EAC No. 139-49

## **Table Of Contents**

## **EAC139-49 RUNWAY END SAFETY AREAS**

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1. Where a runway end safety area is provided in accordance with Subpart F of ECAR Part 139, consideration should be given to providing an area long enough to contain overruns and undershoots resulting from a reasonably probable combination of adverse operational factors. On a precision approach runway, the ILS localizer is normally the first upstanding obstacle, and the runway end safety area should extend up to this facility. In other circumstances the first upstanding obstacle may be a road, a railroad or other constructed or natural feature. The provision of a runway end safety area should take such obstacles into consideration.

2. Where provision of a runway end safety area would be particularly prohibitive to implement, consideration would have to be given to reducing some of the declared distances of the runway for the provision of a runway end safety area and installation of an arresting system.

3. Research programmes, as well as evaluation of actual aircraft overruns into arresting systems, have demonstrated that the performance of some arresting systems can be predictable and effective in arresting aircraft overruns.

4. Demonstrated performance of an arresting system can be achieved by a validated design method, which can predict the performance of the system. The design and performance should be based on the type of aircraft anticipated to use the associated runway that imposes the greatest demand upon the arresting system.

5. The design of an arresting system must consider multiple aircraft parameters, including but not limited to, allowable aircraft gear loads, gear configuration, tire contact pressure, aircraft center of gravity and aircraft speed. Accommodating undershoots must also be addressed. Additionally, the design must allow the safe operation of fully loaded rescue and fire fighting vehicles, including their ingress and egress.

6. The information relating to the provision of a runway end safety area and the presence of an arresting system should be published in the AIP.

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7. Additional information is contained in the EAC 139-9.

Figure A 1: Runway end safety area for a runway where the code number is 3 or 4.