

STUDY TOPIC WRD
WRONG RUNWAY DEPARTURES
CICTT RISK AREAS RE, RI, LOC-I, NAV

SECTION I: SE OVERVIEW

Study Topic Overview Summary Following a wrong runway departure accident on August 27, 2006, in Lexington, Kentucky, ASIAs initiated a study to gather wrong runway event reports from several databases and found 117 reports of attempted or actual wrong runway takeoffs involving airplanes operating under 14 CFR part 121 between 1981 and 2006. A panel from CAST member organizations reviewed the reports to identify common factors and proposed mitigations. After the CAST panel eliminated duplicate reports and reports without sufficient information to determine contributing factors, 80 reports remained. The panel review identified several contributing factors, including crew resource management (CRM) deficiencies, airport geometry/complexity issues, human factors issues, and communications deficiencies. CAST adopted seven SEs as a result of the study, five of which were directed at airports and air traffic control.

SE Objective The purpose of this SE is to implement enhancements to runway and taxiway signage, marking, and lighting at airports identified as high-threat airports in the Wrong Runway Departure study.

Enhanced taxiway centerline markings are now mandatory at certificated airports with at least 1.5 million annual enplanements. Surface Movement Guidance Control Systems (SMGCS) plans are required for all airports that operate below 1,200 RVR. Runway Status Lights (RSL) are part of the SMGCS plans but have been used at airports to supplement existing lighting as a safety enhancement.

Primary Risks Mitigated Runway Excursion (RE), Runway Incursion (RI), Loss of Control-Inflight (LOC-I), Navigation Errors (NAV)

Action	Organization(s)	Strategy	Description	Due Date
Action 1	FAA AAS-300	Research, Infrastructure	Review existing sign and marking plans at all high-threat airports through local Runway Safety Action Teams to identify potential hazards, evaluate and mitigate risks, and document the process for followup.	N/A
<i>Comments: CAST closed this action based on FAA Call to Action and FAA Airport Engineering (AAS-100) Engineering Brief No. 72A.</i>				

See section II of this SE for detailed action descriptions.

References: The detailed analysis in the Wrong Runway Departures Final Report (August 2007) is available through CAST.



STUDY TOPIC WRD WRONG RUNWAY DEPARTURES
CICTT RISK AREAS RE, RJ, LOC-I, NAV

TABLE OF CONTENTS

SECTION II: DETAILED ACTION INFORMATION

PAGE 3

SE 178 consists of one action, which this section lays out in detail.

- **Action 1 (FAA AAS-300)**PAGE 3
Review existing sign and marking plans at all high-threat airports

SECTION III: SUPPLEMENTAL INFORMATION

PAGE 4

This section contains the following additional information that may be of interest to implementers:

- Source Study
- Related Initiatives
- Total Cost / Resource Overview

SECTION IV: REVISION LOG

PAGE 5

This section provides a history of revisions to this SE.



STUDY TOPIC WRD WRONG RUNWAY DEPARTURES
CICTT RISK AREAS RE, RI, LOC-I, NAV

SECTION II: DETAILED ACTION INFORMATION

Action 1: Review existing sign and marking plans at all high-threat airports

Primary Implementer FAA Office Airport Safety and Standards, Airport Safety and Operations (FAA AAS-300)

Action Objective Review existing sign and marking plans at all high-threat airports through local Runway Safety Action Teams (RSAT) to identify potential hazards, evaluate and mitigate risks, and document the process for followup.

Action Timeline Flow Time: N/A
Due Date: N/A

Timeline/Flow for Future Adopters TBD

CAST Lead FAA AAS-300

#	Organization(s)	Detailed Steps
1a	FAA AAS-300	Conduct reviews, coordinating with the Runway Safety Office to attend RSAT meetings to address airport "hot spots." a. Resources: Regional Lead, Airport Certification Safety Inspector (ACSI) and Runway Safety Office manager. b. Timeframe: Ongoing. c. Actions: Update airport sign and marking plans to incorporate RSAT recommended changes.
<i>Complete.</i>		
1b	FAA AAS-300	Implement changes identified and approved by FAA AAS to airport sign and marking plans. Develop an implementation strategy through RSAT meetings. a. Resources: Regional Lead, ACSI, and Runway Safety Office Manager. b. Timeframe: Ongoing. c. Actions: Determine implementation strategy tailored to individual airport needs and resources.
<i>Complete per FAA Call to Action and FAA Airport Engineering (AAS-100) Engineering Brief No. 72A..</i>		

Notes

Programmatic Approach:
 Product Development. This action requires validation that it will be compatible with the National Airspace System (NAS) and that it will address common threats found at complex airports.
 Implementation Strategy. RSAT will agree on recommended changes and implementation strategies.
 Organizational Strategy. Manager, AAS-300, empowers regional ACSIs to attend RSAT meetings and participate as needed.
 Implementation Activities. FAA AAS will work closely with the Runway Safety Office to evaluate high-threat areas and make recommendations for improving the conspicuity of markings, signs, and/or lighting where needed.

SECTION II

Note: See Section III for detailed costs and resources.



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CICTT RISK AREAS RE, RJ, LOC-I, NAV

SECTION III: SUPPLEMENTAL INFORMATION

Source Study Wrong Runway Departures Final Report (August 2007)

Related Initiatives N/A

Total Cost N/A

Action 1 N/A

	Organization	Resources Needed
<i>Direct Resource Overview – Government</i>	N/A	N/A

	Organization	Resources Needed
<i>Direct Resource Overview – Industry</i>	N/A	N/A

Indirect Resource Overview The organizations identified in this section are not expected to incur direct costs associated with implementing this SE, but they may incur indirect costs within their normal line of work.

Organization	Description
N/A	N/A

SECTION III



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CICTT RISK AREAS RE, RI, LOC-I, NAV

SECTION IV: REVISION LOG

Major revisions (whole numbers) represent CAST-approved changes to SE language. Minor revisions (decimals) represent minor changes to target dates or completion notes that do not affect implementer actions.

Revision	Date	Description
2.0	09/17/2018	New SE format. Content reorganized and terminology updated. No substantive changes.
1.0	12/06/2017	
Original	2007	CAST adopted SE 178.

SECTION IV

