

### SECTION I: SE OVERVIEW

**Study Topic Overview Summary**

Throughout the National Airspace System (NAS), the risk for approach and landing misalignment (ALM) has been identified. This risk includes aircraft approaching or landing on a surface other than what they were cleared for. These other surfaces included the wrong runway, taxiway, or airport. While these events have typically been caught soon enough to prevent an adverse outcome, there have been high-profile events, including an event involving an approach to a taxiway on July 7, 2017, in San Francisco, California. This ultimately led CAST to charter the ALM Joint Safety Analysis and Implementation Team (JSAIT) to analyze misalignments and determine mitigations based on Aviation Safety Information Analysis and Sharing (ASIAS) data from sources such as Aviation Safety Action Program (ASAP) reports, Air Traffic Safety Action Program (ATSAP) reports, and Mandatory Occurrence Reports (MOR). CAST adopted four SEs as a result of the study, two of which are directed toward aircraft operators and original equipment manufacturers (OEM), while the remaining two are directed toward air traffic control (ATC). CAST also adopted one research and development (R&D) SE, which is directed toward aircraft operators and OEMs.

**SE Objective** CAST recommends utilizing air traffic procedures and policies lessons learned and adapt these best practices.

**Primary Risks Mitigated** Ground Collision (GCOL) and Runway Incursion (RI)

Action	Organization(s)	Strategy	Description	Due Date
<a href="#">Action 1</a>	FAA Air Traffic Organization (ATO)	Collaboration	Establish a working group for testing the expansion of the runway assignment plan.	2/29/2024
<i>Comments: None</i>				
<a href="#">Action 2</a>	FAA ATO	Procedures	Develop procedures to ensure operable runway alignment equipment is utilized for visual approaches.	11/30/2024
<i>Comments: None</i>				

*See section II of this SE for detailed action descriptions.*

**References:** The detailed analysis in the ALM JSAIT Final Report is available through CAST.



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*SE 234 consists of two actions, which this section lays out in detail.*

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Establish a working group for testing the expansion of the runway assignment plan
- **Action 2 (FAA ATO, FAA AJI, FAA AJV, FAA AJT, NATCA) .....PAGE 4**  
Utilize operable runway alignment equipment

#### SECTION III: SUPPLEMENTAL INFORMATION

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*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

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*This section provides a history of revisions to this SE.*



SECTION II: DETAILED ACTION INFORMATION

Action 1: Establish a working group for testing the expansion of the runway assignment plan

Primary Implementer **FAA Air Traffic Organization (ATO)**

Action Objective Establish a workgroup to identify airports with similar layouts and numbers of operations to Salt Lake City International Airport (KSLC), Salt Lake City, Utah, for testing the expansion of the runway assignment plan.

Action Timeline Flow Time: 27 months  
 o 1a—9 months  
 o 1b—6 months  
 o 1c—12 months

Due Date: 2/29/2024

Timeline/Flow for Future Adopters N/A

CAST Lead FAA Safety and Technical Training (AJT), National Air Traffic Controllers Association (NATCA)

#	Organization(s)	Detailed Steps
1a	FAA ATO Office of Terminal Services (AJT), FAA AJI, NATCA	Establish a collaborative workgroup to identify the existing best practices, such as the KSLC runway assignment plan, and a list of similar-size airports with similar operations for best practices implementation testing.
1b	FAA AJT, FAA AJI, NATCA	Create a template for applying the best practices at the identified airports. Identify what they did at air traffic facilities and air carriers. Include development of published approach guidance, like an instrument landing system (ILS) Precision Runway Monitor (PRM) instructions page.
1c	FAA AJT, FAA AJI, NATCA	Communicate with similar-size airports and affected air carriers; provide results from KSLC runway assignment plan.

Notes

Note: See section III for detailed costs and resources.



SECTION II: DETAILED ACTION INFORMATION

**Action 2: Develop procedures to ensure operable runway alignment equipment is utilized for visual approaches**

*Primary Implementer* **FAA Air Traffic Organization (ATO)**

*Action Objective* Develop a method that ensures arrivals utilize the operable runway alignment equipment, such as an instrument landing system (ILS), when conducting visual approaches.

*Action Timeline* Flow Time: 36 months  
 o 2a—12 months  
 o 2b—24 months

Due Date: 11/30/2024

*Timeline/Flow for Future Adopters* N/A

*CAST Lead* FAA Safety and Technical Training (AJI), National Air Traffic Controllers Association (NATCA)

#	Organization(s)	Detailed Steps
2a	FAA AJI, FAA Mission Support (AJV), FAA AJT, NATCA	Establish a collaborative workgroup to develop a method that ensures arrivals utilize the operable runway alignment equipment, such as an instrument landing system (ILS), when conducting visual approaches.
2b	FAA AJI, FAA AJV, FAA AJT, NATCA	FAA ATO will provide methods to air traffic facilities that would ensure arrivals use the operable runway alignment equipment, such as an ILS, when conducting visual approaches. The air traffic facilities will then have the option to implement the practice to verify correct alignment to manage misalignment risk.

*Notes*

Note: See section III for detailed costs and resources.



### SECTION III: SUPPLEMENTAL INFORMATION

**Source Study** Approach and Landing Misalignment (ALM) Joint Safety Analysis and Implementation Team (JSAIT)

**Related Initiatives** None

**Total Cost<sup>1</sup>** **\$14,375,000** *Note: For labor, 1 Full Time Equivalent (FTE) = \$250,000*

	Organization	Resources Needed
<i>Direct Resource Overview—Government</i>	FAA Air Traffic Organization (ATO)	<ul style="list-style-type: none"> <li>40 FTE</li> </ul>

	Organization	Resources Needed
<i>Direct Resource Overview—Industry</i>	Air Carriers	<ul style="list-style-type: none"> <li>17.5 (0.25 FTE per air carrier, per airport to evaluate impact of new procedures)</li> </ul>

**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
Air carriers	Projections above assume individual air carriers will implement appropriate changes as part of their regular 10-9 chart update cycles.
Air carriers	Project requires air carrier data analysis to identify the airports for implementation.

<sup>1</sup> Based on a tentative list of test facilities (Dallas Love Field (KDAL) in Dallas, Texas, Memphis International Airport (KMEM) in Shelby County, Tennessee, Louisville International Airport (KDF) in Louisville, Kentucky, and Seattle–Tacoma International Airport (KSEA) in SeaTac, Washington) for the Runway Assignment Plan.



### 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
0.3	08/04/2022	Administrative change to clarify description of Action 2 in Section 1 and the corresponding title in Section 2.
0.2	03/24/2022	Administrative change to correct Strategy field in— Action 1 in Section 1. Action 2 in Section 1.
0.1	12/20/2021	Administrative change to correct due date inconsistency in Action 1.
Original	12/2/2021	<i>Start date based on CAST adoption.</i>

