



**U.S. DEPARTMENT OF TRANSPORTATION**  
**FEDERAL AVIATION ADMINISTRATION**  
National Policy

**ORDER**  
**5200.11**

Effective Date:  
08/30/2010

**SUBJ:** FAA Airports (ARP) Safety Management System

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A Safety Management System (SMS) provides a consistent means of assessing safety risks. It does this through an integrated Safety Policy, a functioning Safety Risk Management (SRM) approach, a Safety Assurance model that identifies performance targets and facilitates continuous improvement, and a program of Safety Promotion, including clear communications.

Through rulemaking, the Office of Airports (ARP) is developing SMS standards for airports certificated under 14 Code of Federal Regulations (CFR) Part 139, Certification of Airports. This effort will increase safety at individual airports and harmonize with international standards.

The principles of an SMS are important to all safety-focused organizations, not only those regulated by the Federal Aviation Administration (like certificated airports). SMS has the ability to identify and address safety issues before they become hazards and thus increase system safety. FAA Order 8000.369, Safety Management System Guidance, commits the FAA to applying SMS throughout the FAA (also referred to as "the Agency"). This process began with the Air Traffic Organization and will include the Aviation Safety (AVS) and ARP lines of business (LOBs). By putting SMS into practice, the FAA continues its leading role in safety management.

This Order provides the basis for implementing SMS within ARP. It describes the roles and responsibilities of ARP management and staff as well as other LOBs that will contribute to the ARP SMS. ARP will supplement this Order with individual programmatic policy and guidance.

The Associate Administrator for Airports has overall responsibility for SMS within ARP. The Office of Airport Safety and Standards (AAS) will be responsible for implementing it, and every ARP employee will be responsible for putting it into practice.

A handwritten signature in black ink, appearing to read "Catherine M. Lang".

Catherine M. Lang  
Acting Associate Administrator  
Airports

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## Chapter 1. General Information

**1-1. Purpose of This Order.** This Order defines Safety Management System (SMS) requirements for the FAA's Airports (ARP) line of business. It identifies the responsibilities and authority of all offices within ARP for integrating the SMS into our programs. It also explains the roles other LOBs play in the ARP SMS.

**1-2. Audience.** This Order applies to all ARP personnel and applicable offices in the FAA Air Traffic Organization (ATO) and Aviation Safety (AVS) as well as other FAA offices as needed.

**1-3. Availability.** You can find this Order on the FAA Employees website at [https://employees.faa.gov/tools\\_resources/orders\\_notices/](https://employees.faa.gov/tools_resources/orders_notices/).

**1-4. Effective Date.** This Order is effective on signature. However, implementation will begin June 1, 2011. Projects, approvals, and standards started after June 1, 2011, must comply with the Safety Risk Management (SRM) requirements in this Order and may require the full support of applicable LOBs in completing related Safety Assessments.<sup>1</sup>

Specifically, after this date, SRM requirements will apply to the actions listed under paragraph 1-4a at the categories of airports listed under paragraph 1-4b:

**a. SRM Applicability (see paragraph 4-3 for more complete information).**

(1) Submittal of new or revised Airport Layout Plans (ALPs) for FAA approval. SRM requirements do not apply to ALP submittals received prior to the dates identified for each category of airport listed under paragraph 1-4b.

(2) FAA airspace determinations for construction safety plans in accordance with JO Order 7400.2, Procedures for Handling Airspace Matters.<sup>2</sup>

(3) FAA airspace determinations for airport sponsor requests for non-construction airport changes submitted by FAA Form 7480-1, Notice of Landing Area Proposal. See paragraph 4-3f.

(4) FAA approval of Part 150 noise compatibility programs and program changes that may affect aviation safety.

(5) FAA approval of an airport sponsor's request for a Modification of Standards.

(6) Final FAA approval of new and updated airport planning, design, or construction standards.

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<sup>1</sup> Within ARP, an SRM review and related documentation is called a Safety Assessment.

<sup>2</sup> Safety Assessments are required for construction safety plans submitted after June 1, 2011. However, ARP Regional and Headquarters Offices are encouraged to apply these standards earlier as part of training/implementation.

**b. Sequence of SRM Applicability.**

- (1) Beginning June 1, 2011, all Large, Medium, and Small hub airports;
- (2) Beginning June 1, 2012, all Part 139 certificated airports;
- (3) Beginning June 1, 2013, all remaining towered airports; and
- (4) Beginning June 1, 2014, all remaining airports in the National Plan of Integrated Airport Systems (NPIAS).

The Regional Airports Office or Airport District Office (ADO) may elect to conduct SRM at airports earlier than the above schedule in cases where it is deemed beneficial and appropriate.

The period between signature and implementation will allow ARP to train staff, communicate with industry on the new requirements, and allow other LOBs to develop guidance for their employees. SMS training for ARP employees will begin by December 2010 and continue through May 2011.

**1-5. Importance of SMS.** SMS is a set of defined processes that will enable ARP to adapt to changes and continuously improve airport safety. Organizations that employ SMS can identify and mitigate system hazards and risks without a negative effect on the overall mission. ARP affirms its continued commitment to safety by introducing and upholding SMS standards in this Order.

**1-6. General Scope.** This Order applies to all standards and approvals by ARP except:

a. External SMS – Regulation of airports under 14 Code of Federal Regulations (CFR) Part 139, Certification of Airports.<sup>3</sup> ARP is engaged in a rulemaking project to develop standards for implementing SMS at certificated airports. Once the Agency completes its rulemaking under Part 139, ARP will synchronize its SMS efforts both internally and externally to the extent practicable. This Order applies to applicable Federal approvals and projects at certificated airports regardless of the rulemaking.

b. Occupational Safety and Health Administration requirements and FAA Order 3900.19, FAA Occupational Safety and Health Program.

**1-7. Integration and Coordination.**

a. FAA Order 8000.369, Safety Management System Guidance, provides the FAA standard for SMS guidance throughout the Agency.

b. The ARP SMS is one of many the FAA and its industry partners are introducing. While each SMS addresses organization-specific needs, they must all work together under a

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<sup>3</sup> This Order defines the FAA's responsibilities related to safety risk management associated with airport development projects, including all airports included in the National Plan of Integrated Airport Systems (NPIAS), regardless of whether the airport is certificated under Part 139.

common framework to ensure an efficient and effective approach. The ARP SMS will support interaction among organizations critical for achieving our common safety goals, such as:

- (1) ATO, including Terminal, Technical Operations, System Operations–Flight Procedures, Service Centers, and Safety;
- (2) AVS, including Flight Standards;
- (3) Airport sponsors and industry groups; and
- (4) Aircraft operators and manufacturers (for issues related to planning and design standards).

c. As required by FAA Order 8000.369, the FAA Safety Management System Committee provides advice and guidance to LOBs regarding development, implementation, and interoperability of SMS throughout the FAA. The Committee also ensures harmonization of all FAA SMS efforts and serves as a forum for discussing Safety Policy, Safety Risk Management, Safety Assurance, and Safety Promotion across all FAA organizations.

**1-8. Related Documents and Publications.** ARP SMS integrates SMS principles and standards from these publications:

a. **FAA Order 8000.369, Safety Management System Guidance.** Provides guidance for setting up common safety management systems within the Agency. [See [http://www.faa.gov/regulations\\_policies/orders\\_notices/index.cfm/go/document.current/documentNumber/8000.369](http://www.faa.gov/regulations_policies/orders_notices/index.cfm/go/document.current/documentNumber/8000.369).]

b. **International Civil Aviation Organization Safety Management Manual, Doc 9859 (2008).** Provides countries with guidance to develop the regulatory framework and supporting documents for implementation of safety management systems by service providers and development of state safety programs for regulators. [See <http://www.icao.int/anb/safetymanagement/Documents.html>.]

c. **Joint Planning and Development Office (JPDO) SMS Standard, Paper No: 08-007 (July 30, 2008).** Describes the minimum requirements for SMS in the air transportation system for Federal organizations. [See <http://www.jpdo.gov/library.asp>.]

d. **Air Traffic Order JO 1000.37, Air Traffic Organization Safety Management System.** Describes the roles and responsibilities for implementing SMS within the Air Traffic Organization. [See [http://www.faa.gov/regulations\\_policies/orders\\_notices/index.cfm/go/document.current/documentNumber/1000.37](http://www.faa.gov/regulations_policies/orders_notices/index.cfm/go/document.current/documentNumber/1000.37).]

e. **Air Traffic Organization SMS Manual, Version 2.1 (May 2008).** Provides guidance, processes, and tools to ATO personnel for managing the safety of the National Airspace System (NAS), building on ATO safety management capabilities. [See

[http://www.faa.gov/air\\_traffic/publications/.](http://www.faa.gov/air_traffic/publications/)]

f. **Safety Risk Management Guidance for System Acquisition (SRMGSA), Version 1.4.a (February 2007).** Provides guidance to ATO on conducting Safety Risk Management. [See <http://fast.faa.gov/toolsets/SafMgmt/index.htm>.]

## Chapter 2. Safety Management Systems

### 2-1. General.

a. An SMS is an integrated collection of practices, procedures, and programs ensuring a formal approach to system safety through risk management. It makes certain that all changes are documented and all problems and issues are tracked to conclusion. A proper SMS creates a safety philosophy throughout the organization that leads to effective monitoring and continuous improvement of safety.

b. The FAA uses SMS to oversee and uphold safety throughout the National Airspace System (NAS). SMS uses a risk management approach for decisions. It entails suitable policies and methods of feedback and evaluation are in place to ensure an acceptable level of safety when planning and carrying out changes to the NAS. FAA Order 8000.369 identifies four components of an SMS:

- (1) Safety Policy,
- (2) Safety Risk Management (SRM),
- (3) Safety Assurance, and
- (4) Safety Promotion.

**2-2. Guidelines.** The ARP SMS will comply with FAA Order 8000.369. In addition, the following principles will ensure that it also meets the specific needs of ARP:

a. The intent of the ARP SMS is to improve existing ARP practices and to create new procedures when the ARP Safety Review Board (see paragraph 7-3) recommends such improvements are necessary.

b. Management is briefed and consulted on safety-essential decisions.

c. Safety hazards, their associated risks, and mitigations are properly documented.

d. ARP is committed to an integrated approach to SMS; therefore, the SMS must share common features with other FAA LOBs, including:

- (1) Common definitions and understanding of risk,
- (2) Consistent methods for analyzing and assessing safety risks associated with hazards,
- (3) Common safety risk management techniques,
- (4) Consistent Safety Assurance procedures, and

- (5) Common approaches to defining acceptable levels of risk.

**2-3. Roles.** As a whole, the FAA plays the dual roles of service provider (as with air traffic services) and safety oversight (through CFR Parts 139, 91, 121, 135, and other regulations).

a. Service providers directly control risks through the control of resources, personnel, and operational procedures. ATO is a service provider for air traffic control services. Individual airports are also service providers because they develop, operate, and maintain the airport facilities and control airfield and airport operations. ARP partners with airports in the provision of those services by providing standards and approval of airport projects.

b. The FAA provides safety oversight for industry participants, such as pilots, aircraft manufacturers, air carriers, and airports. Safety oversight of airports is provided through 14 CFR Part 139 for certificated airports and through Federal obligations and grant assurances for all airports accepting Federal financial assistance.

c. ARP provides a unique set of standards, approvals, and oversight to the airport industry:

- (1) Standards.

(a) Airport planning, design, and construction standards published in FAA Advisory Circulars.

(b) Airport operation and maintenance standards published in FAA Advisory Circulars.

- (2) Review and approval of proposed facility changes.

(a) Approval of Airport Layout Plans (ALPs), including all associated revisions (FAA Form 7460-1, Notice of Proposed Construction or Alteration, airspace approvals, pen and ink change, etc.).

(b) Approval of Federally assisted construction projects.

(c) Review and coordination of non-Federally assisted construction projects, including projects funded by Passenger Facility Charges or PFCs (CFR Part 158).

(d) Approval or disapproval of requested project-specific Modifications of Standards.

(e) Approval of Noise Compatibility Programs measures under CFR Part 150, Airport Noise Compatibility Planning, that could affect aviation safety (such as noise abatement departure procedures).

- (3) Safety Oversight.

(a) Administration of airport regulations, including 14 CFR Part 139 (certification of airports supporting certain types and levels of commercial air service).

(b) Monitoring design and construction phases of projects funded under the Airport Improvement Program (AIP) and with PFCs.

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### Chapter 3. Safety Policy

**3-1. Purpose.** Safety Policy provides the foundation for SMS. It outlines the methods and tools for achieving desired safety outcomes and details management responsibility and accountability for safety. It identifies overall goals, needs, resources, priorities, and management commitment to SMS.

**3-2. Safety Policy.** ARP will commit to implementing and systematically integrating SMS throughout the organization. The ARP SMS will:

- a. Continuously improve and uphold safety as the highest priority.
- b. Bring both internal and external stakeholders together early in all applicable processes.
- c. Facilitate and promote a proactive and positive safety culture.
- d. Consistently evaluate hazards and decisions to remove, control, and mitigate those hazards and their associated safety risks.
- e. Promote an environment where safety is our first concern when considering a change to the NAS.

**3-3. Supporting Requirements.**

- a. Safety objectives will be measurable, attainable, relevant, and time-bound and will promote a positive safety culture.
- b. Safety objectives will be supported by clear methods, procedures, and guidance in each ARP program area as required by this Order. All SMS guidance will be clear, comprehensive, and concise.
- c. The ARP SMS will employ integrated data-driven risk management to the maximum practicable extent.
- d. ARP will use transparent, unambiguous safety performance measurement, including documentation of safety risk and mitigation actions.
- e. The ARP SMS will feature organization-wide understanding and application of SMS principles, including comprehensive and thorough training as necessary.
- f. ARP will provide outreach to our external stakeholders explaining the benefits of SMS. Outreach will include the creation of a website for lessons learned and best practices.

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## Chapter 4. Safety Risk Management

**4-1. Introduction.** Safety Risk Management (SRM) is a formalized approach to safety. It ensures sound safety decisions by identifying and examining hazards early and lays the groundwork for effective risk mitigations based on well-documented data.

**4-2. Purpose.** Safety Risk Management supports:

- a. A positive safety culture,
- b. Thorough documentation of safety decisions,
- c. Improved coordination with stakeholders who have operational responsibilities, and
- d. System-wide communication of documented hazards and mitigations.

**4-3. Application.**<sup>4</sup> Within ARP, SRM applies to ARP-produced airport standards and project-specific approvals that could impact aviation safety, including the safety of air traffic or airfield operations. (For exceptions, see Appendix B, Airport Project Approvals Not Typically Requiring Safety Assessments.) ARP standards and approvals include:

- a. Development of and updates to airport planning, environmental, engineering, construction, operations, and maintenance standards published in Advisory Circulars.
- b. FAA review of new or revised Airport Layout Plans (ALPs).
- c. Construction project coordination, review, or approval for Federally obligated airports, including Construction Safety and Phasing Plans.
- d. Approval of Part 150 Noise Compatibility Program measures that could affect aviation safety (such as noise abatement departure procedures).
- e. Approval of requests for project-specific Modifications of Standards (excludes AC 150/5370-10, Standards for Specifying Construction of Airports).
- f. Non-construction changes, including runway and taxiway designations, airfield pavement marking and signage (excluding normal maintenance), runway categories (design aircraft), and in coordination with other LOBs for planned approach or departure procedure changes.
- g. Modification or update to any action that could represent a material change from a previous SRM review or Safety Assessment.

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<sup>4</sup> Additional program guidance will be made available no later than February 1, 2011, detailing when during a project, approval, or standards life cycle, a Safety Assessment (including the Safety Assessment Screening and SRM panel) should be started and completed. (See paragraphs 4-6 through 4-8 for information about Safety Assessments, Safety Assessment Screening, and SRM panels.)

h. FAA decisions on operational or safety-related issues (complex airfield projects, complex planning study alternative analysis, etc.).

**4-4. ARP Actions Not Requiring SRM.** Appendix B, Airport Project Approvals Not Typically Requiring Safety Assessments, provides a list of projects and actions that do not typically require an SRM Safety Assessment. (A Safety Assessment Screening or SAS, described in paragraph 4-7, must be completed for these projects and actions.)

**4-5. Safety Baseline.** A safety baseline is a point-in-time description of system (facility) safety, normally reflecting existing conditions. Proposed system or facility changes must be evaluated in terms of the baseline to find out the relative impacts of proposed changes. A baseline does not mean the existing system or facility is hazard-free, but rather provides a concise description of the “as-is” safety condition at a specific time. *A safety baseline for the ARP SMS is set as of June 1, 2011.* Prior approvals and standards existing before this date do not automatically require a retroactive Safety Assessment. However, a Safety Assessment of existing standards or conditions may be required when considering new or revised airport standards and modification of standards in accordance with FAA Order 5300.1, Modification to Agency Airport Design, Construction, and Equipment Standards, or when reviewing existing conditions (such as during an ALP review) that are known to include previously unidentified hazards even if those conditions were previously approved by the FAA.

**4-6. Safety Assessment Process.** If an action will have an impact beyond ARP, the Safety Assessment should be conducted by panels that include subject matter experts and stakeholders with operational and safety responsibilities. Panels can include representatives from the airport sponsor, industry groups, and other FAA LOBs. SRM panels must analyze and consider all relevant and available data to form a sound basis and rationale for their deliberations. Additional data and analysis, including modeling and simulations, may also be appropriate for larger projects and complex operating environments. A Safety Impact Checklist, part of the Safety Assessment Screening (SAS) discussed in paragraph 4-7, will help ARP decide when a panel is necessary. The Safety Assessment process is described below and depicted in Figure 4-1.

a. **Describe the Facility or System.** Identify the operating environment of the facility or system. For construction projects, use the scope of the proposed change as the starting point. Be sure to include related systems that may be affected by the proposed change. Consider operational, procedural, organizational, and environmental factors as well as physical characteristics.

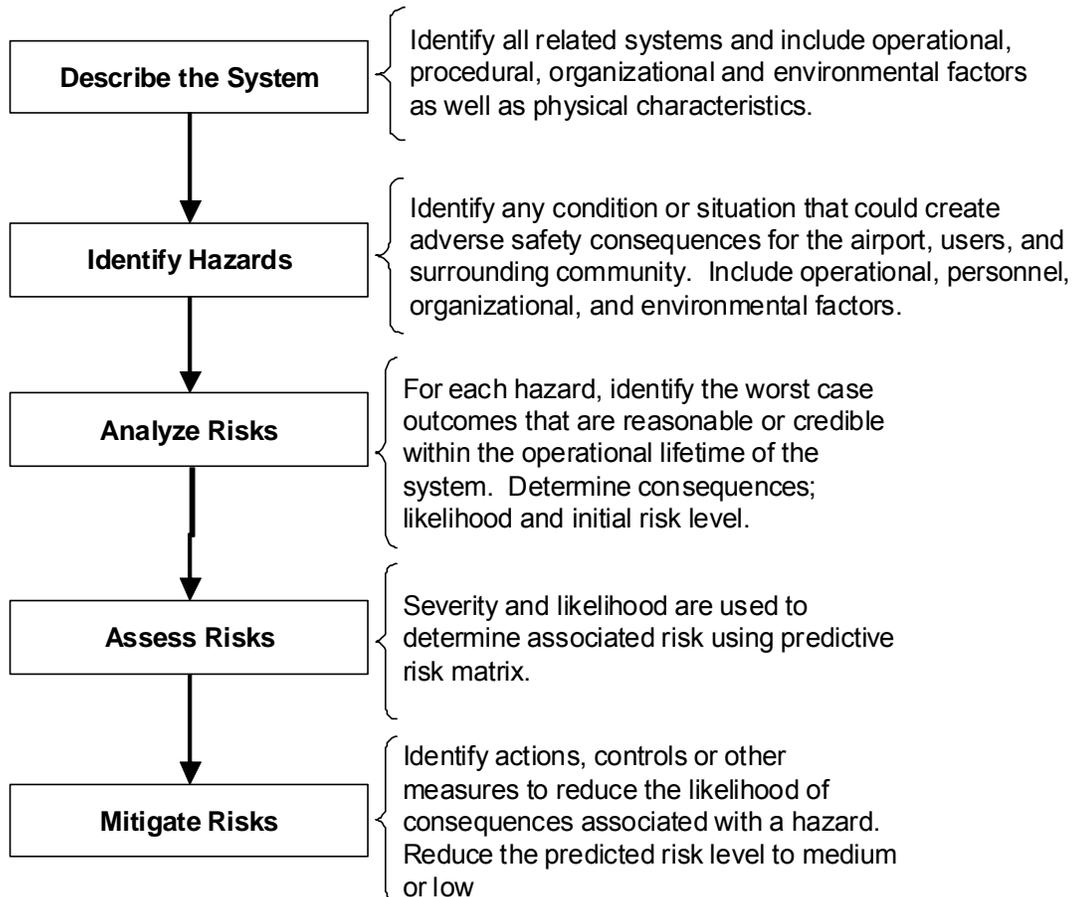
b. **Identify Hazards.** Identify any condition or situation that could create adverse safety outcomes for the airport, users, and surrounding community. Be sure to consider operational, procedural, personnel, organizational, and environmental factors that could create hazards.

c. **Analyze Risks.** For each hazard, identify the worst case outcomes that are reasonable or credible within the operational lifetime of the system. For each outcome, severity and likelihood are identified. Use Appendix C, Safety Assessment Tables, to identify the category for severity and likelihood.

d. **Assess Risks.** Severity and likelihood are assessed to determine associated risk using the Predictive Risk Matrix in Appendix C. Results include high-initial risk, medium-initial risk, or low-initial risk.

e. **Mitigate Risks.** For risk that is higher than acceptable levels, eliminate or reduce risk to the lowest possible level (also known as residual risk). Techniques to lower risk to acceptable levels may include a combination of planning and design modifications or mitigation measures. A mitigation is any action or control to reduce the likelihood associated with a hazard and its potential effects. Mitigations to be implemented beyond the triggering approval must be verified, monitored, and tracked to ensure they are properly implemented and effectively reducing the risks associated with the hazards. *In the FAA, high-initial risk must be mitigated.* Medium and low-initial risks are acceptable but may require design modification or mitigation and tracking.

**Figure 4-1 SRM Safety Assessment Process**



**4-7. Documentation.** Use the proper Safety Assessment Screening (SAS) in Appendix D, with correct attachments, to document SRM findings and approvals. (When a full Safety Assessment is completed, the SAS serves a role similar to the ATO Safety Risk Management Document (SRMD).)

a. For proposed **airport planning and development projects**, use **SAS-1** and follow the general workflow in Figure 4-2 for the following types of projects:

- (1) ALP approvals (including any associated environmental review).
- (2) Airport construction.
- (3) Non-construction airport changes.
- (4) Part 150 Noise Compatibility Program measures that may affect aviation safety.

b. For proposed **project-specific Modifications of Standards**, use **SAS-2** and follow the general workflow in Figure 4-3.

c. For new or updated **planning, design, or construction standards** to be published in Advisory Circulars, use **SAS-3** and follow the general workflow in Figure 4-4.

Figure 4-2 Airport Project SAS (SAS-1)

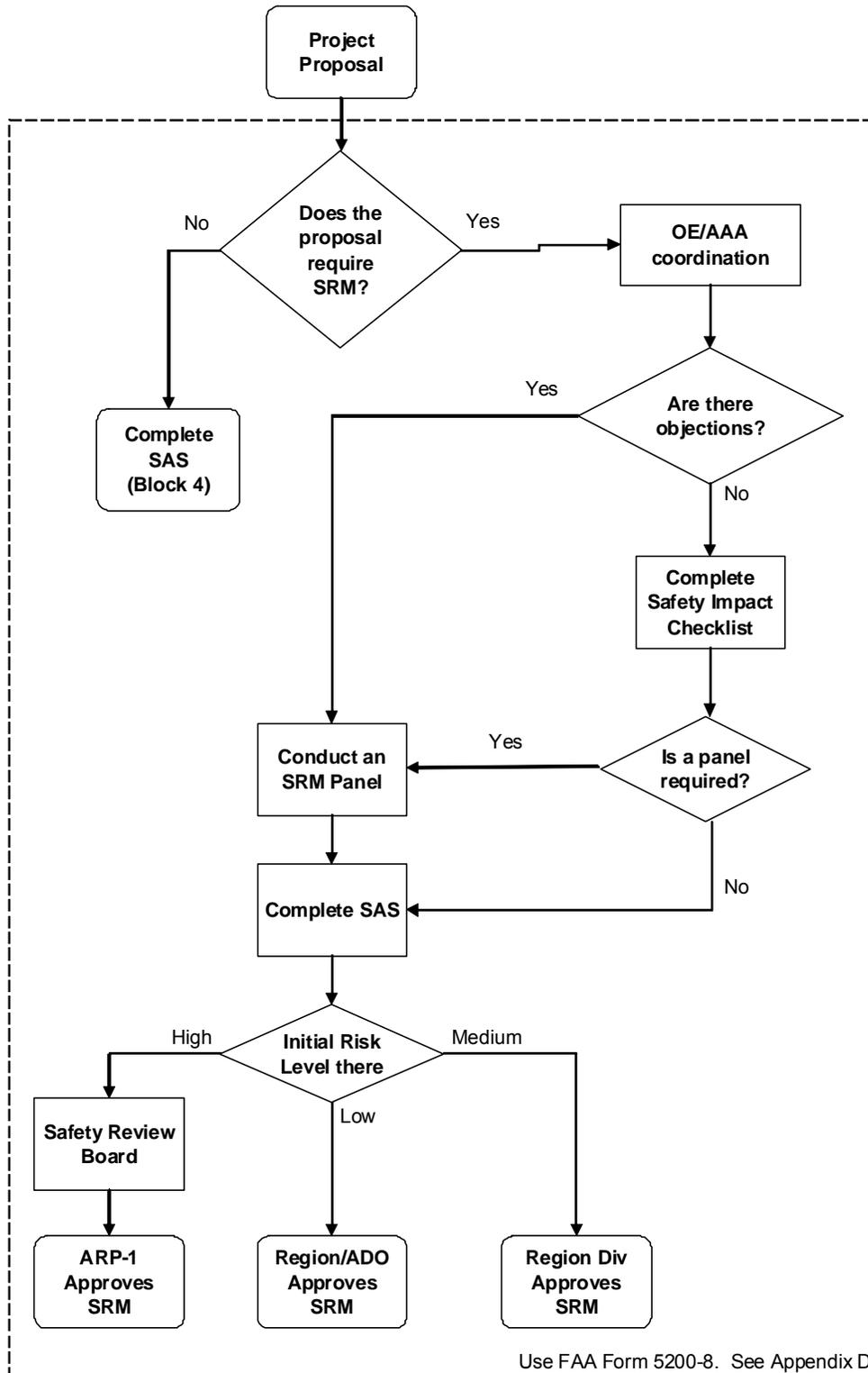


Figure 4-3 Modification of Standards SAS (SAS-2)

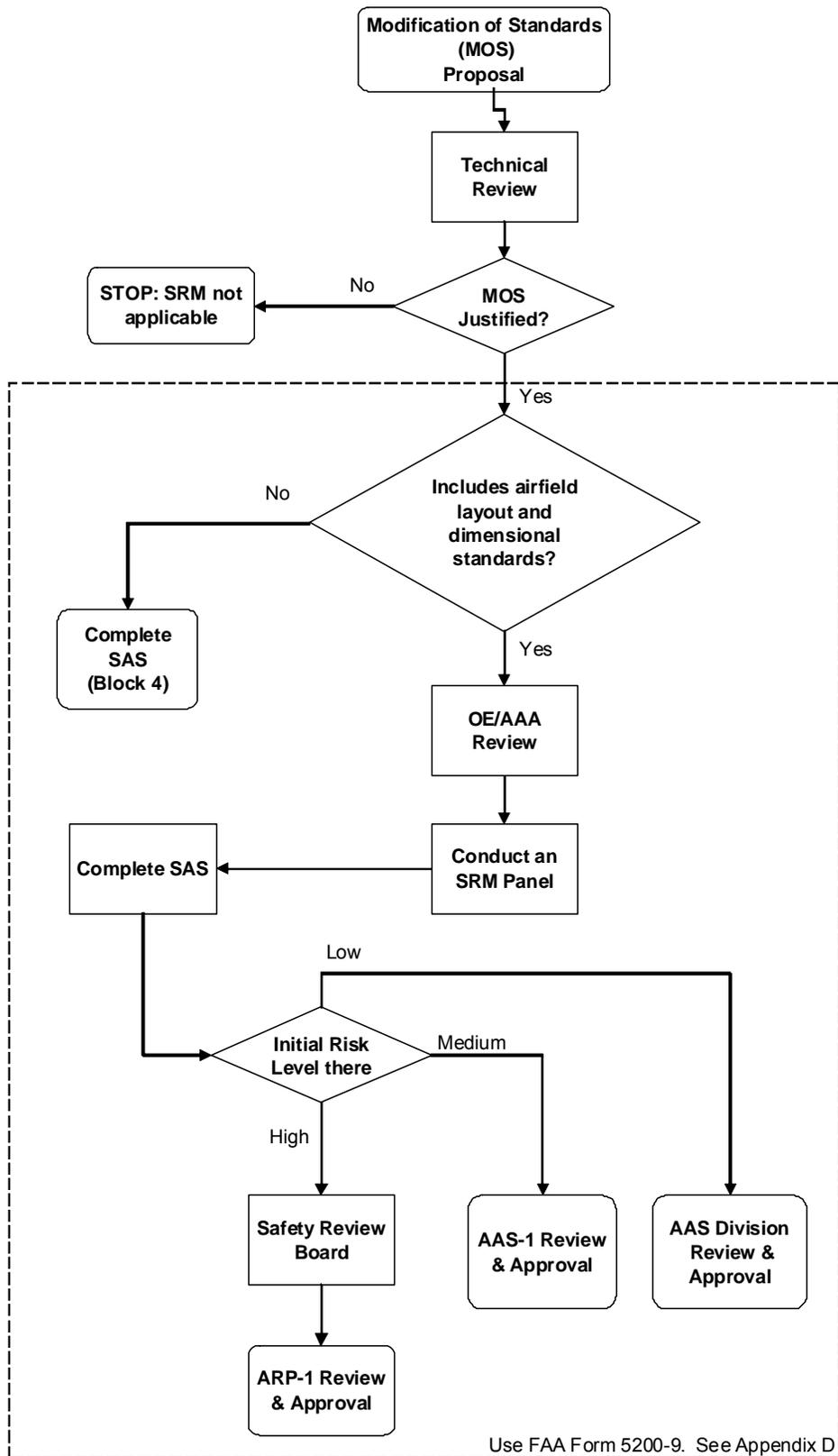
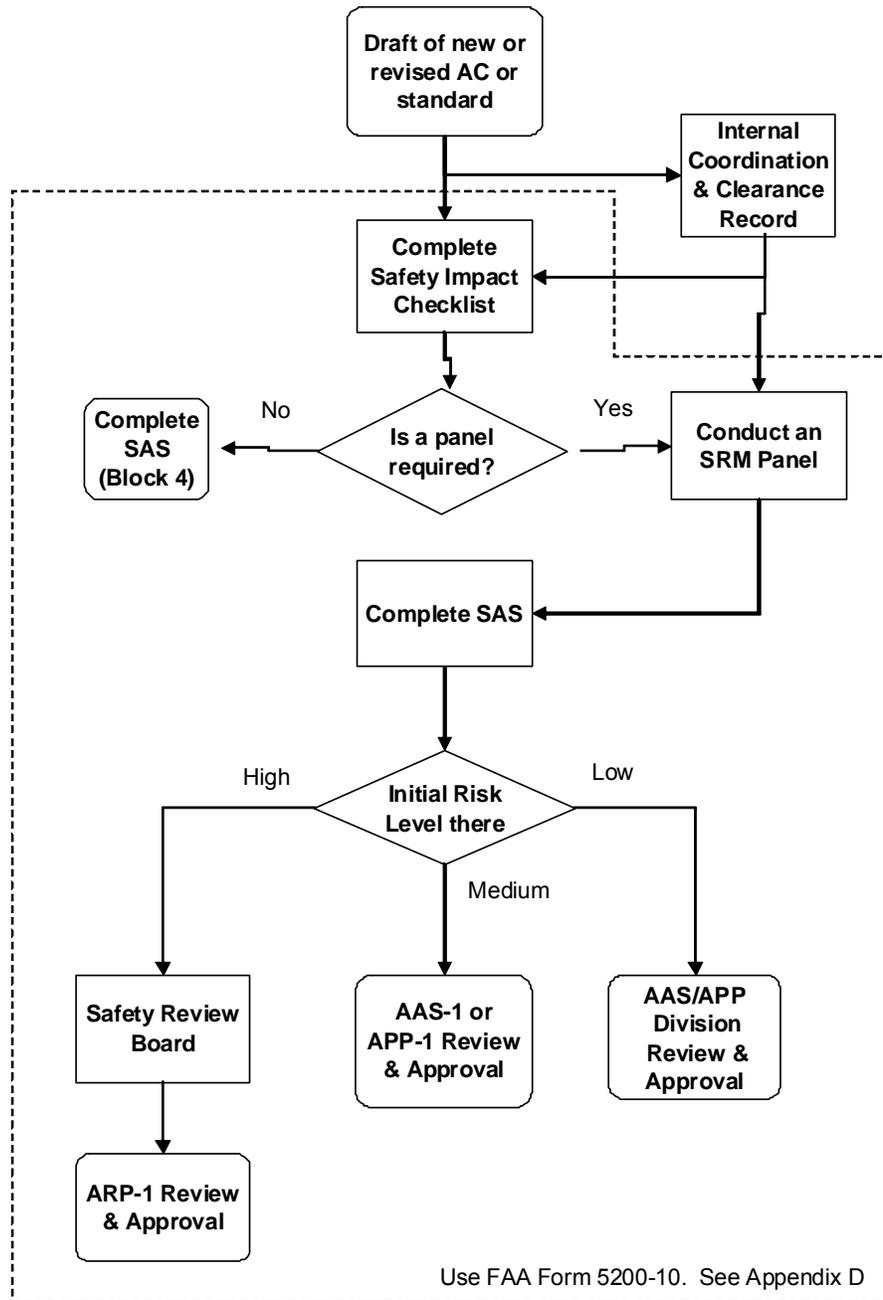


Figure 4-4 Standards SAS (SAS-3)



**4-8. SRM Panels.** SRM panels are an effective tool for providing a thorough examination of hazards and risk associated with any proposal. However, they are labor-intensive and should be used judiciously, on the most safety-critical decisions. Therefore, only hold panels identified as necessary by the applicable SAS described in paragraph 4-7. If an action will not have impact outside ARP (such as a revision of an Advisory Circular), an ARP subject matter expert may

conduct the assessment and complete the needed documentation. Otherwise, a formal SRM panel will be required.

a. **Panel Members.** Panel members or subject matter experts should be selected based on their technical expertise or operational responsibilities for the facility or system under consideration and their authority to make decisions for their respective organizations.

b. **Panel Facilitator.** All SRM panels should have a panel facilitator. The facilitator engages the panel to develop a thorough Safety Assessment. The facilitator cultivates discussion among panel members about potential hazards, risks, and mitigations. Facilitators should complete the SRM Panel Facilitation course before leading their first ARP SRM panel. (See Appendix E, ARP SMS Curriculum Matrix.) Other duties of the facilitator include:

(1) **Select and notify panel members.**<sup>5</sup> The facilitator must request subject matter experts for the panel from applicable organizations. Organizations must identify panel members or subject matter experts within 30 days of the request. The facilitator should let the organizations know if the panel could need multiple meetings. In instances where an organization either does not respond to the request or fails to provide a subject matter expert, the facilitator should contact the Safety Management Division (see paragraph 7-5k) for action. Panel membership will vary depending on the Safety Assessment. However, facilitators should consider seeking members from the following groups:

(a) Airport sponsor (including airport operations, airport maintenance, aircraft rescue and fire fighting, planning, and airport tenants if required).

(b) ATCT manager (or ATO District Office/Air Route Traffic Control Center/Terminal Radar Approach Control for a non-towered airport).

(c) ATO-Technical Operations.

(d) ATO-Safety (Regional Runway Safety Office)

(e) Flight Standards District Office.

(2) **Complete pre-meeting logistics and documentation.**

(a) The facilitator will arrange a location for the panel to meet and discuss the Safety Assessment. Facilitators should be aware of travel schedules and budgets. It may be necessary to use online meetings, telephone or video conferencing, and other collaboration technologies.

(b) **Create pre-meeting documentation.** The facilitator will complete the first step of SRM, describing the system, including documenting the baseline conditions (existing facilities or system), summarizing the proposed action, and explaining any impacts to facilities,

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<sup>5</sup> In cases where the facilitator is not an FAA employee, the FAA office responsible for the Safety Assessment will select panel members.

equipment, technology, or human factors, as applicable in coordination with the subject matter experts assigned to the SRM panel. The facilitator will document this information and send it to the panel members at least three working days before the first meeting so all members understand the issues and change that will be analyzed during the meeting.

(3) **Facilitate during panel meetings.**

(a) **Provide guidance on ARP SMS and SRM requirements.** The facilitator should be familiar with SRM and the requirements for conducting and documenting Safety Assessments. Since some panel members will be from organizations other than ARP, they may need a summary of ARP requirements. The facilitator should also choose someone to take notes during the panel meetings if the facilitator is unable to do so.

(b) **Keep the panel focused on the scope.** The facilitator should control the panel discussion so it remains focused on the scope of the issues. The panel should identify and analyze only those hazards for the described system or change. If the panel discovers issues outside the scope of the panel, the facilitator should document those issues and forward them to the office with primary responsibility.

(4) **Complete post-meeting documentation.** After the panel members meet, the facilitator will document the panel's findings in the applicable SAS for review and approval by all panel members and the airport sponsor's authorized representative, where applicable. The final report should document the SRM process and findings of the team, including a detailed proposal description (such as a change proposal) and any alternative perspectives on the risk determinations.

**4-9. SRM Acceptance and Signature Requirements.** ARP is a partner in accepting risk with organizations responsible for the system under consideration. Specifically, ATO accepts risk for the operations in the air traffic system, and the airport sponsor accepts risks for the operation of the airfield. ARP has a stake in that risk acceptance by approving projects and requiring airport sponsors to meet FAA standards. All SRM documents, including but not limited to the SAS, Advisory Circulars, and Modifications of Standards, will have one ARP signatory—the manager who has proper responsibility to accept the Safety Assessment and documentation. Note that ARP requires only one signature for SRM acceptance, while ATO requires two signatures (one for Safety Risk Management Document (SRMD) approval and one for Risk Acceptance). Table 4-1 summarizes ARP acceptance signature requirements.

**Table 4-1 Safety Assessment Acceptance and Signature Requirement**

Project Type	High Initial Risk	Medium Initial Risk	Low Initial Risk
	Accepted by:	Accepted by:	Accepted by:
	<i>Acceptance authorities shown may not be delegated</i>		
<b>Airport Projects</b>	Safety Review Board for review and ARP-1 for approval	Regional Division Managers who have authority over the change	ADO Managers who have authority over the change*
<b>Modifications of Standards (MOSs)</b>	Safety Review Board for review and ARP-1 for approval	AAS-1	HQ Division Managers who have authority over the change (AAS-100 or AAS-300)
<b>Advisory Circulars (ACs) (New and Updated Standards)</b>	Safety Review Board for review and ARP-1 for approval	HQ Office Directors who have authority over the change (AAS-1 or APP-1)	HQ Division Managers who have authority over the change (AAS-100 or AAS-300)

\* In regions without ADOs, the applicable Regional Branch Manager or Deputy Division Manager holds signature authority.

**4-10. National-Level Safety Assessments.** ARP may choose to complete national-level Safety Assessments for particular initiatives or programs, which may take the place of location-specific assessments as long as certain conditions are met. Regional Offices, Airport District Offices, or other LOBs should coordinate requests for national-level Safety Assessments through the Safety Management Division (see Chapter 7, Roles and Responsibilities). The Safety Management Division will send the request to the correct Headquarters Division for formation of a panel to include representatives from the Headquarters Division, applicable LOBs, and ARP field offices where applicable.

**4-11. Other Guidance for Conducting Safety Assessments and the SRM Process.** The Safety Management Division will develop supporting guidance on Safety Assessments, the SRM process, and documentation requirements before the ARP SMS goes into effect. These guidelines will in turn be incorporated in AAS and Office of Airport Planning and Programming (APP) program guidance as applicable.

## Chapter 5. Safety Assurance

### 5-1. Introduction.

a. **Purpose.** ARP's SMS includes formalized processes that proactively identify hazards and risks. Safety Assurance provides tools that allow ARP to track how the SMS performs, confirm the SMS is achieving intended outcomes (that is, mitigations developed through SRM are working), and continuously improve standards, operations, and practices to increase safety. Safety Assurance is closely linked to SRM. It provides confidence that mitigations are having their intended effect and that newly identified hazards (from sources other than approvals or changes to standards) are properly evaluated through the SRM process.

b. **Background.** Safety Assurance relies on the analysis of safety-related information and data to draw conclusions about the effectiveness of the SMS. For example, information and data includes employee reports, agency safety databases, results from ARP-led Safety Assessments, investigations, and internal evaluations and audits. ARP analyzes this safety data and information to identify hazards and risks that require assessment and possible mitigations under SRM. ARP also analyzes the data to draw conclusions about the effectiveness of ARP'S SMS, the status of implementation, and the general safety of those features of the national system of airports for which ARP is responsible.

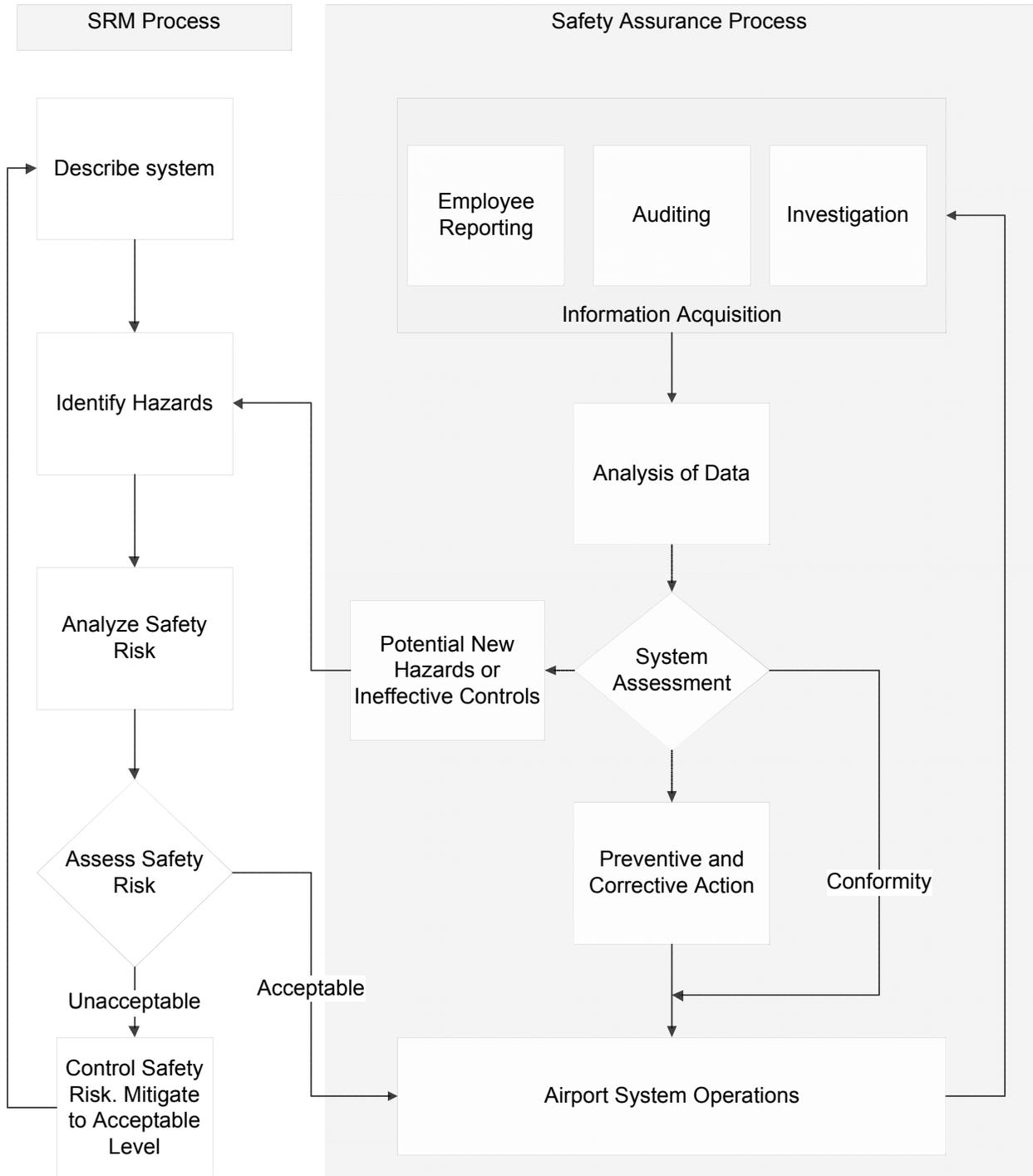
### 5-2. Introduction to the Safety Assurance Process.

a. The four steps of Safety Assurance include:

- (1) Information acquisition.
- (2) Analysis.
- (3) System assessment.
- (4) Development of preventive/corrective actions for non-conformance.

b. Figure 5-1 shows how the steps of Safety Assurance align with SRM within ARP's SMS. Safety Assurance works with SRM. Safety Assurance ensures that risk mitigations continue to achieve their intended objectives. It also evaluates the need for new mitigations because of changes in the operational environment.

Figure 5-1 Safety Assurance Process and its Links to SRM



**5-3. Information Acquisition.** Information gathering is the first step within the Safety Assurance process. It requires ARP to collect data and information to prove SMS effectiveness. Data and information will be gathered at a minimum from the following resources: employee reports, results from ARP-led Safety Assessments, agency safety databases or reports, investigations, and internal evaluations and audits.

a. **Employee Safety Reporting.** AAS will set up a voluntary, confidential safety reporting system. The employee reporting system will enable ARP employees to report hazards, safety-related issues, concerns, and incidents and recommend solutions and ideas for safety improvements. The Safety Management Division is responsible for managing the employee reporting system for ARP. The Division may work with other LOBs to develop a corporate system. A prototype system for use by the Airport Certification Safety Inspector cadre will be in place by September 30, 2010. Further expansion of this reporting system to the entire ARP organization will be considered.

(1) **Accessibility and Purpose.** The employee reports and database will be evaluated to determine if identified hazards require SRM. The reports and database will also be used to assess the effectiveness of the ARP SMS.

(2) **Use by the Safety Management Division.** The Safety Management Division will analyze data collected by the employee safety reporting system. It will then compare that data to other safety data inventories while tracking all mitigations under ARP control, regulation, or oversight. The Safety Management Division will use the employee safety reporting system to identify information to share as lessons learned among Regional Divisions, Airport District Offices, Headquarters Offices and Divisions, and airport sponsors. The Safety Management Division will post lessons learned on the FAA public and employee websites as appropriate.

b. **ARP-led Safety Assessments.** SRM ensures that mitigations required for initial high and medium risk actions are put into place and effectively mitigating the risk. While this function may be considered a part of SRM, it is also a function of Safety Assurance and can provide essential information about the effectiveness of mitigations in improving safety. Therefore, any office that conducts Safety Assessments will periodically confirm the implementation and assess the effectiveness of mitigations required under Safety Assessments they lead. The Regional Division Manager may delegate this periodic confirmation and review to the Regional SMS Coordinator (see paragraph 7-7a). The Safety Management Division will also review a sampling of ARP Safety Assessments to assess compliance with SMS requirements.

c. **Agency Safety Databases or Reports.** Safety data housed in agency safety databases may also provide key indicators about how well the SMS is performing. Such databases include the Certification and Compliance Information System (CCMIS), Air Traffic Quality Assurance System (ATQA), Aviation System Information Analysis and Sharing (ASIAS) System, or hazard tracking system. Reports available for use include Runway Safety Action Team (RSAT) reports and Runway Safety Action (RSA) Plans. For example, large numbers of vehicle/pedestrian deviations reported for an airport may indicate ineffective mitigations or the need for a Safety Assessment or more thorough safety review. The

Safety Management Division will periodically check these databases and gather relevant safety data for analysis.

d. **Investigations.** Information gained through investigating incidents or accidents provides much insight into the safety of the NAS. As required by FAA Order 2150.3, FAA Compliance and Enforcement Program, and FAA Order 5280.5, Airport Certification Program Handbook, ARP will aid or lead in the investigation of accidents and incidents, where necessary. The findings of these investigations may identify potential hazards or ineffective risk mitigations employed through SRM.

e. **Internal Evaluations and Audits.** Internal evaluations and audits also provide information for analysis. This data contributes to Safety Assurance by providing information on performance, compliance, and status of SMS implementation within ARP.

(1) **Internal Evaluations.** To assess whether the organization is following SMS policies, any Headquarters Division, Regional Office, or ADO may conduct internal evaluations. The office's staff or manager may conduct these evaluations. Managers may also request help from the Regional SMS Coordinator or Safety Management Division.

(a) **Subject Functions.** An internal evaluation may include assessing all or some of these safety management components:

- (i) Safety Policy
- (ii) Safety Risk Management.
- (iii) Safety Assurance.
- (iv) Safety Promotion.

(b) **Means.**

- (i) Collecting data.
- (ii) Analyzing data.
- (iii) Providing a system evaluation.
- (iv) Taking corrective actions when non-conformity is identified.

(c) **Scope and Frequency.** Internal evaluations will be conducted as needed.

(2) **Internal Audits.** To ensure a more formalized evaluation procedure, ARP will conduct internal audits of Regional Offices and Headquarters Division with roles and responsibilities under the ARP SMS. The Safety Management Division, with oversight from the ARP Safety Review Board, will conduct the internal audits for the organization.

(a) **Purpose and Scope.** Internal audits will formally assess performance and compliance with the ARP SMS. Reviews include all SMS requirements applicable to the audited office.

(b) **Means.** Internal audits will include reviews of related SMS documentation, training records, and implementation methods from a sampling of offices under the control of the Regional Office or Headquarters Division.

(c) **Reporting.** The Safety Management Division will send a final report documenting the findings of each internal audit to the ARP Safety Review Board within three months of audit completion. Once approved by the ARP Safety Review Board, the Safety Management Division will send the Final Report to the audited office. The audited office may provide written comments to the Safety Management Division within 30 days of receipt. Comments will be attached to the Final Report and forwarded to the ARP Safety Review Board for final approval. The ARP Safety Review Board may change the Final Report based on comments received. Copies of the Final Report and attachments will be provided to members of the ARP Safety Review Board, the Safety Management Division, and the audited office.

(d) **Frequency.** The Safety Management Division will conduct two internal audits each year (one Regional Office and one Headquarters Division).

**5-4. Analysis.** The second step of Safety Assurance is analysis. In this step, the data and information gathered from information acquisition is analyzed to draw conclusions. The Safety Management Division has primary responsibility for data analysis under the ARP SMS; however, any office with roles or responsibilities under the ARP SMS can conduct analysis.

a. **Purpose.** Safety data and information is analyzed to:

(1) Identify potential hazards and risks not associated with current Safety Assessments.

(2) Improve ARP's awareness of potential hazards.

(3) Assess the overall safety of those areas of the NAS for which ARP is responsible.

(4) Identify lessons learned and best practices resulting from Safety Assessments and analysis.

(5) Review Safety Assessment outcomes to identify trends and recommendations appropriate for changes to policies, procedures, or airport standards.

b. **Reporting.** Conclusions that signal new safety issues or ineffective mitigations of initial high-risk hazards will be reported immediately to the Safety Management Division. The Safety Management Division will review the issue or mitigation and recommend actions to the ARP Safety Review Board.

**5-5. System Assessment.** The third step of Safety Assurance is system assessment. System assessment is a constant practice of the Safety Management Division.

a. **Assessment Criteria.**

- (1) Unbiased.
- (2) Inclusive of all relevant data.
- (3) Conservative (that is, err on the side of safety), if specific information is not readily available.
- (4) Capable of reintroducing the SRM process when new hazards are discovered.

b. **Resources.** Resources used in system assessment include but are not limited to:

- (1) Employee reports.
- (2) Agency safety databases.
- (3) Internal evaluations.
- (4) Internal audits.

c. **Continuous Monitoring.** The Safety Management Division will provide oversight of SMS and offer technical support to Headquarters Divisions, Regional Offices, and ADOs. Continuous monitoring will include review of the hazard tracking system, agency safety databases, and employee reports.

**5-6. Development of Preventive and Corrective Actions for Non-Conformance.** The Safety Assurance process will include procedures to ensure ARP develops preventive and corrective actions when needed.

a. **Criteria.** These actions will:

- (1) Respond to the findings of audits, evaluations, or employee reports.
- (2) Remove the causes of nonconformance identified during analysis.
- (3) Prevent recurrences.
- (4) Ensure timely implementation.

b. **Monitoring Initial High-Risk Hazards.** The Safety Management Division will monitor the implementation of mitigations associated with initial high-risk hazards along with

the ARP office responsible for the applicable Safety Assessment. When mitigations are judged ineffective, the applicable ARP office will identify corrective actions.

c. **ARP Safety Management Division.** The Safety Management Division will provide guidance to ARP Managers with preventive and corrective action for SMS non-conformance.

**5-7. Hazard Tracking System.** Hazards may also be identified outside the Safety Assessment or SRM processes. These hazards should also be documented in the hazard tracking system. This will enable tracking and accountability. Once in place, the hazard tracking system will increase safety awareness and strengthen the ARP SMS. The Safety Management Division will be responsible for using the hazard tracking system data to identify safety concerns that might affect areas of ARP responsibility.

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## Chapter 6. Safety Promotion

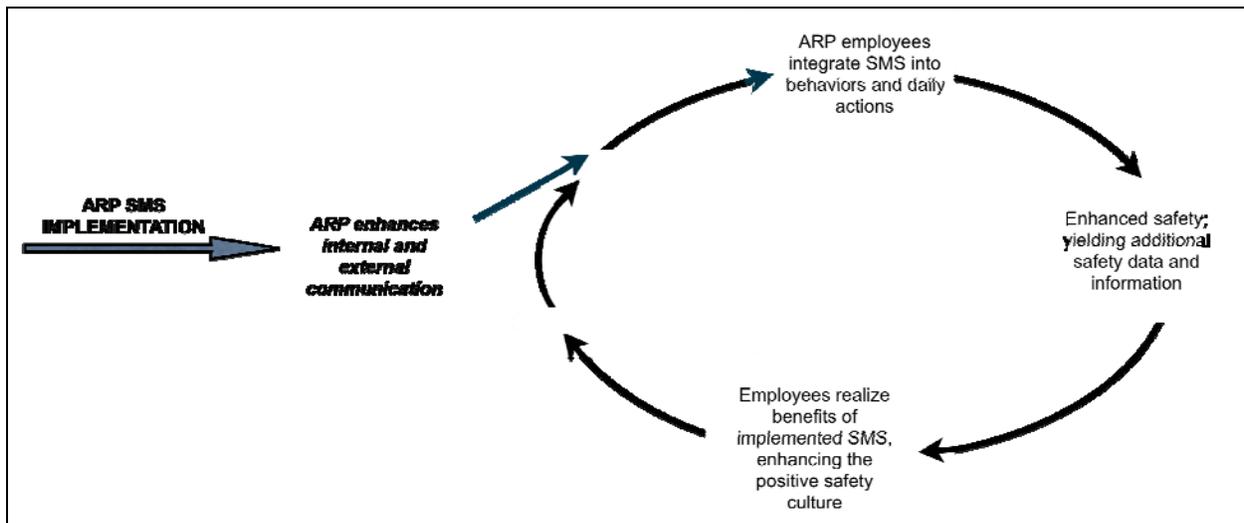
### 6-1. Introduction.

a. **Overview.** Safety Promotion includes the actions to create a work environment where SMS objectives can be achieved. The key objective is a positive safety culture. All levels of management will actively promote and provide leadership to ensure a positive safety culture throughout ARP.

b. **Purpose.** A positive safety culture keeps the organization focused on common goals that ARP can act on every day. Focus brings cohesion to the workplace and enables better-coordinated actions. By eliminating ambiguity, the positive safety culture allows employees to make safe choices. When personnel understand the values and goals of the organization, they are empowered to identify and mitigate safety hazards.

**6-2. Positive Safety Culture.** Promotion of a positive safety culture is essential to Safety Promotion in an SMS. A positive safety culture relies on open communication channels, individual group values, attitudes, competencies, and patterns of behavior that work in a cyclical fashion as shown in Figure 6-1.

**Figure 6-1 Positive Safety Culture Cycle**



**6-3. Features of the ARP Positive Safety Culture.** ARP management will promote a positive safety culture throughout the organization. Management will do this by increasing open lines of communication, sharing lessons learned, projecting our SMS in a positive light, and personally embracing its fundamental ideas. Our positive safety culture will have the following features:

a. Competent personnel who understand hazards and associated risks, have proper training, have the skills and experience to work safely, and ensure safe approvals or standards are produced.

- b. Value for individual opinion and encouragement to identify threats to safety and seek the changes necessary to overcome them.
- c. Encouragement and support of a reporting culture where employees are willing and able to report safety hazards and concerns.
- d. Effective communication, including an open environment for reporting safety concerns.
- e. Enough resources to support the commitment to safety.
- f. A method for sharing safety information to develop and apply lessons learned and best practices for hazard identification, Safety Assessments and mitigations, and other SRM responses. Encouragement to share information about corrective actions and results of management reviews.
- g. Willingness to recognize when to challenge basic assumptions and make changes—an adaptive and agile organization.

**6-4. Key Managerial Behaviors.** Responsibility for Safety Promotion rests with ARP management. Management will express this responsibility through communication methods and training that include:

- a. Ensuring ARP has the appropriate staff with appropriate competencies, skills, and training to perform their functions under the ARP SMS.
- b. Ensuring employees receive training and instruction in SMS and safety requirements.
- c. Providing a means for communicating safety issues and responding to safety-related reports.
- d. Sharing safety information among the LOBs.

**6-5. Communications.** ARP will use various internal and external communication methods, including print publications, the website, and multimedia. These methods will be crafted to improve the ARP positive safety culture.

a. **Internal Communications.** ARP will develop effective internal communications that include the employee safety reporting system described in Chapter 5. Additionally, ARP will continue to work with other LOBs to improve information sharing across organizational lines. ARP will develop and apply lessons learned about hazard identification, Safety Assessments, and other SRM processes. Internal methods of communications will include:

- (1) Employee safety reports.
- (2) Newsletters.

- (3) Program Guidance Letters.
- (4) FAA's public and employees' websites.
- (5) Multimedia.
- (6) SMS training.

b. **Internal Communication Responsibilities.** The Safety Management Division will communicate lessons learned and best practices periodically to increase awareness of and reinforce the positive safety culture. The Safety Management Division will share safety data to promote best practices and lessons learned to all ARP employees. ARP management will promote the use of employee safety reporting.

c. **External Communication and Responsibilities.** ARP SMS communications to the industry will be coordinated with the Safety Management Division to help identify opportunities to reinforce the core objectives of SMS. External communications methods include:

- (1) Advisory Circulars.
- (2) Engineering Briefs.
- (3) Program Guidance Letters.
- (4) FAA's public website.
- (5) Multimedia presentations, including those given at regional, state, and industry association conferences.

**6-6. SMS Training.** All ARP personnel are responsible for knowing and understanding their roles and responsibilities in support of the ARP SMS. ARP will develop training for employees on SMS policies, procedures, and requirements. The training will play a key role in reinforcing our positive safety culture. ARP will ensure personnel receive suitable initial, recurrent, and advanced training on our SMS and its features.

a. **SMS Training Responsibilities.** The Safety Management Division will develop and manage the SMS training program and develop suitable training materials.

b. **ARP SMS Curriculum.** ARP will offer the following courses relevant to the ARP SMS:

- (1) SMS Overview.
- (2) SRM.
- (3) SRM Panel Facilitation.

- (4) SRM Writing.
- (5) SMS Instructor Training.
- (6) Managing the ARP SMS Effort.

c. **Course Descriptions, Objectives, Prerequisites, and Medium.** Appendix E provides relevant details on ARP SMS-related courses. The appendix will be amended as necessary.

## Chapter 7. Roles and Responsibilities

**7-1. Introduction.** This chapter defines roles and responsibilities for ARP and other FAA LOBs that must provide support and take part in ARP SMS-related activities.

One of the steps to ensure that SMS is set up managed properly and that procedures are correctly applied is to identify who has responsibility for actions under the Safety Policy, SRM, Safety Assurance, and Safety Promotion. ARP Managers have the authority to delegate tasks, except where specifically assigned to ARP-1 or the ARP Safety Review Board or in cases delegation is expressly prohibited. However, delegation does not relieve the manager of responsibility for accomplishment of that task and ensuring its final approval or acceptance (that is, Safety Assessment approval and risk acceptance).

The ARP SMS defines requirements from the top down. This approach provides structure and prevents repeating requirements among the different levels of the LOB.

**7-2. Associate Administrator for Airports (ARP-1).** ARP-1 is the organization's top executive, with full authority for all organizational resources. ARP-1 has direct responsibility for the organization's affairs and is accountable for oversight of system safety under ARP's control. ARP-1 must:

- a. Promote a positive safety culture and ensure all ARP personnel do the same.
- b. Provide the funding, personnel, and support necessary to create an effective SMS within ARP.
- c. Require the entire organization to follow all policies, procedures, guidance, and standards needed to set up and use SMS.
- d. Approve this Order and supporting documentation.
- e. Approve Safety Assessments (or other SRM documentation) with initial high-risk hazards.

**7-3. ARP Safety Review Board.**

- a. **Charter.**
  - (1) Review all Safety Assessments that have initial high risk or that have system-wide safety implications.
  - (2) Provide recommendations to ARP-1 about initial high-risk Safety Assessments.
  - (3) Recommend that national-level Safety Assessments, when needed, be conducted by the Headquarters' Division responsible for the safety issue.

**b. Members.<sup>6</sup>**

- (1) Deputy Associate Administrator for Airports (ARP-2) – Chair.
- (2) Director of Airport Safety and Standards (AAS-1).
- (3) Director of Airport Planning and Programming (APP-1).
- (4) Three Regional Division Managers, as determined by ARP-1.
- (5) Safety Management Division Manager (see paragraph 7-5k).
- (6) Other members required from time to time, as designated by ARP-1.

**7-4. ARP Directors (AAS-1, APP-1).** The AAS and APP Directors share the following SMS roles and responsibilities:

- a. Hold all supervisors and managers accountable for implementation of SMS.
- b. Ensure SMS is incorporated into the policy, guidance, and practices of their offices.
- c. Set up criteria for identifying personnel who must take SMS training.
- d. Ensure initial and recurrent SMS training is provided for identified personnel.
- e. Actively promote a positive safety culture throughout their offices and ARP.

**7-5. Office of Airport Safety and Standards (AAS).** AAS is responsible for overall guidance and realization of SMS across ARP in close coordination with the Office of Airport Planning and Programming (APP).<sup>7</sup> AAS also has program responsibilities affected by the ARP SMS, including developing new standards and approving Modifications of Standards. Therefore, as well as overseeing the SMS, AAS must incorporate the requirements of SMS into its programs and practices. Further, AAS must:

- a. Develop and keep current policies, procedures, guidance, and standards needed to set up and run the SMS.
- b. Keep this Order current and send any changes to ARP-1 for approval.
- c. Coordinate implementation schedules and reporting to ARP-1.

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<sup>6</sup> Membership and decisions made by this Board may not be delegated to subordinate divisions.

<sup>7</sup> Until the Safety Management Division is established, AAS-1 will delegate the roles and responsibilities of the Safety Management Division Manager to the Airport Safety and Operations Manager (AAS-300). See paragraph 7-5k for more information about the Safety Management Division.

d. Keep supporting ARP SMS guidance current and send any changes to the ARP Safety Review Board for approval.

e. Ensure the ARP SMS is consistent with FAA SMS policy and requirements.

f. Incorporate SMS requirements into programmatic policies, procedures, and guidance, including new and updated Orders, Advisory Circulars, and other documents.

g. Ensure that applicable ARP employees complete recurrent SMS training, as defined in the ARP SMS supporting guidance.

h. Direct national-level Safety Assessments as needed (see paragraph 4-10).

i. Require ARP offices to analyze safety data, hazards, and the effects of selected mitigations and conduct Safety Assessments when suitable.

j. Represent ARP on the FAA SMS Committee.

k. Create the **Safety Management Division**. The Safety Management Division is responsible for creating and interpreting guidance to ensure successful implementation of the SMS throughout ARP, providing general program oversight, and offering technical support to individuals throughout ARP. The Safety Management Division will also serve as the ARP point of contact for ARP SMS issues.<sup>8</sup> The Safety Management Division will represent ARP at interagency meetings for SMS and will serve as ARP's SMS representative to the JPDO. Additionally, the Safety Management Division must:

(1) Provide program oversight of the ARP SMS.

(2) Coordinate the tasks of the ARP Safety Review Board.

(3) Develop and oversee a hazard tracking system for ARP employees to enter hazards and mitigations developed through ARP-led Safety Assessments. The Division may work with other LOBs to develop a corporate system. However, until the corporate system is developed, the Safety Management Division will use interim measures to provide a mechanism for hazard tracking no later than September 2011.

(4) Assess relevant safety data from agency safety databases, including the hazard tracking system, to draw conclusions about the effectiveness of SMS policies, procedures, or results and to assess the effectiveness of mitigations used in ARP-led Safety Assessments.

(5) Develop and oversee an ARP employee safety reporting system through which personnel can confidentially report safety issues, including hazards, concerns, and incidents that affect operational safety, and propose safety solutions or improvements. The Division may work with other LOBs to develop a corporate system. However, until the corporate system is

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<sup>8</sup> The Airport Safety and Operations Division (AAS-300) will continue to hold responsibility for and serve as point of contact on 14 Part 139 SMS (external SMS).

developed, the Safety Management Division will use interim measures to provide employees a reporting mechanism no later than June 30, 2011.

(6) Develop and oversee SMS initial and recurrent training (including resolving how to integrate SMS recurrent training with existing programmatic training). Initial training will begin in January 2011, and annual recurrent training by the end of FY 2012.

(7) Support SRM actions when asked.

(8) Provide technical support to ARP offices.

(9) Conduct internal audits of Headquarters' Divisions and Regional Airports Division Offices (Regional Offices) to ensure compliance with ARP SMS and report findings to the ARP Safety Review Board.

(10) Develop SMS-related communications and policies.

(11) Coordinate with other LOBs Headquarters Offices to ensure ARP SMS policies and procedures are interoperable.

(12) Set up and chair the **ARP SMS Working Group**:

(a) **Working Group Charter.**

(i) Provide working-level assessment of the ARP SMS.

(ii) Recommend SMS changes to AAS-1.

(iii) Help with updates to ARP SMS policies, procedures, and guidance.

(iv) Meet regularly via teleconference and at least yearly in person.

(b) **Members.** The ARP SMS Working Group will include representatives from the following offices and groups:

(i) Safety Management Division – Chair.

(ii) Airport Safety and Operations Division (AAS-300).

(iii) Airport Engineering Division (AAS-100).

(iv) Airport Planning and Environmental Division (APP-400).

(v) Regional SMS Coordinators.

**7-6. Office of Airport Planning and Programming (APP).** APP must:

- a. Incorporate SMS requirements into policies, procedures, and guidance used to manage airport planning, environmental, and financial programs. APP coordinates these actions with AAS and Regional Division Managers.
- b. Select an individual to serve as the APP point of contact for national SMS policy development and implementation (with a particular focus on SRM).
- c. Support the Regional Offices in fulfilling all SMS responsibilities for APP programs and responsibilities as described in ARP supporting documents and this Order.
- d. Take part in national-level Safety Assessments as needed (see paragraph 4-10).

**7-7. Regional Offices.** Regional Airports Division Offices (Regional Offices) must incorporate SMS into their areas of responsibility. Regional Offices may further delegate this responsibility to Airport District Offices (ADOs) where applicable. Regional Offices must:

- a. Set up, take part in, or appoint ARP personnel to sit on SRM panels (ARP, ATO, AST, or AVS panels) as needed.
- b. Review SRM documentation for compliance with SRM policies. .
- c. Work with the Safety Management Division to address the findings of internal evaluations and audits.
- d. Appoint a **Regional SMS Coordinator** who:
  - (1) Reviews requests for ARP participation on SRM panels. Requests may come from ATO, AVS, ARP Headquarters Offices, or airport sponsors.
  - (2) In coordination with ADO and Regional program offices, recommends participants for SRM panels to panel facilitators.
  - (3) Provides support to Regional Offices and ADOs as needed in carrying out their SMS responsibilities.
  - (4) Works closely with the Safety Management Division and provide support to AAS by ensuring data developed through the SMS is entered, tracked, and analyzed.
  - (5) Serves as the point of contact for regional SMS issues.
  - (6) Uploads hazards and required mitigations identified by regional or ADO Safety Assessments into the hazard tracking system.

(7) Coordinates Regional recommendations for improvements to SMS policies, procedures, and guidance and presents them to the Safety Management Division.

(8) Represents the Region in the ARP SMS Working Group as requested by the Safety Management Division.

(9) Assists SRM panel facilitators, as necessary, with ATO and AVS to get the support needed for conducting ARP-led SRM panels.

(10) Participates in at least two SRM panels annually and attends applicable recurrent training once every three years.

**7-8. ARP Employees.** All ARP employees play a role in ensuring the national system of airports is safe. Some ARP employees will have prominent roles in the ARP SMS. All employees play a role in ensuring system safety and are responsible for understanding ARP's SMS requirements. ARP employees will:

a. Comply with all terms of the ARP SMS.

b. Participate as subject matter experts (SMEs), as needed, on SRM panels formed by ARP or other FAA LOBs. More than one ARP employee may need to serve on a given panel to make certain all ARP interests are represented (for example, planning, certification, environmental). While representing ARP on an SRM panel, the employee must:

(1) Ensure that hazards and effects are properly identified and mitigated in SRM documentation, based on ARP regulations, standards, policies, procedures, and guidance.

(2) Review draft Safety Assessments, as asked, to ensure they properly document the processes used, hazards identified, and risks analyzed. *This review does not amount to acceptance of the Safety Assessment.*

c. Begin Safety Assessments when initiating approvals or changes to standards.

**7-9. Other FAA Lines of Business and Offices.**

a. **Background.** ARP SMS will identify hazards and safety concerns early in the planning phase of airport projects and when developing airport-related standards. Therefore, ARP can remove many hazards by eliminating or mitigating them during the design to an acceptable level before large investments are made. ARP needs ATO and AVS involvement in ARP-led SRM panels that could impact ATO or AVS operations or procedures. These panels may be formed to identify and assess hazards for individual airport projects or for the development of national airport standards. Therefore, ARP may ask multiple ATO service units or centers or AVS organizations to join panels. Such requests for participation may extend to other FAA offices as needed.

**b. Air Traffic Organization General Responsibilities.** To support ARP SMS, ARP requests ATO:

- (1) Increase communication with ARP and collaborate on safety concerns shared by their respective Safety Management Systems.
- (2) Take part in ARP SRM panels so hazards are identified and eliminated or mitigated during the design. ARP will request participation as follows:
  - (a) During the planning or environmental stage (if applicable).
  - (b) During engineering design for complex projects or if there are material changes from the planning stage.
  - (c) During review of the Construction Safety and Phasing Plan.
  - (d) As requested by ARP for the review of Modifications of Standards or the development or revision of national standards.
- (3) Coordinate with ARP Regional Offices when scheduling ATO-led SRM panels for changes that will affect the airport or ATO operations.
- (4) Coordinate with ARP Regional Offices to develop preventive and corrective actions for identified safety issues on airports.
- (5) Coordinate with ARP Headquarters Offices when scheduling ATO-led SRM panels for system-wide changes that affect airport operations.
- (6) Provide access to ATO hazard tracking software so ARP can conduct Safety Assurance to identify common safety issues that affect ARP.
- (7) Provide timely and complete response (in accordance with Order JO 7400.2, Procedures for Handling Airspace Matters) to ARP inquiries and Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) coordination requests.

Table 7-1 provides examples of some expectations of ATO Service Units taking part in the ARP SMS.

**Table 7-1 Examples of ATO Participation with ARP SMS**

Task/Office	ATO - Terminal		ATO - Technical Operations		ATO - En Route and Oceanic Services	ATO - System Operations (Flight Procedures)	ATO – Safety		
	ATCT Facilities*	HQ Offices	District Offices	HQ Offices			Regional Runway Safety Offices	HQ Runway Safety Office	Safety Management Systems Office
Take part in ARP-led SRM panels for airport projects or modifications of standards	■		■			■	■		
Take part in ARP-led SRM panels for changes to airport standards		■		■	■	■		■	
Develop guidance for ATO Service Units and Offices about participation on ARP-led SRM panels									■
All other ATO offices not specifically referenced in this chart will support ARP-led SRM panels as applicable. This list is not all inclusive.									

\*Airport Traffic Control Tower facilities.

c. **Aviation Safety Organization (AVS) General Responsibilities.** To support ARP SMS, ARP requests AVS:

(1) Increase communication with ARP and collaborate on safety concerns shared by the two safety management systems.

(2) Participate on ARP SRM panels so hazards are identified and eliminated or mitigated during the design. ARP will request participation as follows:

(a) Typically during the planning or environmental stage.

(b) During engineering design only if there are material changes from the planning stage.

(c) During review of the Construction Safety and Phasing Plan.

(d) As requested by ARP for the review of Modifications of Standards or the development or revision of national standards.

(3) Coordinate with ARP Regional Offices when scheduling AVS-led SRM panels for changes that will affect the airport or AVS operations or oversight.

(4) Coordinate with ARP Regional Offices to develop preventive and corrective actions for identified safety issues.

(5) Coordinate with ARP Headquarters Offices when scheduling AVS-led SRM panels for system-wide changes.

(6) Provide access to AVS hazard tracking software so ARP can conduct Safety Assurance to identify common safety issues that affect ARP.

(7) Provide timely response to ARP inquiries and OE/AAA coordination requests.

Table 7-2 provides examples of some expectations of AVS organizations taking part in the ARP SMS.

**Table 7-2 Examples of AVS Participation in ARP SMS**

Task/Office	Flight Standards		Accident Investigation & Prevention
	District Offices (FSDOs)	HQ Offices	Safety Mgmt. & Planning Division (AVP-300)
Take part in ARP-led SRM panels for airport projects or modifications of standards	■		
Take part in ARP-led SRM panels for changes to airport standards		■	
Develop guidance for AVS Offices about participation on ARP-SRM panels			■
All other AVS offices not specifically referenced in this chart will support ARP-led SRM panels as needed. This list is not all inclusive.			

**7-10. Airport Sponsors.**

a. In accordance with the sequence of airport categories outlined in paragraph 1-4b, airport sponsors will be expected to provide required planning data, to participate as requested in SRM panels, to sign the associated documentation, and to comply with any risk mitigation measures that may fall within their purview. The FAA will provide additional guidance on these processes and may be able to provide AIP funding for additional planning-related analysis that may result.

b. Airport sponsors continue to hold operational responsibilities and requirements to comply with applicable statutory and regulatory requirements, including applicable ACs, in accordance with existing AIP and PFC assurances. This includes assurances requiring sponsors to prevent the establishment or creation of airport hazards and preventing the sponsor from making or permitting changes or alterations that do not comply with the approved ALP and that might, in the opinion of the Secretary, adversely affect the safety, utility, or efficiency of the airport. Applicable ACs include (among others) the current version of AC 150/5370-2, Operational Safety on Airports During Construction. As always, airport sponsors are expected to provide timely, complete, and accurate information necessary to enable the FAA to evaluate proposed changes to ALPs and construction safety phasing plans where required and must comply with any risk mitigation measures required by the FAA.

## Appendix A. Glossary

**Air Transportation System:** Entirety of the aviation system, including the FAA; entities that design, manufacture, or operate aircraft or components of aircraft; training entities; people; infrastructure; and other systems and subsystems.

**Aircraft Accident:** As defined by National Transportation Safety Board (NTSB) Part 830, an occurrence associated with the operation of an aircraft that takes place between the time any person boards the aircraft with the intention of flight and until all such persons have disembarked and in which any person suffers death or serious injury or the aircraft receives substantial damage.

**Aircraft Incident:** As defined by NTSB Part 830, an occurrence other than an accident that is associated with the operation of an aircraft and that affects or could affect the safety of operations.

**Airport Project:** Is defined for purposes of this Order as an airport construction project that affects the physical characteristics of the airport, ALP approvals, or review of construction safety phasing plans.

**Approval:** Formal act of approving a change sent by a requesting organization. Required before the proposed change is implemented.

**Common Cause Failure:** A failure that occurs when a single fault results in the corresponding failure of multiple system components or functions.

**Construction Safety and Phasing Plan (CS/PP):** A document that outlines procedures, coordination, and control of safety issues during construction activity on an airport. The requirements for the CS/PP can be found in Advisory Circular 150/5370-2, Operational Safety on Airports During Construction. Other names for the CS/PP are Construction Safety Plan, Safety Plan, and Change Proposal.

**Control:** Anything that mitigates the risk of a hazard's effect. Same as a safety requirement. All controls must be written in requirements language. There are three types of controls:

*Validated:* Unambiguous, correct, complete, and verifiable.

*Verified:* Objectively determined to meet the design solution.

*Recommended:* Have the potential to mitigate a hazard or risk but are not yet validated as part of the system or its requirements.

**Credible:** Refers to a specific system state and sequence of events supported by data and expert opinion that clearly describes the outcome. It implies that it is reasonable to expect the assumed combination of extreme conditions will occur within the operational lifetime of the system.

**Hazard:** Any existing or potential condition that can lead to injury, illness, or death to people; damage to or loss of a system, equipment, or property; or damage to the environment. A hazard

is a condition that is a prerequisite of an accident or incident. A hazard might or might not result in a situation of high risk.

**Likelihood:** The estimated probability or frequency, in quantitative or qualitative terms, of a hazard's effect.

**Material Change:** Any change that in the opinion of the project manager could introduce new safety risks (that is, any change that is a result of the environmental or design process, alternative selection that changes the physical layout).

**National Airspace System (NAS):** The common network of U.S. airspace; air navigation facilities; equipment and services; airports or landing areas; aeronautical charts and information services; rules, regulations, and procedures; technical information; and labor and material. Includes system components shared with the military.

**Reasonable:** Not extreme or excessive.

**Risk:** The composite of predicted severity and likelihood of the potential effect of a hazard in the worst credible system state. There are three types of risk:

*Initial:* The severity and likelihood of a hazard when it is first identified and assessed, including the effects of preexisting risk controls in the current environment.

*Current:* The predicted severity and likelihood of a hazard at the current time.

*Residual:* The remaining risk that exists after all risk mitigations have been implemented or exhausted and all risk mitigations have been verified.

**Risk Assessment:** The process by which the results of risk analysis are used to make decisions. The process of combining the impacts of risk elements discovered in risk analysis and comparing them against some acceptability criteria. Risk assessment can include consolidating risks into risk sets that can be jointly mitigated, combined, and then used in decision making.

**Risk Mitigations:** Anything that mitigates the risk of a hazard's effect. A control is the same as a safety requirement.

**Safety Assessment:** A multidiscipline review and documentation often conducted by a panel of experts, of a preliminary safety analysis of a system or proposed system change. A safety analysis is typically performed early in the planning process before preparing a draft Airport Layout Plan, does not include mitigations, and often makes recommendations for further safety analysis. It is not a full ATO-compliant Safety Risk Management Document (SRMD), but should support the SRMD whenever it is needed.

**Safety Assessment Screening (SAS):** An ARP-specified description of the safety analysis for a proposed action. It documents the evidence to support whether the proposed action is acceptable

from a safety risk perspective. There are three versions of the SAS: one each for projects, Modification of Standards<sup>9</sup>, and Advisory Circular standards.

**Safety Risk Management Document (SRMD):** An ATO-specified description of the safety analysis for a given proposed change. It documents the evidence to support whether the proposed change to the system is acceptable from a safety risk perspective. SRMDs are maintained by the organization responsible for the change for the life cycle of the system or change.

**Safety Risk Management Panel:** A group formed to formalize a proactive approach to system safety and a methodology that ensures hazards are identified and unacceptable risk is mitigated before the change is made. It provides a framework to ensure that once a change is made, it will be tracked throughout its life cycle.

**Severity:** The measure of how bad the results of an event are predicted to be. Severity is determined by the worst credible outcome.

**Single Point Failure:** A failure of an item that would result in the failure of the system and is not compensated for by redundancy or an alternative operational procedure.

**System:** An integrated set of constituent pieces that are combined in an operational or support environment to meet a defined objective. These pieces include people, equipment, information, procedures, facilities, services, and other support services.

**System State:** An expression of the various conditions, characterized by quantities or qualities, in which a system can exist.

**Validation:** The process of proving the functions, procedures, controls, and safety standards are correct and the right system is being built (that is, the requirements are unambiguous, correct, complete, and verifiable).

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<sup>9</sup> See FAA Order 5300.1, Modifications to Agency Airport Design, Construction, and Equipment Standards, at [http://www.faa.gov/regulations\\_policies/orders\\_notices/index.cfm/go/document.current/documentNumber/5300.1](http://www.faa.gov/regulations_policies/orders_notices/index.cfm/go/document.current/documentNumber/5300.1).

## **Appendix B. Airport Project Approvals Not Typically Requiring Safety Assessments**

1. Administrative approvals such as the award of grants for planning studies, system plans, pavement management, environmental reviews, wildlife hazard assessment, or wildlife hazard management plans.

2. Purchase of mobile vehicles and equipment. This includes Aircraft Rescue and Fire Fighting (ARFF) vehicles, snow removal equipment, mobile ARFF training equipment, ARFF turn-out gear, handicap lift devices, passenger load bridges, low emission airport equipment (Voluntary Airport Low Emissions Program), driver increased vision equipment, mobile deicing equipment, friction measuring equipment, foreign object debris sweepers, and interactive training systems.

3. Airport Improvement Program grant for reimbursement of a completed project.

4. Land acquisition for any purpose. (Land acquisitions only results in a change in paperwork and names on a deed. The purpose of the land acquisition or use of acquired land may require further safety risk review.)

5. Residential and public building sound insulation.

6. Installation of noise monitoring system outside the airport operations area.

7. Construction, rehabilitation, or change of any facility that is entirely outside the air operations area, does not involve any expansion of the facility envelope and does not involve construction equipment, haul routes or placement of material in locations that require access to the air operations area, increase the facility envelope, or impact line-of-sight. Such facilities may include passenger terminals and parking or other structures. Project managers must examine such projects carefully (including construction logistics) to identify extraordinary circumstances that could trigger the need for a Safety Assessment.

8. Projects depicted on an Airport Layout Plan that are not expected to be under construction within 15 years from the ALP approval date.

9. Approval of a Passenger Facility Charge for 'impose only'.

## Appendix C. Safety Assessment Tables

### Hazard Severity Classification

Effect On:	Minimal 5	Minor 4	Major 3	Hazardous 2	Catastrophic 1
ATC Services	-Conditions Resulting in a minimal reduction in ATC services, or -A loss of separation resulting in a Category D Runway Incursion (RI), or -An Operational Deviation (OD), or -A Proximity Event (PE)	-Conditions resulting on a slight reduction in ATC services, or -A loss of separation resulting on a Category C RI, or Operational Error (OE)	-Conditions resulting in a partial loss of ATC services, or -A loss of separation resulting in Category B RI or OE	-Conditions resulting in a total loss of ATC services (ATC Zero), or -A loss of separation resulting in a Category A RI or OE	Conditions resulting in a collision between aircraft, obstacles or terrain
Flight Crew	-Flight crew receives TCAS Traffic Advisory informing of nearby traffic or, -Pilot Deviation (PD) where loss of airborne separation falls within the same parameters of a Category D OE or PE, or -Minimal effect on operation of aircraft	-Potential for PD due to TCAS Preventive Resolution Advisory (PRA) advising crew not to deviate from present vertical profile, or -PD where loss of airborne separation falls within the same parameters of a Category C OE, or -A reduction of functional capability of aircraft but does not impact overall safety (e.g. normal procedures per AFM)	-PD due to response to TCAS Corrective Resolution Advisory (CRA) issued advising crew to take vertical action to avoid developing conflict with traffic, or -PD where loss of airborne separation falls within the same parameters of a Category B OE, or -Reduction in safety margin or functional capability of the aircraft requiring crew to follow abnormal procedures per AFM	-Near mid-air collision (NMAC) results due to proximity of less than 500 feet from another aircraft or a report filed by pilot or flight crew member that a collision hazard existed between two or more aircraft; or -Reduction of safety margin and functional capability of the aircraft requiring crew to follow emergency procedures as per AFM.	-Conditions resulting in a mid-air collision (MAC) or impact with obstacle or terrain resulting in hull loss, multiple fatalities, or fatal injury
Flying Public	Minimal injury or discomfort to passenger(s)	-Physical discomfort to passenger(s) (e.g. extreme braking action; clear air turbulence causing unexpected movement of aircraft causing injuries to one or two passengers out of their seats) -Minor injury to greater than zero to less or equal to 10% of passengers	-Physical distress on passengers (e.g. abrupt evasive action; severe turbulence causing unexpected aircraft movements), or -Minor injury to greater than 10% of passengers	Serious injury to passenger(s)	Fatalities or fatal injury to passenger(s)
Airport	No damage to aircraft but minimal injury or discomfort of little consequence to passenger(s) or workers	-Minimal damage to aircraft, or -Minor injury to passengers, or -Minimal unplanned airport operations limitations (i.e. taxiway closure), or -Minor incident involving the use of airport emergency procedures	-Major damage to aircraft and/or minor injury to passenger(s)/worker(s), or -Major unplanned disruption to airport operations, or -Serious incident, or -Deduction on the airport's ability to deal with adverse conditions	-Severe damage to aircraft and/or serious injury to passenger(s)/worker(s); or -Complete unplanned airport closure, or -Major unplanned operations limitations (i.e.. runway closure), or -Major airport damage to equipment and facilities	-Complete loss of aircraft and/or facilities or fatal injury in passenger(s)/worker(s); or -Complete unplanned airport closure and destruction of critical facilities; or -Airport facilities and equipment destroyed

**Likelihood Definitions**

	NAS System & ATC Operational	NAS Systems		ATC Operational		Flight Procedures	Airports
		Individual Item/System	ATC Service/NAS Level System	Per Facility	NAS-Wide		Airport Specific
Frequent A	Probability of occurrence per operation/operational hour is equal to or greater than $1 \times 10^{-3}$	Expected to occur about once every 3 months for an item	Continuously experienced in the system	Expected to occur more than once per week	Expected to occur more than every 1-2 days	Probability of occurrence per operation/operational hour is equal to or greater than $1 \times 10^{-5}$	Expected to occur more than once per week or every 2500 departures, whichever occurs sooner
Probable B	Probability of occurrence per operation/operational hour is equal to or greater than $1 \times 10^{-5}$	Expected to occur about once per year for an item	Expected to occur frequently in the system	Expected to occur about once every month	Expected to occur about several times per month		Expected to occur about once every month or 250,000 departures, whichever occurs sooner
Remote C	Probability of occurrence per operation/operational hour is less than or equal to $1 \times 10^{-5}$ but equal to or greater than $1 \times 10^{-7}$	Expected to occur several times during the life cycle of an item	Expected to occur numerous times in a system's life cycle	Expected to occur about once every year	Expected to occur about once every 3 years	Probability of occurrence per operation/operational hour is less than or equal to $1 \times 10^{-5}$ , but equal to or greater than $1 \times 10^{-7}$	Expected to occur about once every year or 2.5 million departures, whichever occurs sooner
Extremely Remote D	Probability of occurrence per operation/operational hour is less than or equal to $1 \times 10^{-7}$ but equal to or greater than $1 \times 10^{-9}$	Unlikely to occur, but possible in an item's life cycle	Expected to occur several times in a system's life cycle	Expected to occur once every 10-100 years	Expected to occur about once every 3 years	Probability of occurrence per operation/operational hour is less than or equal to $1 \times 10^{-7}$ but equal to or greater than $1 \times 10^{-9}$	Expected to occur once every 10-100 years or 25 million departures, whichever occurs sooner
Extremely Improbable E	Probability of occurrence per operation/operational hour is less than $1 \times 10^{-9}$	So unlikely that it can be assumed that it will not occur in an item's life cycle	Unlikely to occur, but it is possible in system life cycle	Expected to occur less than every 100 years	Expected to occur less than every 30 years	Probability of occurrence per operation/operational hour is less than $1 \times 10^{-9}$	Expected to occur less than every 100 years

**Risk Matrix**

Severity \ Likelihood	Minimal 5	Minor 4	Major 3	Hazardous 2	Catastrophic 1
Frequent A	Low Risk	Medium Risk	High Risk	High Risk	High Risk
Probable B	Low Risk	Medium Risk	High Risk	High Risk	High Risk
Remote C	Low Risk	Low Risk	Medium Risk	High Risk	High Risk
Extremely Remote D	Low Risk	Low Risk	Low Risk	Medium Risk	High Risk
Extremely Improbable E	Low Risk	Low Risk	Low Risk	Low Risk	High Risk *

High Risk
Medium Risk
Low Risk

\* Unacceptable with Single Point and/or Common Cause Failures

**High Risk** – High risk is unacceptable within the ARP SMS. If a hazard presents a high-initial risk, the proposal cannot be carried out unless hazards are further mitigated so risk is reduced to medium or low level and the ARP Safety Review Board recommends that ARP-1 approve the mitigations. Tracking and management of high-risk hazards and controls are required.

**Medium Risk** – Medium risk is acceptable within the ARP SMS. A medium risk is the minimum acceptable safety objective. With medium risk, the proposal may be carried out as long as the risk is tracked and managed.

**Low Risk** – Within the ARP SMS, low risk is the target. Low risk is acceptable without restriction. Low-risk hazards do not need to be actively managed but must be recorded in the SRM documentation.

### Appendix D. Safety Assessment Screening (SAS)

#### SAS-1: Airport Planning and Development Projects

1. ALP approvals (including any associated environmental review)
2. Airport construction
3. Non-construction airport changes
4. Part 150 Noise Compatibility Program (measures that may affect aviation safety)

Airports Safety Risk Management (SRM)	
Safety Assessment Screening for Projects (SAS-1)	Page 1
<b>1. Project Location</b>	
a. LocID _____ b. Airport _____ c. City _____ d. State _____ e. Sponsor _____ f. Service Level _____ g. CFR 139 date _____ h. CFR 139 type _____	SMS ID: <input style="width: 150px;" type="text"/>
<b>2. Describe the Proposed Action (Include any identifying number or date of submission (e.g., date of draft ALP))</b>	
<b>3. Approval Action Type/Triggering Event (Select all that apply)</b>	
a. <input type="checkbox"/> Airport Layout Plan (ALP) (new or update) b. <input type="checkbox"/> Airport construction review, coordination, and approval c. <input type="checkbox"/> Other airport changes not involving construction d. <input type="checkbox"/> Part 150 Noise Compatibility Program (measures that may affect aviation safety)	
<b>4. Project Screening</b>	
a. <input checked="" type="checkbox"/> A preliminary analysis indicates that an SRM review is required. (Complete pages 2 & 3) b. <input checked="" type="checkbox"/> The proposal does not require further SRM review. (Discard pages 2 & 3)	
Prepared by _____ Office _____ Title _____	Sign _____ Date _____

Airports Safety Risk Management (SRM)	
Safety Assessment Screening for Projects (SAS-1)	
Page 2	
SMS ID: <input type="text"/>	
<b>5. Was the proposal reviewed by OE/AAA?</b>	
a. <input type="checkbox"/> Yes <input type="checkbox"/> No (Skip to block number 6)	
b. Case Number: <input type="text"/>	
c. Determination Date: <input type="text"/>	
d. <input type="checkbox"/> OE/AAA review comments are attached.	
e. <input type="checkbox"/> OE/AAA review indicates an objection to the proposal.	
<b>6. A review of the proposal indicates the following: (select all that apply)</b>	
<b>ARP System Safety Impact Checklist</b>	
a. <input type="checkbox"/> The Proposed Action may deviate from applicable FAA standards.	
b. <input type="checkbox"/> The Proposed Action may affect aviation safety.	
c. <input type="checkbox"/> The Proposed Action may impact aviation operations.	
d. <input type="checkbox"/> The Proposed Action may affect navigational aids.	
e. <input type="checkbox"/> The Proposed Action may impact TERPS surfaces.	
f. <input type="checkbox"/> Other safety impact: _____	
<b>SRM Panel</b>	
g. <input type="checkbox"/> The OE/AAA review indicates that an SRM panel is required.	
h. <input type="checkbox"/> The Safety Impact Checklist indicates that an SRM panel is required.	
i. <input type="checkbox"/> AN SRM panel is not required. No further SRM review is necessary. Complete and sign block number 12.	
<b>7. SRM Panel and Findings</b>	
a. Report date: <input type="text"/>	
b. <input type="checkbox"/> Report is attached.	
<b>8. Initial Risk Determination</b>	
a. <input type="checkbox"/> <b>Low Initial Risk.</b> Attach supporting documentation.	
b. <input type="checkbox"/> <b>Medium Initial Risk.</b> Attach detailed explanation of hazards.	
c. <input type="checkbox"/> <b>High Initial Risk.</b> Attach detailed explanation of hazards. Requires review by the ARP Safety Review Board.	
<b>9. Final Risk Determination</b>	
a. <input type="checkbox"/> <b>Low Risk.</b> Attach detailed explanation of mitigation measures, including NOTAM requirements.	
b. <input type="checkbox"/> <b>Medium Risk.</b> Attach detailed explanation of mitigation measures, including NOTAM requirements.	
c. <input type="checkbox"/> <b>High Risk.</b> The project proposal with risk mitigation in place is unacceptable.	

<b>Airports Safety Risk Management (SRM)</b>			
<b>Safety Assessment Screening for Projects (SAS-1)</b>			<b>Page 3</b>
SMS ID: <input style="width: 150px;" type="text"/>			
<b>10. SRM Panel Members and Certification</b>			
<i>We certify that we have reviewed the project documentation and have fully considered the potential hazards (and any proposed mitigation measures) before reaching this determination. Dissenting opinions concerning the determination are included in the report.</i>			
<b>FAA Office</b>	<b>Name and Title</b>	<b>Date</b>	<b>Signature</b>

**Instructions for FAA Form 5200-8  
ARP Safety Assessment Screening for Projects (SAS-1)**

**General**

Use Form 5200-8 (SAS-1) to document the Safety Risk Management (SRM) process for airport planning and development projects in accordance with FAA Order 5200.11. The SAS should be completed and signed prior to final FAA approvals or determinations in connection with the following triggering events:

- Airport Layout Plan (ALP) approvals
- Airport construction project review, coordination, and/or approval for federally obligated airports. This includes review of Construction Safety and Phasing Plans in accordance with Advisory Circular 150/5370-2, Operational Safety on Airports During Construction.
- Non-construction airport changes, including runway and taxiway designations, and changes to airfield marking, lighting, or signage. These reviews are required when the change is not part of a draft ALP submittal.
- Part 150 Noise Compatibility Program approvals that affect aviation safety.

These instructions may be supplemented or replaced by program guidance for the specific triggering event. For example, more detailed instructions for completing the SAS for ALP approvals may be included in AC 150/5070-6, Airport Master Plans, or FAA Order 5100.38, Airport Improvement Program Handbook.

**Purpose**

A completed and signed SAS documents the SRM process for the FAA Office of the Associate Administrator for Airports (ARP). It is intended to ensure that ARP program decisions (identified above as triggering events) properly consider safety. It will also help staff determine when an SRM panel is required.

**Timing**

The SAS should be completed prior to the final ARP action (approval, determination, etc.) for the triggering event. An OE/AAA airspace study, if applicable, should be completed prior to completion of the SAS.

**Availability**

This form is available electronically at <http://www.faa.gov/airports/resources/forms/>.

**Data Block Instructions**

**Block 1. Project Location.** Identify the project location, type of airport, and the airport sponsor responsible for executing the project.

**SMS ID** is a unique number that identifies the proposed action (block 2). It will be used to identify and coordinate the SAS and for future reference. Do not use the AIP grant number, OE/AAA NRA case number, or any other existing number. Consult program guidance for specific instructions on assigning the SMS ID.

**Block 2. Proposed Action.** Be as specific as possible about the airfield components and systems affected by the proposal. For example: "Reconstruct Runway 12/30 and entrance taxiways 'A', 'B', and 'C'."

- Block 3. Approval Action Type.** Select the triggering event(s) for the proposed action, indicating why SRM is required by Order 5200.11.
- Block 4. Project Screening.**
- a. *If any item in Block 3 is checked*, select 4a. *A preliminary analysis indicates that the proposal requires SRM*, and complete pages 2 and 3.
  - b. *If no items in Block 3 are checked*, select 4b. No further SRM review is required, discard pages 2 and 3, and complete and sign the signature block. Block 4 should be signed by the individual responsible for reviewing or approving the triggering event, unless otherwise indicated by supplemental program guidance.
- Block 5. OE/AAA Review.** Complete each line item as follows:
- a. Indicate whether an OE/AAA airspace review has been completed. If no, proceed to Block 6. If yes, go to item b.
  - b. Enter the NRA airspace case number from the OE/AAA.
  - c. Enter the date of the determination, if the review is complete.
  - d. It may be useful to attach the OE/AAA review comments to expedite review and approval of the proposal.
  - e. Select this box if the OE/AAA review resulted in an objection.
- Block 6. Safety Impact Checklist.** Select all items (a) through (f) that apply. Supplemental program guidance (if available) may provide additional instructions for completing the Safety Impact Checklist.
- SRM Panel.** Determine whether a panel is required.
- g. *If any items in the Safety Impact Checklist are checked*, select item (h). An SRM panel is required.
  - h. *If Block 5 item (d) is checked*, select item (h). An SRM panel is required.
  - i. *If neither item (g) nor (h) is selected*, select item (i), skip to Block 12, and sign the document.
- Block 7.** If an SRM panel is required (Block 6, items (g) or (h)), refer to FAA Order 5200.11, 4-8, for the composition, conduct, findings, and final report of the panel. Supplemental program guidance may provide additional instructions for the panel, findings, and report.
- Block 8.** Indicate the SRM Panel's initial risk determination. This is the unmitigated risk associated with the project proposal. Select that highest initial risk found for each of the hazards identified by the panel. Use Order 5200.11, appendix C, to select the appropriate initial risk level.
- Block 9.** Indicate the SRM Panel's final risk determination. This is the estimated residual risk after all mitigations proposed by the SRM panel are in-place. Use Order 5200.11, appendix C, to select the appropriate final risk level.
- Block 10.** Have each panel member certify that all appropriate hazards are identified and that reasonable mitigation measures were considered by the panel. This certification is **not** an agreement to the findings of the panel (risk level), but an indication that each panel member believes that the panel performed a thorough job of identifying hazards and considering appropriate mitigations.

**Block 11.** If an SRM panel is required (Block 6, items (g) or (h)), have the airport sponsor sign. Airport sponsors have direct control for controlling hazards and risks associated with airport operations. Airport signature is acknowledgement of the risks and responsibility for implementing and maintaining risk mitigation strategies. It provides for coordinated safety risk management between the FAA and the airport.

**Block 12.** Sign the SAS.

***If an SRM panel is NOT required (Block 6, item (i)),*** have the form signed by the individual responsible for reviewing or approving the triggering event, unless otherwise indicated by supplemental program guidance.

***If an SRM panel is required (Block 6, items (g) or (h)),*** obtain the correct signature. FAA approval represents an endorsement that all hazards have been considered and that risk levels will remain acceptable provided that risk mitigations remain in-place. The FAA signature level for approval is determined by the panel's initial risk level findings as follows:

- a. **High Initial Risk.** ARP Safety Review Board review and ARP-1 approval.
- b. **Medium Initial Risk.** Regional ARP Division Manager with authority over the change.
- c. **Low Initial Risk.** Airport District Office or regional branch manager with authority over the change.

**SAS-2: Modifications of Standards**

<b>Airports Safety Risk Management (SRM)</b>	
<b>Safety Assessment Screening for Modification of Standards (SAS-2) Page 1</b>	
<b>1. Project Location</b>	
a. LocID _____	SMS ID: <input style="width: 150px;" type="text"/>
b. Airport _____	
c. City _____	
d. State _____	
e. Sponsor _____	
f. Service Level _____	
g. CFR 139 date _____	
h. CFR 139 type _____	
<b>2. Describe the Proposed Modification of Standards (Include the Advisory Circular and paragraph to be modified)</b>	
<b>3. Standards Type-- This modification applies only to the following: (select all that apply)</b>	
a. <input type="checkbox"/> Dimensional standards for Runway Safety Areas (AC 150/5300-13, paragraph 305) b. <input type="checkbox"/> Regional or state standards c. <input type="checkbox"/> Material standards d. <input type="checkbox"/> Construction standards <small>(See Order 5300.1, Modification to Agency Airport Design, Construction, and Equipment Standards)</small>	
<b>4. Proposal Screening</b>	
a. <input checked="" type="checkbox"/> A preliminary analysis indicates that an SRM review is required. (Complete pages 2 & 3.) b. <input checked="" type="checkbox"/> The proposal does not require further SRM review. (Discard pages 2 & 3.)	
Prepared by _____	Sign _____
Office _____	
Title _____	Date _____



<b>Airports Safety Risk Management (SRM)</b>			
<b>Safety Assessment Screening for Modification of Standards (SAS-2)</b>			<b>Page 3</b>
SMS ID: <input style="width: 150px;" type="text"/>			
<b>10. Safety Risk Management (SRM) Panel Members and Certification</b>			
<i>We certify that we have reviewed the project documentation and have fully considered the potential hazards (and any proposed mitigation measures) before reaching this determination. Dissenting opinions concerning the determination are included in the report.</i>			
<b>FAA Office</b>	<b>Name and Title</b>	<b>Date</b>	<b>Signature</b>

**Instructions for FAA Form 5200-9  
ARP Safety Assessment Screening for Modification of Standards (SAS-2)**

**General**

Use Form 5200-9 (SAS-2) to document the Safety Risk Management (SRM) process for modifications of standards (MOS) approvals in accordance with FAA Order 5200.11. The SAS should be completed and signed prior to final FAA approval for applicable Modifications of Standards.

These instructions may be supplemented or replaced by program guidance for the modifications of standards process. See FAA Order 5300.1, Modifications to Agency Airport Design, Construction, and Equipment Standards.

**Purpose**

A completed and signed SAS documents the SRM process for the FAA Office of the Associate Administrator for Airports (ARP). It is intended to ensure that ARP program decisions, including final approval of MOS properly consider safety. It will also help staff determine when a project requires an SRM panel.

**Timing**

The SAS should be completed prior to the final MOS approval. An OE/AAA airspace study, if applicable, should be completed prior to completion of the SAS.

**Availability**

This form is available electronically at <http://www.faa.gov/airports/resources/forms/>

**Data Block Instructions**

**Block 1. Project Location.** Identify the project location, type of airport, and the airport sponsor responsible for executing the project.

**SMS ID** is a unique number that identifies the proposed action (block 2). It will be used to identify and coordinate the SAS and for future reference. Do not use the AIP grant number, OE/AAA NRA case number, or any other existing number. Consult program guidance for specific instructions on assigning the SMS ID.

**Block 2. Proposed Modification of Standards.** Describe the proposed MOS. Include a reference to the specific Advisory Circular and paragraph that is proposed for modification. Be as specific as possible regarding the airfield components and systems that are affected by the MOS proposal.

**Block 3. Standards Type.** SRM for MOS only applies to airfield layout and dimensional standards. If the proposal applies exclusively to any items in Block 3, then SRM is not appropriate. Select all that apply exclusively:

- a. The modification only applies to non-standard RSA dimensions. RSA dimensional standards cannot be modified according to FAA Order 5300.1.
- b. Regional or state standards, FAA Order 5300.1, paragraphs 12 and 13.
- c. Material and equipment standards.

- d. Construction standards and specifications included in Advisory Circular 150/5370-10, Standards for Specifying Construction of Airports.

**Block 4. Proposal Screening.**

- a. ***If no items in Block 3 are checked***, then select 4a. An SRM panel is required. Complete pages 2 and 3. This implies that the standard applies to airfield dimensional or layout standards.
- b. ***If any Block 3 items are checked***, select 4b. No further SRM review is required. Discard pages 2 and 3, and complete and sign the signature block. The form should be signed by the individual responsible for reviewing or approving the MOS, unless otherwise required by supplemental program guidance.

**Block 5. Justification.** Add the justification for the MOS. An MOS must be justified before it can be approved (whether an SRM determines risks are acceptable or not). Order 5300.1 and Advisory Circular 150/5300-13, Airport Design, provides guidance for justifying MOS requests.

**Block 6. OE/AAA Review.** Complete each line item as follows:

- a. Indicate whether an OE/AAA airspace review has been completed. Review is required if the MOS applies to airfield dimensional or layout standards.
- b. Enter the NRA airspace case number from the OE/AAA.
- c. Enter the date of the determination, if the review is complete.
- d. It may be useful to attach the OE/AAA review comments to expedite review and approval of the proposal.
- e. Select this box if the OE/AAA review resulted in an objection.

**Block 7.** Add the date of the final SRM panel report and indicate if the report is attached to the SAS.

**Block 8.** Indicate the SRM Panel's initial risk determination. This is the unmitigated risk associated with the project proposal. Select that highest initial risk found for each of the hazards identified by the panel. Use Order 5200.11, appendix C, to select the appropriate initial risk level.

**Block 9.** Indicate the SRM Panel's final risk determination. This is the estimated residual risk after all mitigations proposed by the SRM panel are in-place. Use Order 5200.11, appendix C, to select the appropriate final risk level.

**Block 10.** Have each panel member certify that all appropriate hazards are identified and that reasonable mitigation measures were considered by the panel. This certification is **not** an agreement to the findings of the panel (risk level), but an indication that each panel member believes that the panel performed a thorough job of identifying hazards and considering appropriate mitigations.

**Block 11.** Have the airport sponsor sign. Airport sponsors have direct control for controlling hazards and risks associated with airport operations. Airport signature is acknowledgement of the risks and responsibility for implementing and maintaining risk mitigation strategies. It provides for coordinated safety risk management between the FAA and the airport.

**Block 12.** Obtain the correct signature. FAA approval represents an endorsement that all hazards have been considered and that risk levels will remain acceptable

- a. **High Initial Risk.** ARP Safety Review Board review and ARP-1 approval.
- b. **Medium Initial Risk.** ARP Safety and Standards Director, AAS-1.
- c. **Low Initial Risk.** ARP headquarters division manager with authority over the change (i.e. AAS-100 or AAS-300).

**SAS-3: Advisory Circular Standards**

<b>Airports Safety Risk Management (SRM)</b>	
<b>Safety Assessment Screening for Standards (SAS-3)</b>	
<b>Page 1</b>	
<b>1. Advisory Circular</b>	
SMS ID: <input style="width: 150px;" type="text"/>	
<b>2. Standards Included in the AC (List by paragraph)</b>	
<b>3. ARP System Safety Impact Checklist (Select all that apply)</b>	
<ul style="list-style-type: none"> <li>a. <input type="checkbox"/> The proposed standards may deviate from applicable FAA standards.</li> <li>b. <input type="checkbox"/> The proposed standards may affect aviation safety.</li> <li>c. <input type="checkbox"/> The proposed standards may impact aviation operations.</li> <li>d. <input type="checkbox"/> The proposed standards may affect navigational aids.</li> <li>e. <input type="checkbox"/> The proposed standards may impact TERPS surfaces.</li> <li>f. <input type="checkbox"/> Other safety impact: _____</li> </ul>	
<b>4. Proposed Standard Screening</b>	
<ul style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> The Safety Impact Checklist indicates that an SRM panel is required. (Complete page 2.)</li> <li>b. <input checked="" type="checkbox"/> The Safety Impact Checklist indicates that an SRM panel is <b>not</b> required. (Discard page 2.)</li> </ul>	
Prepared by _____	Sign _____
Office _____	Date _____
Title _____	

<b>Airports Safety Risk Management (SRM)</b>			
<b>Safety Assessment Screening for Standards (SAS-3)</b>			<b>Page 2</b>
SMS ID: <input style="width: 150px;" type="text"/>			
<b>5. Was the proposal reviewed internally within FAA?</b>			
a. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Skip to block number 6) b. Clearance Record Date: <input style="width: 150px;" type="text"/> c. <input type="checkbox"/> Review comments are attached. d. <input type="checkbox"/> Review indicates an objection to the proposal.			
<b>6. SRM Panel and Findings</b>			
a. Report date: <input style="width: 150px;" type="text"/> b. <input type="checkbox"/> Report is attached.			
<b>7. Initial Risk Determination</b>			
a. <input type="checkbox"/> <b>Low Initial Risk.</b> Attach supporting documentation. b. <input type="checkbox"/> <b>Medium Initial Risk.</b> Attach detailed explanation of hazards. c. <input type="checkbox"/> <b>High Initial Risk.</b> Attach detailed explanation of hazards. Requires review by the ARP Safety Review Board.			
<b>8. Final Risk Determination</b>			
a. <input type="checkbox"/> <b>Low Risk.</b> Attach detailed explanation of mitigation measures. b. <input type="checkbox"/> <b>Medium Risk.</b> Attach detailed explanation of mitigation measures. c. <input type="checkbox"/> <b>High Risk.</b> The project proposal with risk mitigation in place is unacceptable.			
<b>9. SRM Panel Members and Certification</b>			
<i>We certify that we have reviewed the project documentation and have fully considered the potential hazards (and any proposed mitigation measures) before reaching this determination. Dissenting opinions concerning the determination are included in the report.</i>			
<b>FAA Office</b>	<b>Name and Title</b>	<b>Date</b>	<b>Signature</b>

**Instructions for FAA Form 5200-10  
ARP Safety Assessment Screening for Standards (SAS-3)**

**General**

Use Form 5200-10 (SAS-3) to document the Safety Risk Management (SRM) process for new and revised airport standards in accordance with FAA Order 5200.11. The SAS should be completed and signed prior to final FAA approval for publication of the standard.

These instructions may be supplemented or replaced by program guidance for the development of new and revised airport standards.

**Purpose**

A completed and signed SAS documents the SRM process for the FAA Office of the Associate Administrator for Airports (ARP). It is intended to ensure that ARP program decisions, including final approval of new and revised airport standards properly consider safety. It will also help staff determine when a proposed standard requires an SRM panel.

**Timing**

The SAS should be completed prior to the final standard approval. An internal FAA clearance record, if applicable, should be completed prior to completion of the SAS.

**Availability**

This form is available electronically at <http://www.faa.gov/airports/resources/forms/>

**Data Block Instructions**

**Block 1. Advisory Circular.** Enter the name and number of the Advisory Circular(s), which will include the new/revised standard.

**SMS ID** is a unique number that identifies the proposed standard(s) (block 2). It will be used to identify and coordinate the SAS and for future reference. Consult program guidance, if available, for specific instructions on assigning the SMS ID.

**Block 2. Standards included in the AC.** List each standard under consideration by paragraph and provide a sufficient description to identify the purpose of the standard. Be as specific as possible about the airfield components and systems affected by the proposed standard.

**Block 3. Safety Impact Checklist.** Select all items (a) through (f) that apply. Supplemental program guidance (if available) may provide additional instructions for completing the Safety Impact Checklist.

**Block 4. Proposed Standard Screening.**

- a. **If any items in Block 3 are checked**, then select 4a. An SRM panel is required. Complete page 2.
- b. **If no Block 3 items are checked**, select 4b. No further SRM review is required. Discard page 2, and complete and sign Block 4. The form should be signed by the individual responsible for writing the new or

- Block 5. FAA Internal Review.** Complete each line item as follows:
- a. Indicate whether a clearance record has been completed. If no, proceed to Block 6. If yes, go to item b.
  - b. Enter the clearance record date.
  - c. It may be useful to attach the clearance record to expedite review and approval of the proposed standard.
  - d. Select this box if the review resulted in an objection or non-concurrence.
- Block 6.** Add the date of the final SRM panel report and indicate if the report is attached to the SAS.
- Block 7.** Indicate the SRM Panel's initial risk determination. This is the unmitigated risk associated with the proposed standard. Select that highest initial risk found for each of the hazards identified by the panel. Use Order 5200.11, appendix C, to select the appropriate initial risk level.
- Block 8.** Indicate the SRM Panel's final risk determination. This is the estimated residual risk after all mitigations proposed by the SRM panel are in-place. Use Order 5200.11, appendix C, to select the appropriate final risk level.
- Block 9.** Have each panel member certify that all appropriate hazards are identified and that reasonable mitigation measures were considered by the panel. This certification is **not** an agreement to the findings of the panel (risk level), but an indication that each panel member believes that the panel performed a thorough job of identifying hazards and considering appropriate mitigations.
- Block 10.** Obtain the correct signature. FAA approval represents an endorsement that all hazards have been considered and that risk levels will remain acceptable provided that risk mitigations remain in-place. The FAA signature level for approval is determined by the panel's initial risk level findings as follows:
- a. **High Initial Risk.** ARP Safety Review Board review and ARP-1 approval.
  - b. **Medium Initial Risk.** ARP Safety and Standards (AAS-1) or Planning and Programming (APP-1) manager with ever is responsible for the standard.
  - c. **Low Initial Risk.** ARP headquarters division manager with authority over the change (i.e. AAS-100, AAS-300, APP-400, or APP-500).

**Appendix E. ARP SMS Curriculum Matrix**

<b>Course Name</b>	<b>Objectives</b>	<b>Prerequisites</b>	<b>Medium</b>	<b>Recommended Audience</b>
SMS Overview (eLMS)	Define SMS List four components of SMS Define positive safety culture Identify the benefits of an SMS		eLMS course	All ARP employees  Employees from other LOBs
SRM	Define SRM Define SRMD Define Preliminary Hazard List (PHL) Define Preliminary Hazard Analysis (PHA) Conduct a Preliminary Hazard Analysis	SMS Overview	Instructor-led Training	All ARP employees required to participate in or facilitate SRM Panels
SRM Panel Facilitation	Facilitate an SRM panel	SMS Overview SRM	Instructor-led Training	Facilitators  ARP employees responsible for overseeing Facilitators
Safety Assessment Writing	Documenting the findings of an SRM panel and Safety Assessment	SMS Overview SRM	eLMS course	ARP employees responsible for writing or overseeing the writing of SRM panels and Safety Assessments
SMS Instructor Training	Train the trainers for SRM, Safety Assessment writing, and SRM Panel Facilitation courses	SMS Overview	Instructor-led Workshop	ARP employees serving as trainers
Managing the SMS Effort	Manage SMS implementation and sustainment	SMS Overview	eLMS course	All ARP Managers