

900 - Project Design Development Projects

Sponsor Responsibility

Under the Airport Improvement Program (AIP), the sponsor is responsible for accomplishing project engineering and design. The sponsor shall use qualified technical resources to accomplish project design and to prepare a bid package that complies with Federal, State and local regulations and standards. The project design shall incorporate sound engineering principals along with accepted "Best Practice" design considerations and methods.

FAA Standards

By accepting an AIP grant, the sponsor agrees to adhere to FAA standards that are presented in various applicable Advisory Circulars (AC's). A listing of applicable AC's is attached to each grant agreement.

Unless specifically approved in writing by the FAA, the Sponsor must apply all applicable FAA standards to the project design without modification. Non-standard design elements that are deemed not acceptable to the FAA are ineligible for AIP participation.

FAA Review

Sponsors, along with their consultant, are strongly encouraged to consult with the FAA prior to commencement of the project design phase. This coordination will establish the limits of AIP eligibility and thus hopefully limit any misdirected work that may be declared ineligible after the fact.

The primary purpose of the FAA's review is to assure that applicable FAA standards are being applied as well as to make determinations regarding the limits of AIP eligibility. The review is generally limited to eligibility determinations and a review of critical project elements such as the safety plan, pavement details, airfield marking details and airfield signage details. The FAA will not typically review detailed engineering and quantity calculations, however such documentation shall be made available if so requested by the FAA.

Within the FAA Central Region, FAA acceptance of the plans and specifications is based on a combination of a FAA cursory review and the submittal of a satisfactory executed sponsor certification. **Sponsors and their consultant must not construe the FAA review as a quality control review.** The responsibility for complying with FAA standards rests with the sponsor. Any review and approval by the FAA does not relieve the Sponsor or the engineer of the responsibility for the accuracy, completeness, and technical content of the plans and specifications.

The sponsor and their consultant shall allow sufficient time for the FAA to conduct an appropriate review. This may vary per size and type of project. Generally, a review time frame of 2-3 weeks is requested. Sponsors should not proceed with the invitation for bids until FAA concurs with the design and bid package.

910 - Predesign Conference: Development Projects

The predesign conference offers the opportunity for discussion of project issues related to acceptable design parameters, airport safety considerations, construction phasing and environmental considerations. This meeting also re-affirms the limits of AIP participation thus hopefully limiting misdirected design work.

A pre-design conference is generally held for all, but the most basic projects. This meeting is essential when a project is of sufficient magnitude and complexity. For smaller scale projects, the pre-design conference may be conducted via a telephone conference call. In either case, it is recommended that a prepared agenda be distributed to all participants. Listed below are some items to be discussed at a predesign conference. This list should not be construed as being inclusive of all such project issues.

Critical Issues

- Scope of work
- AIP participation limits
- Project funding limits versus requirements
- Impact of Discretionary Funds (if applicable)
- Application of FAA Standards
- Design considerations and material alternatives
- Regional Modification to FAA Standards
- Sponsor initiated modifications to FAA Standards
- Sequencing of construction
- Airport Operational Safety – Safety & Phasing Plan Coordination
- Schedule for Plans & Specification reviews, advertisement, bid opening and award.
- Impacts to existing or proposed approach procedures – Aeronautical Surveys

Other related Issues

- Airspace concerns for construction equipment/plants
- Coordination of project with airport users and FBO's
- Inclusion of ineligible work
- Routing of aircraft and equipment
- Environmental considerations
- Impacts to Airway Facilities equipment (FAA Reimbursable)
- Material Availability
- Disadvantaged Business Enterprise Participation
- Buy American Preferences

Attendees

The magnitude and complexity of the project will be a factor in who needs to attend the predesign conference. In general, the airport sponsor, their design consultant and the FAA project engineer should attend the pre-design conference.

Other attendees that may be invited, depending on the scope of the project, include: FAA Airway Facilities personnel, airport maintenance supervisors, FBOs, airlines, affected utility companies, and airport tenants.

RESOURCES

Advisory Circular

- [AC 150/5300-9](#) - Pre-design, Prebid & Preconstruction Conferences

920 - Engineer's Report Development Projects

The engineer's report serves to document the design considerations, engineering analysis and design selections that occur early in the design phase. An engineer's report shall be prepared and submitted for most development projects funded under the Airport Improvement Program (AIP). For relatively small and simple projects, the FAA project engineer may waive this report requirement.

As a minimum, the report should include listing of applicable design standards, a summary of the design computations, justification for selection of design materials, summary of preliminary project budget and the identification of modifications to FAA standards.

As each individual project will present unique design considerations, the topics to be addressed within the engineer's report will vary with each specific project.

A recommended outline for the engineer's report is provided below.

1. **General Scope of Project** - A brief narrative on the scope of work including AIP eligible and ineligible work items. Unique and unusual situations should be identified and briefly explained.
2. **Photographs** – Include a representative number of photographs that depicts the existing site condition.
3. **Design Standards** - Listing of applicable standards such as design aircraft, geometric dimensions, safety areas, object free areas and etc.
4. **Airport operational safety** - Address issues related to how operational safety will be maintained during construction. Issues regarding phasing and pavement closure should be adequately addressed. Refer to AC 150/5370-2 for FAA standards. (Note: We now require that a pdf copy of the final safety plan be submitted to the FAA project manager early in the project phase)
5. **Site Conditions** - Address factors related to site condition such as drainage considerations, soil characteristics and climatic conditions. A summary of geotechnical report should be provided.
6. **Pavement Design** - Include a completed and signed copy of FAA Form 5100-1 "Airport Pavement Design". Backup information should include:
 - Fleet mix (aircraft, load and frequency of operations)
 - Selection of paving materials (including life cycle cost analysis for any new construction or reconstruction project)
 - Summary of design calculations.
 - Soil and geotechnical report
7. **Material Availability** – For remote locations, the engineer should investigate the local availability of construction materials. This includes contacting potential material suppliers to determine if sufficient material will be available for the project.
8. **Pavement Marking** - Address marking requirements for compliance with AC 150/5340-1. For runway projects, sponsor shall confirm the runway designation numbers as they relate to changes in the magnetic declination. Temporary marking should also be addressed.
9. **Lighting** - Address design criteria, design selection and lighting layout. A summary of electric design calculations should be included that support the design selections.

10. **Signage** - Address standard layout and design criteria for airport signage. For Part 139 airports, a revised sign plan must be submitted with the plans and specifications.
 11. **Miscellaneous Work Items** - Address other project related work items such as seeding, fencing, airport drainage, site access and etc.
 12. **FAA Owned Facilities** – Identify Impacts to FAA owned facilities and equipment (including buried cables)
 13. **Non-AIP work** - Identify all work items, including quantities that are not eligible for AIP participation.
 14. **Engineers Estimate** - Provide an engineer's estimate of probable construction costs.
 15. **Project Budget** - Provide a project budget that identifies all anticipated project costs (Administrative, Engineering Design, Construction Observation, Construction, etc.)
 16. **Sponsor Modifications to Standards** - Provide listing, description and justification for all sponsor initiated modifications to FAA standards. Please note that it is not acceptable to simply list the changes. A justification must be provided as well. Refer to AIP Sponsor Guide 950 for additional information on sponsor-initiated modifications to FAA standards.
 17. **DBE participation** - Identify potential work items that are suitable for participation by available DBE's firms.
 18. **Predesign meeting minutes** - Provide a copy of the minutes from the predesign meeting.
-

RESOURCES

Advisory Circulars

- [AC 150/5300-9](#) - Pre-design, Prebid & Preconstruction Conferences
- [AC 150/5300-13](#) – Airport Design
- [AC 150/5320-6](#) - Pavement Design

Forms

- [Form 5100-1: Pavement Design](#) (MS Word)

930 - Plans and Specifications Development Projects

General

The development requirements of a Sponsor are typically conveyed to prospective bidders through the preparation of plans and specifications.

- Project plans (drawings) serve to graphically depict the extent of the development requirements in an accurate and concise manner.
- The project specification in contrast serves to convey technical information for quality acceptance, performance characteristics, and permissible construction methods.

In addition to the plans and specifications, bid documents and contract documents are to be prepared for the purpose of conveying to prospective contractors all bidding requirements and contractual obligations expected of the successful bidder. The bid documents and contract documents are commonly bound with the project specifications to form a project manual.

Sponsor Responsibility

The Sponsor is responsible for all matters concerning contract procurement for a project. The Sponsor is also the contractual authority for all matter related to establishing and administering the contract agreement. The FAA **is not** a party to such contract agreements.

The Sponsor and their engineering consultant are also responsible for the accuracy, completeness, legal sufficiency and technical content of the contract plans and specifications. Reviews conducted by the FAA are limited to the purpose of determining AIP eligibility and adherence with FAA Standards.

While the FAA is not a party to the construction contract, the sponsor is obligated by the receipt of Airport Improvement Program (AIP) grant to incorporate all applicable FAA standards and Federal provisions required by the AIP. FAA standards, policies and guidelines are published in various Advisory Circulars and Engineering Briefs. Sponsors are obligated to assure that applicable standards are applied in the design of an AIP project. Modifications to FAA standards are not permitted unless the FAA project engineer grants expressed written approval.

Submittal Requirements

The submittal requirements for a project may vary per the complexity of the project. The following provides guidance per the size of the project. The Sponsor and Consultant should discuss submittal requirements with the FAA project manager at the time of the pre-design conference.

1. **Small Simple Project:** A one-time submittal is generally acceptable.
2. **Medium Sized Project:** Submit engineer's report and 90% plans & specifications for FAA review and approval before finalizing the package.
3. **Large Complex projects:** Submit engineer's report with design selections at an early stage in the project. Engineer should not proceed to 90% until acceptable design selections are made.
4. **Projects involving FAA Owned Facilities:** For projects that involve FAA owned facilities (e.g. MALSR, ILS, etc....), the sponsor must submit two sets of preliminary plans and specifications to facilitate reviews by other appropriate FAA offices. Advance coordination is required for such projects as they likely will require a FAA reimbursable agreement.

FAA Review and Approval

The acceptance of plans and specifications by the FAA is based on the combination of a FAA cursory review and the submittal of a satisfactory executed sponsor certification. The review by the FAA engineer is generally limited to critical project elements such as the safety plan, pavement details, airfield marking details and airfield signage details.

The FAA review **shall not** serve as the Sponsor's/Engineer's quality control. The FAA will not typically review detailed engineering and quantity calculations, however such documentation shall be made available if so requested by the FAA. The primary purpose of the FAA's review is to verify that applicable FAA standards are being applied as well as to make a determination regarding the limits of AIP eligibility.

The sponsor and their consultant shall allow sufficient time for the FAA to conduct an appropriate review. This may vary per size and type of project. Generally, a review time frame of 2-3 weeks is requested.

Sponsor's Response

Upon receipt of FAA review comments, the Sponsor or their consultant shall provide a written response to each comment made by the FAA that addresses how the comment was resolved. Authorization to advertise for bids will generally not be granted until the FAA deems the plans and specifications acceptable for AIP participation.

Sponsors shall note that FAA acceptance in the plans and specifications does not relieve the Sponsor of the responsibility to correct items of work later found to be non-compliant with regards to FAA Standards.

RESOURCES**Advisory Circular**

- [Airport Design Standards](#) – Cross Reference of AIP Design Standards
- [AC 150/5320-6](#) - Pavement Design
- [AC 150/5340-1](#) – Standards for Airfield Marking
- [AC 150/5340-30](#) – Design and Installation of Visual Aids
- [AC 150/5370-2](#) - Operational Safety on Airport During Construction
- [AC 150/5370-10](#) - Standards for Specifying Construction

931 - Project Drawings Development Projects

The Project Drawing package serves to graphically depict the extent of the contract requirements in an accurate and concise manner. The project drawings, along with the technical specifications, form a critical part of the Contractor' contractual obligations. As a legal document, the contract drawings must convey the requirements of the sponsor in a clear and unambiguous manner.

AIP Requirements

Projects funded under the Airport Improvement Program (AIP) shall be developed in accordance with applicable FAA standards. FAA standards are contained within various Advisory Circulars and engineering briefs and are also supplemented by regional guidance.

Responsibility of Sponsor and Engineer

The sponsor and their consultant assume the responsibility for the accuracy, completeness, and technical content of the contract drawings. The engineer shall apply sound engineering judgment and widely accepted engineering principals when preparing project drawings.

FAA Airway Facilities

If the AIP project involves relocation or installation of FAA owned facilities such navigational aides and approach lighting systems, the design must incorporate FAA Airway Facility's drawing standards and details. Consultants may contact the FAA to obtain copies of existing FAA facility drawings.

Typical Project Plans

A typical drawing package will generally consist of the following sheets and associated details and elements. This outline should not be construed as being inclusive of all such necessary drawings. The engineering consultant shall apply "best practice" judgment in determining the extent of the drawing package for each specific project.

- **Cover Sheet**
 - a. Airport Name
 - b. Airport Location
 - c. Owner's/Sponsor's Name
 - d. AIP Project Number
 - e. Brief Description of Project
 - f. Index of Drawing Sheets
 - g. Location Map
 - h. Date

- **Project Layout Plan**
 - a. Table of Quantities
 - b. Airport Layout
 - c. Site plan
 - d. Legend
 - e. Table of Design Standards (design aircraft, approach category, pavement dimensional values...)

- **Safety Plan/Construction Phasing**
 - a. Standards presented within AC 150/5370-2 *"Operational Safety on Airports During Construction"*

- b. Table of standards (safety areas, object free areas, obstacle free zones...)
 - c. Site access
 - d. Staging area
 - e. Form 7460-1 Airspace notification
 - f. Haul routes
 - g. Stock piles
 - h. NOTAM issuance
 - i. Sequence of construction
 - j. Define limits of work area for each phase
 - k. Pavement closures
 - l. Threshold displacement
 - m. Temporary marking and lighting
 - n. Barricade requirements
 - o. Traffic control
 - p. Environmental issues
 - q. Security issues
 - r. ARFF access
- **Typical sections**
 - a. Pavement sections
 - b. Transverse grade template
 - c. Edge drain location
 - d. Edge drop-offs
 - e. Ditches
- **Grading Plan**
 - a. Longitudinal and transverse criteria
 - b. Safety areas
 - c. Surface drainage
- **Pavement Plan and Profile**
 - a. Paving legend
 - b. Vertical control requirements
 - c. Joint layout
 - d. Slab reinforcement
 - e. Tie down locations (Aprons)
 - f. Fillet layout
 - g. Intersection adjustments
- **Pavement Details**
 - a. Joint details
 - b. Edge drain details
 - c. Tie down detail
 - d. Grooving requirements

- **Marking Plan**
 - a. Layout and type
 - b. Marking Details
 - c. Highlighting

 - **Electrical Plan**
 - a. Light fixture layout
 - b. Sign plan
 - c. Light fixture detail (height and location requirements etc.)
 - d. Sign schedule
 - e. Trench detail
 - f. Grounding details
 - g. Vault details
 - h. Wiring schematic

 - **Navigational Aides (PAPI, REILS,...)**
 - a. Layout
 - b. Installation details
 - c. Aiming information
 - d. Obstruction clearance information (e.g. PAPI OCS)

 - **Drainage**
 - a. Surface and subsurface plan
 - b. Pipe profile
 - c. Drainage structure and pipe schedule
 - d. Drainage structure details
 - e. Underdrain details
 - f. Erosion control

 - **Miscellaneous**
 - a. Erosion control
 - b. Fencing
 - c. Utilities
-

RESOURCES

Advisory Circular

- [Airport Design Standards](#) – Cross Reference of AIP Design Standards
- [AC 150/5320-6](#) - Pavement Design
- [AC 150/5340-1](#) – Standards for Airfield Marking
- [AC 150/5340-30](#) – Design and Installation of Visual Aids
- [AC 150/5370-2](#) - Operational Safety on Airport During Construction
- [AC 150/5370-10](#) - Standards for Specifying Construction

932 - Project Manual Development Projects

Engineering consultants will typically combine the bid documents, contract documents and technical specifications of a project into one bound document commonly referred to as the Project Manual. This document serves to convey to the Contractor the contractual and technical requirements of a construction project. The Project Manual also serves a critical role as part of the bid documents.

Although it may vary per location, the Project Manual will generally consist of the following elements:

- Notice to bidders
- Instructions to Bidders
- General Provisions
- Supplementary Provisions
- Technical Specifications
- Proposal (including DBE forms, bid bond, etc...)
- Contract Agreement (with required bonds attached)

AIP Requirements

The FAA does not prescribe the format or the specific content of each individual element of the Project Manual. However, the Sponsor's participation in the Airport Improvement Program (AIP) does require that the project incorporate all required FAA standards, Federal Provisions, and Certifications. Incorporation of the Federal requirements is best handled by including all such provisions within the Project Manual.

Some of the required Federal Provisions have contract dollar thresholds that establish when they are applicable. A [Federal Provision checklist](#) is available to assist Sponsor's and their consultants with determining when to apply a specific Federal Provision.

Suggested Forms for Construction Contracting

For the benefit of the Sponsor, we have prepared several suggested sample documents that the Sponsor may use as a guide in preparing their own specific bid package. The provided samples incorporate the Federal provisions that are required for a project greater than \$100,000. Projects of lesser amounts may not require all of the provisions included in the sample documents.

Sponsors and Consultants are cautioned that these suggested samples are not to be considered as being complete and whole and that the provision of such suggested sample contract documents by the FAA shall not be construed as a guarantee of legal sufficiency. Sponsors are solely responsible for verifying the legal sufficiency of all matters concerning procurement and contracting.

The suggested sample contract documents are listed below:

- [Requests for Bids \(Advertisement\)](#) (MS Word)
- [Notice-to-bidders](#) (MS Word)
- [Instructions-to-Bidders](#) (MS Word)
- [Supplementary Provisions](#) (MS Word)
- [Form of Proposal \(includes DBE forms\)](#) (MS Word)
- [Contract Agreement](#) (MS Word)
- [Form of Payment Bond](#) (MS Word)
- [Form of Performance Bond](#) (MS Word)

It is not mandatory that a sponsor use of the above suggested contract documents. Sponsors are permitted to use AIA or EJCDC document templates. However, the required Federal provisions and clauses must be incorporated in the final project manual.

RESOURCES

Department of Labor

- [Davis Bacon Wage Rates Determinations](#) – DOL Website
- [DOL Technical Assistance Guide for Federal Contractors](#)
 - [DOL Goals for Minority Participation](#) – Goals for Counties within Iowa, Kansas, Missouri and Nebraska

Federal Regulations

- [41 CFR Part 60.4](#) - Affirmative Action
- [49 CFR Part 18](#) – Uniform Administrative Requirements for Grants

Miscellaneous Guidance

- Checklist for Federal Provisions: [MS Word](#) | [PDF](#)

940 - Regional Approved Modifications to AC 150/5370-10 Development Projects

General

This regional guidance establishes pre-approved modifications to Advisory Circular 150/5370-10A, *Standards for Specifying Construction of Airports*. These pre-approved modifications implement necessary measures and practices to assure acceptable materials and products are utilized that result in quality construction.

Purpose of Modifications

These modifications account for unique materials and conditions common to locations within the FAA Central Region. The majority of these modifications are necessary due the effects of local weather and climatic conditions. Other modifications are a result of "engineering best practices" that have been incorporated on past projects.

Modifications included herein are often initiated by the identification of problem areas on past AIP projects as well as by recurring sponsor initiated requests for modification to FAA construction standards. Sponsors and engineers who would like to suggest additional changes to this guidance may do so by making a written make request to the FAA Central Region. Such requests should be forwarded to Mr. Doug Johnson at (816) 329-2616.

Sponsor Initiated Modifications

Sponsors or Engineers that desire to make additional modifications to AC 150/5370-10 that are not included within these FAA approved modifications must make a written request for FAA approval. Please refer to regional guidance AIP-950: Sponsor Initiated Modifications to FAA Standards for procedures on how to make such a request.

The modifications presented herein this guidance are already approved for use and do not require a separate request from the Sponsor.

RESOURCES

Guidance

- [Central Region Approved Modifications to AC 150/5370-10](#) (RTF)

Advisory Circulars

- [AC 150/5370-10](#): Standards for Specifying Construction

950 - Sponsor Modifications of FAA Standards Development Projects

General

Airport Improvement Program (AIP) Grant assurance #34 obligates a Sponsor to comply with all relevant FAA standards in carrying out any development or equipment project. The FAA conveys such standards and guidelines by publishing various Advisory Circulars. The applicable Advisory Circulars that a grant recipient must comply with are specifically identified in an attachment to each grant agreement.

Sponsors must incorporate the requirements of the appropriate FAA standard without modification. Occasionally, unique and site-specific conditions may necessitate a modification to the FAA standard. All such modifications must be submitted to the FAA for advance review and approval. Unapproved modifications to FAA standards will render the cost of the work ineligible for AIP participation.

Pre-approved Modifications

AIP Sponsors occasionally encounter project situations where unique local conditions preclude compliance with FAA standards for airport design or construction. For common or recurring modifications to the FAA Construction Standards, the Central Region has prepared a listing of regionally approved modifications to AC 150/5370-10. The modifications presented in this guidance are pre-approved for use and do not require a separate request from the Sponsor.

Download: [Pre-Approved Modifications to AC 150/5370-10](#) (RTF)

Note: Pre-approved modifications are typically updated by October of every year.

Sponsor Initiated Modifications

Sponsors that desire additional modifications to FAA Standards that are not covered by the pre-approved modifications must seek formal FAA review and approval. All such modifications must be fully justified and should not diminish the quality intended in the FAA standard.

State Standards: Sponsors should note that the use of State Highway standards at certain airports may or may not require a request for modification to FAA Standards. Please refer to AIP Sponsor guidance AIP-951 to learn more about the use of State Standards in an AIP project.

FAA Criteria

FAA Order 5300.1F, *Modification to Agency Airport Design, Construction and Equipment Standards*, establishes guidelines and criteria for the modification of FAA standards and specifications, which are necessary to accommodate unique local conditions for a specific AIP project. This Order requires that all modifications to design and construction standards be approved by the FAA prior to incorporation into projects funded through the Airport and Airway Improvement Act of 1982 (AIP) as amended.

The time required for review and approval will vary with the complexity of the modification and the level of required approval. The level of required approval is based upon the type of modification that is requested. Modifications that require FAA headquarters approval take a minimum of 6 weeks for review and approval. Modifications requiring FAA Central Region approval need a minimum of 3 weeks for review and approval. The level of required approval is addressed as follows:

FAA Headquarters Approval is Required For:

- a. Modifications to standards for siting navigational or lighting aids.
- b. Modifications for marking, lighting and signs.
- c. Modifications to equipment specifications listed in AC 150/5345-53

- d. Modification to criteria used to control quality or determine the acceptability of material and finished products. (As defined in current Advisory Circulars)
- e. Modifications to methods used to determine if a material or finished product meets test criteria, i.e. test methods.
- f. Construction methods or materials, which are not contained in AC 150/5370-10.
- g. Sections 100 and 110 of the General Provisions contained in AC 150/5370-10.

FAA Central Region Approval is Required For the following:

- a. Modifications to airport design and equipment standards, and construction standards as they relate to materials.
- b. Use of State DOT material and construction standards
- c. Modifications to general provisions of AC 150/5370-10 may be approved if necessary to make them consistent with local laws and regulations.

Form of Sponsor's Request for Modification Approval

The above noted modifications require that the Sponsor formally submit a written request asking for FAA review and approval. In general, the request must identify the modification, provide a short description of the modification and provide a justification for why the modification is necessary.

FAA Central Region Approval – Sponsor initiated modifications that require FAA Central Region Approval shall contain the following:

- 1. Formal written request for modifying and FAA standard
- 2. A separate listing of all modifications, which identifies the FAA standard being modified that includes:
 - a. A short concise description of the modification.
 - b. A statement that justifies why the modification is necessary.
- 3. A engineer's statement that proposed modification of FAA construction standards will provide a product that will meet or exceed FAA standards for acceptance and that the finished product will perform for its intended design life.
- 4. [Sample Sponsor Initiated Modification Listing](#) (pdf)

FAA Headquarters Approval - Modifications that require FAA headquarters approval must contain the following:

- 1. A listing of the standards requiring modification
- 2. A concise description of the proposed modification
- 3. A reason or justification for why the current standard cannot be met
- 4. A brief discussion of viable alternatives for accommodating the unique site condition
- 5. A stated assurance by the Sponsor or their consultant that the modification will provide a product that meets FAA standards for acceptance and that the finished product will perform for its design life based on historical data.
- 6. A stated assurance that the modification will provide an acceptable level of safety.

Submittal Procedure

The request should be made early in the project design phase, preferably along with the submittal of the engineer's report and preliminary plans and specifications. Sponsors and engineers shall note that approval of modifications for a specific project does not imply that the modifications are

automatically approved for any subsequent project. The approval by the FAA is limited only to the specific project for which it was requested under. Modifications under all future projects require a separate request by the Sponsor.

Sponsors and their consultants are requested to adhere to the following procedure when requesting a modification.

1. Sponsor/Engineer prepares a written request for FAA review and approval of modifications to FAA standards. The request must be in the format noted above and shall be separate from the plans and specifications. All modifications, regardless of size of complexity shall be addressed.
2. Modifications to FAA standards that are already pre-approved under the Regional Modifications to Standards do not need to be identified in the Sponsor's request unless changes are being made to the pre-approved modifications.
3. The FAA will conduct an appropriate review (Headquarters or Region) of the modification. A letter notifying the sponsor of acceptance or rejection will be sent to the sponsor once the FAA review is complete.
4. We recommend that all sponsor-initiated modifications be highlighted (font change, shading etc.) in the final plans and specifications.

RESOURCES

Advisory Circular

- [Airport Design Standards](#) – Cross Reference of AIP Design Standards
- [AC 150/5320-6](#) - Pavement Design
- [AC 150/5340-1](#) – Standards for Airfield Marking
- [AC 150/5340-30](#) – Design and Installation of Visual Aids
- [AC 150/5370-10](#) - Standards for Specifying Construction

951 - Use of State Standards Development Projects

General

The use of State Highway standards as a substitute for established FAA AIP standards is permissible if specific conditions are met. The conditions are addressed by two distinct criteria.

1. **AC 160/5320-6D Airport Pavement Design:** Chapter 5 of this Advisory Circular addresses the use of local state highway specifications for pavements serving light aircraft. Light aircraft is defined as those aircraft with a gross weight of 30,000 lbs or less.

If the pavement design is limited to aircraft with gross weights of 30,000 lbs or less, the Sponsor and their consultant have the discretion to specify State Highway standards as a substitute for FAA standards P-401 *Plant Mix Bituminous Pavements* and P-501 *Portland Cement Concrete Pavement*. The use of State material standards for other FAA material standards will require the Sponsor submit a request for modification to FAA standards.

2. **Wendell H. Ford Aviation Investment Reform Act**
The implementation of the Wendell H. Ford Aviation Investment Reform Act for the 21st Century (AIR-21) permits the use of State specifications for airports with runways less than 5,000 feet which serve aircraft with gross weights less than 60,000 pounds.

Airports electing to utilize state specifications under this provision must certify that:

- a. Safety will not be negatively affected and;
- b. That the life of the pavement will not be less than that constructed with FAA paving standards.

NOTE:

Sponsors and consultants should note that a condition of this provision is that no additional AIP funds may be used on this pavement for a period of 10 years.

960 - Operational Safety on Airport During Construction

Construction activities within the operations areas of an airport have the potential to significantly compromise normal operational safety for aircraft. Careful planning and implementation of mitigating measures will greatly minimize the impact construction activities may have on normal airport operations.

Advisory Circular 150/5370-2E establishes FAA guidelines to assure operational safety on airports during construction activities. Adherence to these guidelines is mandatory for all construction projects funded in whole or in part by the Airport Improvement Program (AIP) and for all construction projects undertaken at a Part 139 Certificated airport.

Sponsors and consultants should make their contractor aware that the operational safety plan is not the same as the OSHA workplace safety plan. The submittal of an OSHA workplace safety plan does not satisfy the submittal requirement for the operational safety plan.

Safety Management Systems (SMS)

FAA is presently in the initial stages of implementing Safety Managements System into its Airports Organization. One of the elements being investigated is a safety risk management review "Operational Construction Safety Plans". This risk analysis will eventually require sponsors and their consultants to modify when construction safety plans are to be submitted. In the near future, it is likely the submittal of construction safety and phasing plans will need to occur at the 30% phase as opposed to the 90% or final phase.

Airport Operator's Responsibility

The airport operator is ultimately accountable for assuring operational safety at their airport during construction activities. The airport operator fulfills its obligation by implementing several measures such as:

- Preparing a comprehensive operational safety plan for each specific project,
- Conducting routine meetings that address airport safety concerns
- Monitoring the implementation of safety plan measures
- Informing tenants of construction activities
- Coordinating project impacts with ARFF personnel
- Coordinating construction impacts with Flight Service and Flight Procedures offices.

Operational Safety Plan

As each project will vary per size and complexity, the required safety plan for each project should be customized for the unique conditions associated with the specific project and airport.

It is important to note that while AC 150/5370-2e establishes the FAA standards for operational safety during construction, this Advisory Circular is not intended to serve as the safety plan itself. Simply incorporating this Advisory Circular into the contract documents does not fulfill the airport operator's responsibility to prepare a site-specific safety plan for the specific project.

Minimum Operational Safety Requirements

The Sponsor of the AIP project, through their consultant engineer, shall identify minimum requirements for operational safety during construction activities at their airport. This includes but is not limited to:

- Acceptable construction sequencing
- Pavement closures
- NOTAM issuance
- Hazard identification
- AOA security concerns
- Airfield communication
- Control of Debris
- Work area limits

These requirements are best conveyed to the Contractor by graphical representation on a drawing sheet labeled "Safety Plan". Since the construction sequencing is an integral element of the safety plan, the project phasing requirements are often combined with the safety plan requirements on a drawing labeled "Safety and Phasing Plan".

Chapter 2 of AC 150/5370-2e provides a recommended checklist that addresses suggested elements of a safety plan. Chapter 3 addresses guidelines for various situations and conditions that would compromise normal operational safety. Appendix 3 provides a sample safety plan template for the benefit of the sponsor.

FAA Review

The sponsor's consultant shall submit a pdf file copy as well as a hard copy of the safety plan for FAA review. The submitted safety plan will undergo a review by FAA Airports, Flight Procedures, Air Traffic and Technical Operations.

FAA Airports division will review the safety plan to determine if appropriate requirements and measures are incorporated. Sponsors may not commence work activities unless the FAA has granted approval of the safety plan. FAA airports review and approval generally coincides with the plans and specification review. Any subsequent changes to the approved safety plan shall be submitted to the FAA for review and concurrence.

The Safety Plan and the Contractor

The Contractor is obligated to implement the requirements of the "approved" safety plan. By identifying the minimum requirements of the safety plan in the bid package, prospective contractors have a sound basis for estimating the cost of implementing measures associated with the safety. The successful Contractor would then be required to identify how they intend to comply with the requirements of the safety plan.

We strongly discourage the practice of assigning the responsibility of preparing a safety plan to the successful contractor. Such a practice can introduce contract legal issues and create vague and ambiguous safety plan measures.

By not identifying minimum safety plan requirements within the bid package; it may be possible for the Contractor to seek additional compensation for required operational safety restrictions that were not clearly identified within the bid package.

Sponsors should take into consideration that the project incentive for most Contractor's is based on reducing costs and protecting profit. Furthermore, the Sponsor remains accountable for all construction activities on their airport. It is not prudent for the Sponsor to assign the responsibility of preparing a safety plan to the Contractor while retaining the associated risk.

We strongly recommend identifying minimum safety plan requirements within the bid package. If the contractor proposes construction sequencing that differs from that developed by the Sponsor, the Contractor would then be responsible for identifying acceptable revisions to the approved safety plan at no additional cost to the Sponsor. Such revisions would require approval by the Sponsor and the FAA.

RESOURCES

Advisory Circular

- [AC150/5200-28](#): Notices to Airmen (NOTAM) for Airport Operators

- [AC 150/5210-5](#): Painting Marking and Lighting of Vehicles Used on an Airport
- [AC 150/5340-1](#): Standards for Airport Marking
- [AC 150/5370-2](#): Operational Safety on Airport During Construction
- [AC 150/5380-5](#): Debris Hazards at Civil Airports