
1000 – Construction Phase Airport Development Projects

Sponsors are directly responsible for monitoring all aspects of project accomplishment. To remain eligible under the Airport Improvement Program (AIP), Sponsors must ensure compliance with all requirements of the grant agreement and the approved plans and specifications. Sponsors must also ensure contractor compliance with Federal labor, civil rights requirements and Disadvantaged Business Enterprise (DBE) provisions.

Sponsors are required to provide competent and qualified engineering supervision and construction inspection. The resident engineer (RE) must maintain adequate daily records of the construction activity. This record should indicate the contractor's progress. The RE should continuously compare this progress to the baseline construction schedule submitted at the start of construction. The RE should be diligent in watching for potential delays in completion of the construction.

At the time of final acceptance, the Sponsor must be in position to adequately address each checklist item in the "[Sponsor Certification for Construction Project Final Acceptance](#)". The Sponsor must provide an explanation for any negative reply to a certification statement.

1010 – Bidding Development Projects

For construction projects exceeding the simplified acquisition threshold (\$100,000), the preferred method of procurement is by sealed bids (*49 CFR Part 18.36.d*). This method assumes that two or more qualified bidders are available and that the grantee will award the contract to the lowest responsive and responsible bidder. The use of the sealed bid method allows the establishment of a contract based on a firm fixed price.

Solicitation

Under the sealed bid method, Sponsors must publicly advertise invitation-for-bid for the purpose of soliciting an adequate number of bidders. AIP does not establish a time frame for how long a sponsor must advertise for bids. State and local procurement provisions may dictate a minimum timeframe. Federal Regulation 49 CFR Part 18 does state that grantees must provide a sufficient amount of time in order to allow prospective bidders time to prepare a responsive proposal. For relatively small and simple projects this may only be two weeks. For larger complex projects, this may be 45 to 60 days. For most projects, a bid period of at least 30 days has proven to be a reasonable timeframe.

Bid Opening

The sponsor must publicly open all properly submitted bid proposals at the time and place identified within the invitation for bids. Sponsors must read out loud all Bids submitted by the specified time and date. Sponsors should declare bids received after the specified date and time as non-responsive and thus automatically reject the bid proposal.

Bid Evaluation

Following the opening of the bids, the Sponsor should identify an apparent low bidder. The Sponsor should not make an award of contract until they have thoroughly evaluated all bid submittals. Sponsors usually identify this timeframe within the Instructions-to-Bidders. A bid evaluation period of 60 days is typical.

Projects that include potential discretionary funding incur uncertainty as to when funds will actually become available. Sponsors of projects with possible discretionary funding should establish a longer evaluation period to account for this uncertainty. A 90 to 120 day bid hold may be necessary in some cases. Because long bid evaluation periods have the effect of increasing bid unit prices due to bidder cost uncertainty, we do not recommend sponsors establish a bid hold beyond 120 days.

During this evaluation period, the Sponsor should review each proposal for such things as:

- Bid errors
- Proper extension of all unit prices
- Bid irregularities
- Unbalanced bids
- Bidder responsiveness
- Bid guarantee
- Qualified bids
- DBE Utilization, including good faith effort is goal not met
- Buy America Certification, including waiver request if necessary

The Sponsor's consultant shall prepare a tabular summary that lists an itemized bid abstract of each bidder's proposal as well as the engineer's estimate. The sponsor along with their consultant should evaluate significant disparities in unit prices between the apparent low bidder and the engineer's estimate. If the consultant cannot establish a reasonable explanation for a discrepancy, the Sponsor should open up negotiations for the questioned bid item.

Sponsors should reject bid proposals found not to be responsive or found to be irregular.

Single Bids

This use of the sealed bid method assumes there are two or more qualified bidders available to compete for the project. The presence of multiple bidders is generally sufficient justification to demonstrate adequate competition. If only one bidder submits a proposal, the Sponsor must investigate why they only received one bid. As a minimum the Sponsor should take the following actions:

- 1) Contact plan holders to inquire why they did not submit a bid. The sponsor should document the responses of those contacted.
- 2) Evaluate the project manual and specifications to determine if the project requirements unduly restrict competition. If the sponsor determines the project requirements did not unduly restrict competition, the sponsor must submit a written statement attesting their position that the project requirements were not restrictive. Note the FAA project manager may at their discretion review the project manual and specifications to determine if restrictive conditions exist.
- 3) Compare the apparent low bid to costs from other projects with similar type work. Note that the fact the apparent low bid is less than the engineer's estimate may not be sufficient justification to determine reasonableness of costs. The sole bidder is not truly competing against the engineer's estimate of probable costs. The supplemental cost information may be from other recent AIP funded projects or from bid abstracts from recent State Highway Department bid lettings.
- 4) For unit prices that exceed the engineer's estimate, the sponsor should negotiate with the sole bidder to obtain lower prices if such negotiation is permitted by state or local law.

If the FAA determines the Sponsor's project requirements are restrictive, the FAA may declare the Sponsor's procurement action sole-source procurement and thus deny AIP participation.

Determination of Fair and Reasonable Price

The Sponsor, with assistance from their consultant, must make a determination on whether the apparent low bidder's proposal is responsive and whether it represents a fair and reasonable price. The consultant will typically initiate a letter to the Sponsor recommending they award the contract to the successful bidder.

Because Sponsors remain responsible for all contractual matters, it is important that the Sponsor take action on the consultant's recommendation. It is not acceptable to simply pass the consultant's recommendation onto the FAA for review and approval. Note the FAA cannot act on the behalf of the Sponsor and thus cannot participate in the bid evaluation. This includes the making the initial determination of a fair and reasonable price. The sponsor must indicate whether or not they concur with the consultant's recommendation. We Sponsors make this statement in writing within the letter that transmits the bid information to the FAA.

The Sponsor shall adequately document the bid evaluation and determination of a fair and reasonable price such that a third party auditor may easily track the history of the procurement action.

RESOURCES

Forms

- **Sponsor Certification for Award of Contract:** [MS Word](#) | [PDF](#)

Federal Regulations

- [49 CFR Part 18](#) - Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments

1020 - Contract Award Development Projects

Overview

Once the Sponsor has received and properly evaluated the bids; the grantee **must** make the award of contract to the **lowest responsive and responsible bidder** [49 CFR Part 18.36(d)(2)(ii)(D)]. The Sponsor should typically notify the apparent low bidder through issuance of a "Notice of Award". The Sponsor should make it clear to the successful bidder that they should not construe their issuance of a "Notice of Award" as a binding contractual agreement. The executed contract agreement will serve as the binding contract.

Bid Guaranty

The Sponsor generally holds the bid guaranty of the apparent low bidder and the next low bidder until establishment of a contract agreement. If the apparent low bidder fails to execute the contract agreement, the Sponsor may recover the bid guaranty as a liquidated damage and the award of contract would then proceed with the second low bidder.

FAA Concurrence

The FAA bases concurrence with a Sponsor's award of contract jointly upon sponsor certification and a cursory review of the Sponsor's procurement action. The FAA review and subsequent determination is primarily for the purpose of assuring compliance with AIP provisions. The Sponsor must not construe the FAA action as a review for legal sufficiency.

Once the Sponsor has concurred in the award of contract, the Sponsor must submit the following information to the FAA:

1. **Cover letter:** Letter should indicate whether the Sponsor has:
 - Thoroughly evaluated the bid by the apparent low bidder and has determined the bidder to be responsive and responsible.
 - Determined the contract price to be fair and reasonable.
 - If it is the consultant who established the determination of a fair and reasonable price, the Sponsor must state whether or not they concur with the consultant's determination.
2. **Copy of Bid Tabulation/Abstract:**
3. **DBE Information:** Submit the following:
 - Completed DBE Letters of Intent
 - DBE Utilization forms.
 - Written affirmation by the DBE subcontractor attesting to their participation
 - Copy of the DBE's current certification
 - Documentation supporting good faith efforts if advertised goal is not met.
4. **Buy American:** (Refer to Sponsor Guide Section AIP-430)
 - Submit the successful bidder's Buy American certification.
 - If the successful bidder certifies 100% compliance, no further submittal is necessary.
 - If the low bidder requests a waiver to Buy America provisions, the bidder need to take one of the following actions:
 - i. Prepare and submit a Buy America waiver request that includes a component cost calculation table or
 - ii. Provide a listing of products proposed for project use that are included on the national waiver list.
5. **Sponsor Certification for Award of Contract**

Contract Execution

The intent of bidding by the sealed bid method is for the Sponsor to enter into a firm fixed price contract with the contractor. Once FAA grants approval for AIP participation in the award of contract, the sponsor may proceed with formally executing the contract.

Upon execution of the contract, the Contractor must present the required performance and payment bonds to the Sponsor. Unless otherwise specified, the Contractor should submit the required bonds within two weeks of the contract execution. Sponsors should not generally accept bonds established prior to the contract execution.

The sponsor must submit a copy of the executed contract along with the executed performance and payment bonds to the FAA prior to issuing a Notice-to-Proceed.

RESOURCES

Forms

- **Sponsor Certification for Award of Contract:** [MS Word](#) | [PDF](#)

1030 - Construction Observation Program (COP) Development Projects

Overview

Sponsors are obligated by grant assurance #17 to provide and maintain competent technical supervision at the construction site throughout the life of the project. The purpose of this grant provision is to ensure contractor conformance with the approved plans and specifications.

For paving projects expected to exceed \$250,000, the FAA incorporates a grant condition that requires the preparation and submittal of a "construction management program", also referred to as "construction observation program". The Construction Observation Program (COP) details the measures and procedures necessary to assure compliance with the quality control provisions of the construction contract.

The Sponsor must submit a copy of the COP to the FAA for review and acceptance prior to issuing a Notice-to-Proceed to the contractor.

Standards for Construction Observation

To attain FAA acceptance, the consulting engineering firm responsible for construction observation services must satisfactorily address minimum standards and qualifications for Personnel, Equipment, and Facilities. The plan must also identify the required tests for quality control and acceptance, including the frequency of tests and action limits.

At least a minimum of 10 days prior to the preconstruction meeting, the Engineer should submit a project specific construction observation program to the FAA for review and approval. FAA concurrence with the issuance of the Notice-To-Proceed is contingent upon submittal of an acceptable observation program.

A [Sample COP](#) (pdf) format is available to assist sponsors and their consultant in developing a project specific COP. Users shall not construe this sample as being complete and whole. The Sponsor and their consultant may use these minimum standards to develop an acceptable construction management program specific for their specific project.

I. Construction Observation Program (COP):

The COP shall detail the measures and procedures the Engineer must utilize to comply with quality assurance provisions of the construction contract, including but not limited to all tests required by the project specifications. The program shall include the following items as a minimum:

- a. Brief narrative that describes the general scope of the project work.
- b. Name and title of the Sponsor's authorized representative (Airport Manager, City Engineer etc.).
- c. Name of Contractor and project Superintendent.
- d. Name of Project Engineer/Manager that has overall responsibility for administration of the construction contract. This person shall have the authority, as described in Section 50-08 of AC 150/5370-10, to take necessary actions to assure compliance with the contract requirements.
- e. Name of Resident Observer. Identify the limits of the observer's responsibilities
- f. Name of Sponsor's Quality Assurance testing laboratory and a copy of their certificate of accreditation. For FAA standard paving materials, the accreditation shall be from a nationally recognized accreditation program (AASHTO, NVLAP, A2LA, etc.) as opposed to a State Highway program. The laboratory must have proper accreditation for the specific tests required of the specified material.
- g. Name of Contractor's Quality Control testing laboratory including a point of contact.

- h. Names of any other engineering firms with quality assurance responsibilities for the project. Include a description of the services each firm will provide.
- i. List qualifications for the Project Engineer, site inspectors, laboratory personnel, and testing personnel.
- j. Itemized listing of all tests required by the contract specification. Include the type and frequency of required tests, the method of sampling, the applicable test standard, and the acceptance criteria or tolerances permitted for each type of test. Refer to the [Summary Listing of Tests for AC 150/5370-10](#) (pdf).
- k. Identify procedures for assuring that:
 - Tests are taken in accordance with the approved construction observation program;
 - Tests are documented properly;
 - Corrective actions / retesting is taken for failed tests;
 - Mix designs meet project specifications. Include documentation of Engineer's approval,
 - Quality and quantity of materials meet project requirements;
 - Reports are transmitted to proper parties.

II. Engineer's Field Office and Laboratory, Equipment and Contract Documents

- a. The Engineer must assure that a facility suitable for use as a field office and laboratory is provided for within the construction contract documents (Ref. Section 60-05)
- b. The Engineer must assure that necessary equipment required for surveying, material testing, and project inspection is available and is in proper working order.
- c. The Engineer shall assure that approved plans and/or specifications are available to construction observation and testing laboratory personnel employed by the Engineer or working under contract with the Engineer.

III. Personnel Qualifications

- a. Project Engineer/Manager: The Project Engineer/Manager shall be a Professional Engineer, licensed in the state where construction takes place (or a reciprocal state), and shall have overall responsibility for construction observation of the project.
 - The project engineer must be on the project site at the beginning of any critical operations and shall supervise all additional construction observation personnel. Define critical operations in the Construction Observation Program (COP).
 - The engineer shall have authority to make decisions regarding the project, subject to approval of the sponsor/owner and the FAA. The Project Engineer must sign all official project documents (i.e. change orders, inspection reports, etc.).
 - Unless otherwise approved by the FAA, the Project Engineer shall meet the following minimum requirements:
 - 1) Earthwork - 3 years experience in earthwork construction.
 - 2) Base and Subbase - 3 years experience in base and subbase construction
 - 3) Concrete or Asphalt - 5 years experience in airport or highway pavement construction.
- b. Resident Observer
The engineering consulting firm may supplement the Project Engineer with a Resident Observer. The use of a Resident Observer may not diminish the responsibility of the Project Engineer. The Project Engineer must be present at the start of all critical operations. The Resident Observer may assist the Project Engineer with construction observation but must not assume the overall responsibility of the Project Engineer. The qualifications for construction observation personnel will vary depending upon the material being placed. We

recommend a minimum of two years experience. Refer to the minimum standards for materials to ascertain the minimum qualifications for the resident observer.

c. **Field Testing Personnel**

Unless otherwise specified, field-testing personnel shall have a minimum of one-year experience in field-testing of the material being placed or constructed. In lieu of working experience, a certificate of completion from an acceptable training course is acceptable subject to FAA approval.

d. **Laboratory Personnel**

The supervisors of the main testing laboratory and field laboratory shall have as a minimum; two years of prior employment with the official project testing laboratory or other testing laboratories with approved accreditation. The supervisor is ultimately responsible for the testing activity, but need not be present for field sampling or field-testing.

IV. Testing Laboratory

- a. The laboratory furnishing testing services for the project must have a current accreditation by a nationally recognized accreditation program i.e. AASHTO, NVLAP or A2LA. If a testing laboratory can show evidence that it has applied for and paid necessary fees to an acceptable laboratory accreditation program, such evidence may, satisfy this requirement on an interim basis. The laboratory accreditation must address the tests required in the project.
- b. Testing functions occurring in the field such as density testing, material sampling, or specimen preparation may be performed by accredited laboratory personnel or other qualified personnel. Field-testing personnel shall have as a minimum, one year of experience with the appropriate material and construction methods.

V. Surveying

- a. The surveying included in this portion of the observation program is limited to that required for construction of the project. The Project Engineer should have access to all field notes and data collected during design regardless of who designed the project. The survey party shall consist of a qualified party chief and survey crew. All survey equipment must be in proper working operation prior to use. If property surveying is required, the party chief must be a registered land surveyor.
- b. Horizontal and Vertical Control: Per Section 50-06 of AC 150/5370-10, the Sponsor's engineer is responsible for establishing horizontal and vertical control. Occasional spot check should be required to assure the integrity of the control monuments. Due to accuracy requirements for aeronautical information, the construction monuments for runway projects must be tied into the National Geodetic Service (NGS) National Spatial Reference System (NSRS). For horizontal control, the referenced datum must be NAD83. For vertical control, the referenced datum must be NAVD88. The contractor must adequately protect the construction monuments throughout the duration of the project.
- c. Construction Layout and Staking: The Contractor shall accomplish construction layout and staking by using horizontal and vertical control monuments established by the Sponsor's surveyor. The Sponsor should avoid situations that use the engineering consultant to accomplish construction layout and staking. The responsibility and risk associated with construction layout and staking must remain with the Contractor.
- d. During the course of the project work, the Sponsor's survey party shall make spot checks on alignment, verify proper cross sections of the completed pavement layers (subgrade, subbase, base course and surface course) and verify final cross sections for computing final pay quantities.

VI. Construction Observation and Material Testing

a. Subgrade, Subbase, and Base Course Construction Personnel.

1. Field Construction Observer: The Sponsor's Engineer shall provide at least one on site construction observer per shift with a minimum of 2 years experience in earthwork, and aggregate subbase/ base course construction. Subject to FAA approval, the observer may substitute up to one year of experience with a four-year college degree in engineering or a certificate of completion from an acceptable training course. If additional assistant construction observers are necessary, they shall have a working knowledge of earthwork and subbase/base coarse construction procedures.
2. Field Testing Personnel: Unless otherwise specified, field testing personnel shall have a minimum of one year experience in field testing of subgrade, subbase, and base courses. In lieu of working experience and subject to FAA approval, it may be acceptable to reference a certificate of completion from an acceptable training course.
3. Laboratory Personnel: The supervisor(s) of the main testing laboratory and field laboratory shall have as a minimum; two years of prior employment with the official project testing laboratory or other testing laboratories with approved accreditation. The supervisor is ultimately responsible for the testing activity, but need not be present for field sampling or field testing.

b. Bituminous Paving Observation Personnel.

1. Field and Plant Inspectors: The Sponsor's Engineer shall furnish a sufficient number of observers to adequately observe plant and field lay down operations. A minimum of one on site observer per shift shall have at least five years of experience in the field of bituminous pavement construction. Subject to FAA approval, the inspector may substitute up to one year of experience with four-year college degree in engineering or a certificate of completion from an acceptable training course. Additional assistant observers must have a working knowledge of the appropriate construction procedures. This includes observers for construction of bituminous seal coats and surface courses.
2. Field Testing Personnel: Unless otherwise specified, field-testing personnel shall have a minimum of one year experience in field testing and sampling of bituminous concrete. In lieu of working experience and subject to FAA approval, a certificate of completion from an acceptable training course may be accepted.
3. Laboratory Personnel: The supervisor(s) of the main laboratory and field laboratory shall have a minimum of two years of supervisory employment with this laboratory or other laboratories with approved accreditation. Additional laboratory personnel shall have a working knowledge of bituminous mixture testing. The supervisor is ultimately responsible for the testing activity, but need not be present for field sampling or field testing.

c. Concrete Paving and Structural Concrete Observation Personnel.

1. Field Observers: The Sponsor's Engineer shall furnish a sufficient number of observers to adequately observe plant and field placement operations. A minimum of one on site observer per shift shall have at least 5 years experience in concrete pavement construction. Subject to FAA approval, the observer may substitute up to one year of experience with a four year college degree in engineering or a certificate of completion from an acceptable training course. The observer shall be on site during the placing, initial sawing and initial curing operations. Additional assistant observers shall have a working knowledge of concrete paving procedures.

2. **Field Testing Personnel:** Unless otherwise specified, field-testing personnel shall have a minimum of one-year experience in field testing and sampling of portland cement concrete (PCC). In lieu of working experience and subject to FAA approval, the testing personnel may substitute the experience with a certificate of completion.
 3. **Testing Laboratory Personnel:** The supervisor of the main laboratory and field laboratory shall have a minimum of two years of employment with this laboratory or other laboratories that have approved accreditation. Additional laboratory personnel shall have a working knowledge of concrete testing. The supervisor is ultimately responsible for the testing activity, but need not be present for field sampling or field-testing.
- d. **Manufactured Materials**
For manufactured items such as cement, asphalt, steel, lime, flyash and etc., the Project Engineer may accept the vendor's certification that the materials meet the specifications. The Project Engineer may also require testing of the material to assure compliance to the specifications.
- e. **Report of Test Results to the Contractor:**
The Project Engineer, or designee, shall verbally notify the Contractor of the test results immediately after the tests are complete. The information shall include the results of the tests and any payment deductions due to substandard construction materials. In no case shall the Contractor receive notice more than 4 working hours after the test results are complete. Provide additional written notification to the Contractor within 7 days after the tests are complete.
- f. **Retesting:**
The testing laboratory shall provide written notification to the Sponsor and the Contractor of additional costs incurred from retesting of failed materials and additional quality assurance tests.

VII. Reports

- a. **Weekly Reports:** The consultant shall prepare and submit a weekly construction progress and inspection report conforming to FAA form 5370-1. An equivalent format is acceptable provided the substitute format addresses the same information.

Record and file tests reports in a timely and orderly manner. Tests reports shall include type of tests taken, applicable standards, location of tests, tests results (highlighting those test which fail specification requirements), provisions for failed tests, and specification requirements. Test reports must be made available for FAA review upon request.

- b. **Final Report:** At the end of the project, the Project Engineer shall submit a final test and quality control report that documents the results of all tests performed. Highlight tests that failed or did not meet the applicable test standard and note corrective action and re-testing results. The report shall include any applied pay reductions and justification for accepting any out-of-tolerance materials.

RESOURCES

Advisory Circulars

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

Grant Obligations

- [Airport Sponsor Assurances](#) (pdf)

Guidance

- **Sample COP** ([MS Word](#) | [pdf](#))
- [Summary Listing of Tests](#) (pdf): **AC 150/5370-10B** (Added 12/23/10)

1040 - Preconstruction Conference Development Projects

Overview

The preconstruction conference offers a forum for all interested parties to discuss the scope of the project and its impact on normal airport operations. The primary purpose of the conference is to thoroughly discuss critical project issues such as contract requirements, operational safety, construction phasing, airport security, quality control, acceptance testing, labor requirements, EEO obligations, DBE requirements and other pertinent concerns.

As each project may be unique in type and complexity, the engineer should tailor the agenda for each conference to address the concerns specific for their project.

Scheduling of Conference

The Sponsor/consultant should schedule the preconstruction conference immediately following FAA's concurrence with the award of contract to the apparent low bidder contractor. We request a minimum of 10 days advance notice in order to permit adequate time to inform other FAA offices that may be interested in the project.

Conference Administration

The Sponsor through their delegated consultant is responsible for conducting the preconstruction conference. The consultant shall prepare an agenda that addresses pertinent project issues. The Sponsor shall record minutes of the meeting and forward copies of the meeting minutes to all participants and the project files.

Participants

As a minimum, the following parties should be present at the conference:

- Airport Sponsor/Manager
- Sponsor's Consultant Engineer
- Proposed Resident Engineer/Observer
- Sponsor's Acceptance Testing Laboratory
- Contractor (Owner or authorized representative)
- Contractor's Project Superintendent
- Contractor's Quality Control Laboratory

Additional parties that should be notified of the preconstruction conference include the following:

- FAA Project Manager
- FAA Technical Operations Representative (if project impacts FAA owned facilities and/or cables)
- Department of Homeland Security Federal Security Director
- Air traffic control (if project warrants participation)
- Local Airport Tenants (A separate meeting might be more appropriate to discuss tenant concerns)
- Subcontractors

Conference Agenda

The conference agenda should, as a minimum, include the items listed below. Advisory Circular AC 150/5300-9b presents a complete listing of recommended agenda items. The type, magnitude and uniqueness of a project will likely necessitate modifications to the standard agenda.

1. Identify main points of contact
 - Owner, Owner's Representative, Contractor, Superintendent, Resident Engineer, etc.
 - Identify roles and responsibilities of each party
 - Discuss authority of Engineer
 - Explain relationship between FAA and Sponsor
2. Scope of work
 - Include general plan or chart to depict proposed work
 - Proposed schedule of work
 - Identify construction phasing concerns
3. Notice-To-Proceed: Issuance contingent upon;
 - Execution of grant agreement
 - Submittal of executed contract & required bonds
 - Sponsor acceptance of DBE participation
 - FAA approval of waiver to Buy American preferences (if applicable)
 - FAA Approval of Construction Observation Program
 - Submittal of a properly executed sponsor certification for construction contracts
4. Operational safety & security: Discuss the following:
 - Delineation of construction limits
 - Runway and taxiway safety areas limits (open trenches, drop offs, irregular surfaces)
 - Potential impacts to airport operations
 - Operational Safety requirements of approved safety plan and AC 150/5370-2
 - Vehicular operation within the A.O.A. with emphasis on runway incursions.
 - Staging area location and haul route limitations
 - Stockpile Limitations and Part 77 Notification (FAA Form 7460-1)
 - Equipment heights and Part 77 Notification (FAA Form 7460-1)
 - Foreign Object Debris (FOD) control (windblown and tracked-on)
 - Temporary markings & Barricades
 - Airfield security Requirements
 - Non-compliance consequences (Removal, suspension of work etc)
5. Part 139 Issues
 - Vehicle Operator training
 - Impacts to ARFF operations and response time
6. NOTAMS
 - Airport Operator issued NOTAMS
 - Facility Outages: 7-day advance notification to FAA Technical Operations
 - Procedure NOTAMS: Cannot be issued by Flight Service Station. Contact project manager 7 days prior to threshold relocation
7. FAA Technical Operations (Airway Facilities)
 - FAA Facility Outages: 7 day advance notice required
 - Location of buried cables
8. Construction Observation Program
 - Identify Contractor's and Sponsors laboratory
 - Acceptance testing versus Quality Control testing
 - Test reports, record keeping, daily diary

9. Project Submittals: Approval based upon;
 - Technical requirements
 - Buy American Provisions (Origin of Manufacture)
 - Approved Lighting Equipment (Appendix 3 of AC 150/5345-53)
10. Labor Requirements
 - Davis Bacon Wage Rates (Must be posted on conspicuous project board)
 - Labor poster (Must be posted prior to start of work)
 - Submittal of payrolls
 - Wage rate interviews
11. Civil Rights/DBE Requirements
 - Advise contractor that project is subject to the EEO clause
 - EEO posted notices must be posted prior to start of work
 - Monitoring of DBE
12. Contract Modification Process
 - Refer to central region policy
 - Sponsor may not seek reimbursement for change order work until FAA approves AIP participation in the change order.
13. Utilities
 - Locating
 - Protection
14. Environmental Issues
 - Storm Water Permitting
 - Waste Disposal

RESOURCES

Advisory Circulars

- [AC 150/5300-9](#): Preconstruction Conferences for AIP Projects
- [AC 150/5370-10](#): Standards for Specifying Construction

Required Posted Notices

- [Davis Bacon Poster WH 1321](#) – DOL “Notice to All Employees” Poster
- [EEO Poster](#) – DOL Equal Employment Opportunity Poster

1041 – Aeronautical Review of Equipment Heights Development Projects

Impact of Equipment Heights

The operation of contractor's equipment on or near an airport can have a significant impact to existing approach and departure procedures. The consequences of these impacts could be increased minimums or temporary suspension of published procedures.



Operation of Concrete Pump near Runway Approach

Aeronautical Review

The aeronautical review of the construction safety plan is primarily a coordination review. It does not address evaluation of specific objects (work area, haul route concrete pumps and etc.) that may be present on the project. The evaluation of specific objects requires a separate study through the OEAAA system. The sponsor should typically submit 7460-1 forms for the project work area limits, the proposed haul routes and the proposed staging area during the design phase. The contractor must submit 7460-1 forms for any additional equipment not addressed under by the Sponsor's submittal.

The FAA bases their evaluation of objects upon the extent of information provided. This typically involves providing geodetic coordinates, ground elevation and the height of anticipated equipment. For example, if the Sponsor provides data addressing the work area limits and ground elevation for contractor equipment not expected to exceed 25' agl, the FAA will evaluate the impact of equipment up to 25' agl will have on established procedures. If the study does not indicate any impact to established procedures, the contractor may operate equipment up to 25' agl within the established work area limits without impacting the associated procedures.

If the contractor or a subcontractor proposes to use other equipment (e.g. cranes, boom trucks, and concrete pumps) that exceed the horizontal and vertical limits addressed by the Sponsor's submittal, the contractor must submit a separate Part 77 notice for the purpose of evaluating impacts of this equipment to aviation operations.

The sponsor should inform the contractor no later than at the time of the pre-construction conference of their requirement to submit an online 7460-1 for each individual piece of equipment not previously studied

by the FAA. The Sponsor should also advise the contractor that they must submit this information **45 days** prior to use. Failure to address this matter in a timely manner may result in the temporary loss of approach and departure procedures for the Sponsor's airport.

Refer to AIP sponsor guide section AIP-960 for additional information.

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

On-Line 7460-1 Form

- [Obstruction Evaluation / Airport Airspace Analysis \(OE/AAA\)](#)

1050 - Notice-to-Proceed Development Projects

The Sponsor should avoid issuing a Notice-to-Proceed to the Contractor until the FAA offers concurrence. The FAA will conduct a cursory review of contract documentation to ensure compliance with AIP requirements and to ensure the Sponsor has met preconstruction requirements.

Conditions for FAA Concurrence

The Sponsor must meet the following conditions in order to receive FAA concurrence with the issuance of the Notice-to-Proceed:

1. **Proper Execution of the Contract:**
Both parties must properly execute the contract agreement. This includes signature and date.
2. **Bonding Requirements Fulfilled:**
The Contractor must submit satisfactory Performance and Payment Bonds issued from a solvent surety.
3. **DBE Participation:**
The sponsor has confirmed that the contractor's has either met the published DBE goal or has provided adequate documentation supporting their good faith efforts in obtaining participation by DBE firms.
4. **Buy America Waiver:** If the Buy America certification for the apparent low bidder indicates a request for a waiver to Buy America preferences, the bidder must submit satisfactory documentation that supports a permissible waiver. Sponsors should not enter into the contract agreement until the FAA offers concurrence with a contractor's waiver request.
5. **Construction Observation Plan:**
For projects involving airfield paving that equal or exceed \$250,000, the consultant must prepare and submit to the FAA a satisfactory construction observation plan.
6. **Proper Execution of Grant Agreement:**
With the exception of projects funded entirely by primary entitlement funds, no development shall take place unless the Sponsor has adequately executed the associated grant agreement. Any actual construction that occurs prior to establishment of the associated grant agreement may become ineligible for AIP participation.
7. **Safety Plan**
The sponsor must provide assurance that they have resolved all applicable FAA comments that result from the aeronautical reviews of construction safety plan and the associated project elements (staging area, work area, haul roads and etc.).

Contractor's Proposed Construction Schedule

Section 80 of AC 150/5370-10 requires the Contractor to submit within 10 days of the issuance of the NTP a copy of their proposed progress schedule. Forward a copy of this schedule to the FAA project manager once it is received from the contractor.

RESOURCES

Advisory Circulars

- [AC 150/5300-9: Preconstruction Conferences for AIP Projects](#)
- [AC 150/5370-10: Standards for Specifying Construction](#)

1060 - Labor Provisions Development Projects

Overview

AIP Sponsors with construction projects that exceed \$2,000 are required to comply with applicable Federal Labor provisions. This requirement is included in the grant assurances and the FAA considers this a condition of grant acceptance.

The Department of Labor (DOL) maintains oversight and enforcement over regulations and laws pertaining to labor standards. As an AIP grantee, the Sponsor assumes a role in providing day-to-day administration and monitoring of applicable labor standards.

Federal Regulations 29 CFR Part 5 establishes the provisions for labor requirements on construction projects exceeding the \$2,000 threshold. FAA Advisory Circular 150/5100-6D serves as a guide for AIP Sponsors in complying with applicable labor provisions.

Sponsors should note that at the conclusion of an AIP project, the Sponsor is required to certify compliance with the applicable labor provisions. The form "[Sponsor Certification for Final Acceptance](#)" contains various questions regarding the Contractor's compliance with labor requirements.

Responsibilities of the Sponsor

As an AIP grantee, the Sponsor assumes responsibility for ensuring compliance with relevant labor standards. This responsibility includes but is not limited to the following:

- Incorporate in each bid solicitation a copy of the current wage rate determination as issued by the DOL (*29 CFR Part 1.6*). Sponsor may access current wage rates determinations at the Department of [Labors Wage Determinations Online](#) website.
 - The selected determination should contain worker classifications that are most appropriate for the type of work involved on the project.
 - For most airfield projects, the highway classification is appropriate. For projects involving building construction (ARFF building, SRE building etc) use the building classification.
- For all construction contracts expected to exceed \$2,000, include contract clauses and provisions as required by 29 CFR Part 5.5.
- Award contracts conditioned on the acceptance and adherence of the appropriate wage determination.
- Report all suspected or reported violations to the DOL.
- Withhold from the Contractor accrued payments or advances as may be considered necessary to pay laborers and mechanics employed by the contractor the full amount of wages required per the contract (*29 CFR Part 5.5*)
- Review weekly payroll records in order to ascertain compliance with the applicable wage rate determination.
- Conduct labor standard interviews for purposed of assuring compliance. Form DOT F 4220.5 is available to assist in conducting this interview. There is no established frequency for conducting such interviews. 29 CFR Part 5.6 states that interviews shall be conducted with such frequency as necessary to assure compliance with labor standards.
- Verify that award of contract is not being made to a firm debarred for violations of the Davis-Bacon Act.
- Assist in the classification of any laborer or mechanic not classified under the appropriate wage determination.
- Discuss labor standards during the preconstruction meeting in order to achieve an understanding of the requirements for each individual party.

Responsibilities of the Contractor

Contractors of AIP funded construction projects assume the following obligations:

- Pay the laborers and mechanics the wages and fringe benefits stipulated by the appropriate wage determination.
- Post the wage rate determination and the Davis Bacon Poster (WH-1321) in a prominent and conspicuous location on the job site.
- Ensure that all construction subcontracts contain the appropriate labor provisions established in 29 CFR Part 5.5.
- Maintain payrolls and records for all laborers and mechanics engaged in the project work. Contractor must retain records for a period not less than three years from completion date of the project.
- Submit to the Sponsor or their representative a copy of weekly payrolls consisting of the following minimum information.
 - Name, Address and Social security number
 - Classification and hourly rate
 - Daily and weekly number of hours worked
 - Itemization of Deductions
 - Actual wages and fringe benefits.
- Maintain written evidence of the registration or apprenticeship programs

Applicable Labor Regulations

Listed below are some of the applicable statutes and regulations pertaining to labor standards. Do not construe this listing as inclusive of all regulations pertaining to required labor standards. Additional regulations, policies, executive orders and other regulations may apply. Consult the Department of Labor [Employment Law Guide](#) and [Technical Assistance Guide for Federal Construction Contractors](#) for a comprehensive view of labor requirements. The information provided below is based on information provided on the DOL website.

Davis-Bacon Act (DBA) - The Davis Bacon Act requires payment of prevailing wages and fringe benefits for all AIP projects expected to exceed \$2,000. This requirement extends to all subcontractors employed under the prime contractor.

The Sponsor shall assure that a current wage rate determination and the DBA contract provision is included in the project bid solicitation. The wage determination must also be posted at the job site in a conspicuous location.

While the issuance of a change order would not require an update to the contract wage determination, the execution of a supplemental agreement, which exceeds \$2,000, does require such an update. Supplemental agreements generally cover work not included in the original scope of work.

For labor classifications not included in the wage determination, the contractor and Sponsor shall jointly complete Standard Form 1444 for submittal and approval by the DOL. The Sponsor and contractor should note that this process may take up to thirty 30 days to resolve.

Contract Work Hours and Safety Standards Act (CWHSSA) - The Contract Work Hours and Safety Standards Act (CWHSSA) applies to contractors and subcontractors with federal service contracts and federally funded and assisted construction contracts that exceed \$100,000. The Act requires contractors and subcontractors with covered contracts to pay laborers and mechanics

employed in the performance of the contracts one and one-half times their basic rate of pay for all hours worked over 40 in a workweek. This Act also prohibits unsanitary, hazardous, or dangerous working conditions in the construction industry on federal and federally financed and assisted projects.

The CWHSSA provides most workers on federal assisted contracts the right to receive time and one-half for overtime hours worked on such contracts. The DOL Wage and Hour Division accepts complaints of alleged CWHSSA wage violations.

Contractors or subcontractors who violate this Act may be subject to fines, imprisonment, or both. Intentional violations of this Act are misdemeanors and may be punished by a fine not to exceed \$1,000 or by imprisonment for not more than six months, or both. Overtime wage violations may result in the assessment of liquidated damages in the sum of \$10 for each calendar day an employee is allowed to work in excess of a 40-hour workweek without payment of the required overtime compensation.

Accrued contract amounts may also be withheld in sums necessary to satisfy the liability for unpaid wages and liquidated damages. Employees have rights of action and/or of intervention against the contractor and its sureties if the amounts withheld are insufficient to reimburse the unpaid wages. Contractors or subcontractors found to have committed willful or aggravated violations of the overtime requirements may have their contracts terminated and may be declared ineligible to receive future contracts for a period not to exceed three years.

Copeland Anti-Kickback Act

The "Anti-Kickback" section of the Copeland Act applies to all contractors and subcontractors performing on any federally funded or assisted contract for the construction, prosecution, completion or repair of any public building or public work, except contracts for which the only federal assistance is a loan guarantee. This provision applies even where no labor standards statute covers the contract.

The regulations pertaining to Copeland Act payroll deductions and submittal of the weekly statement of compliance apply only to contractors and subcontractors performing on federally funded contracts in excess of \$2,000 and federally-assisted contracts in excess of \$2,000 that are subject to federal wage standards.

The "Anti-Kickback" section of the Act precludes a contractor or subcontractor from in any way inducing an employee to give up any part of the compensation to which he or she is entitled under his or her contract of employment. The Act and implementing regulations require a contractor and subcontractor to submit a weekly statement of the wages paid to each employee performing on covered work during the preceding payroll period. The regulations also list payroll deductions that are permissible without the approval of the Secretary of Labor and those deductions that require consent of the Secretary of Labor.

The "Anti-Kickback" provisions of the Copeland Act give covered workers on subject federal contracts the right to receive the full pay to which they are entitled for the work they perform. The Act also gives such workers the right to receive pay on a weekly basis. The DOL Wage and Hour Division of the Employment Standards Administration accepts complaints of alleged Copeland Act wage violations.

Any contractor or subcontractor who induces an employee working on a covered contract to give up any part of the compensation to which he or she is entitled is subject to a \$5,000 fine, or imprisonment for up to five years, or both. Willful falsification of the statement of compliance may subject the employer to civil or criminal prosecution and may be cause for contract termination or debarment. Contractors may challenge determinations on debarment before an administrative law judge. Decisions of administrative law judges may be appealed to the Administrative Review

Board. Final determinations on debarment may be appealed to and are enforceable through the federal courts. Civil and criminal sanctions are pursued through the federal courts.

Occupational Safety and Health Act

In general, the Act covers all employers and their employees in the 50 states, the District of Columbia, Puerto Rico, and other U.S. territories. Coverage is provided either directly by the federal Occupational Safety and Health Administration (OSHA) or by an OSHA-approved state job safety and health plan. The Act applies to employers and employees regardless of whether Federal assistance is present or not.

Compliance with OSHA requirements is primarily the responsibility of the Contractor. The Sponsor through their consultant however, should report any suspected violation of OSHA standards to the DOL for prompt resolution.

RESOURCES

Advisory Circulars

- [AC 150/5100-6](#): Labor Requirements for the Airport Improvement Program

Department of Labor Requirements

- [Davis Bacon Wage Rate Determinations](#)
- [Davis Bacon Poster WH 1321](#) – DOL “Notice to All Employees” Poster
- [EEO Poster](#) – DOL Equal Employment Opportunity Poster
- [Technical Assistance Guide for Federal Construction Contractors](#) – DOL publication

Federal Regulations

- [29 CFR - Labor](#)

Forms

- [SF 1445](#) (PDF)– Labor Standards Interview form from GSA

1070 – Inspections Development Projects

Overview

AIP Sponsors assume the responsibility for monitoring the progress of a project and to ensure compliance with the approved plans and specifications. Grant assurance #17 states that the Sponsor must provide and maintain competent technical supervision at the construction site throughout the duration of the project.

The FAA prefers Sponsors assign this responsibility to a qualified consultant engineer. Sponsors that desire to accomplish a portion of the inspection responsibilities must submit to the FAA a formal request for use of a sponsor force account. Refer to AIP guidance AIP-1400 for additional information.

Quality Control of AIP Construction

The consultant engineer represents the Sponsor and has overall responsibility for reporting on the contractor's progress and quality of work. The Sponsor should clearly define the responsibilities of the consultant in a written agreement. Advisory Circular 150/5370-12 addresses the responsibilities of the Sponsor and the Engineer. As a minimum, the agreement should address the following tasks:

Project Administration

- Conduct Preconstruction Conference per AC 150/5300-9
- Prepare Contract Documents for execution
- Prepare and distribute Construction documents (Plans & Specifications) for use by the Contractor
- Provide general consultation and technical assistance to the owner
- Act within the limits of the authority of the engineer established by Section 50-01 of the project manual
- Prepare and verify Contractor periodic payment requests
- Prepare for Sponsor signature AIP Requests for Reimbursement (SF-271 form).
- Develop Construction Observation program per Sponsor's Grant condition
- Prepare and administer contract modifications as required and as approved by the FAA and the Owner.
- Reports:
 - Prepare and update Sponsor Quarterly Performance Reports
 - Prepare and submit progress reports
- Monitor Contractor's compliance with Davis Bacon requirements including reviews of contractor certified payrolls and conducting wage rate interviews
- Monitor Contractor's compliance with DBE requirements.
- Evaluate proposed waiver of Buy American preferences (if applicable)
- Monitor Contractor's compliance with E.E.O requirements

Field Services

- Provide horizontal and vertical survey control for use by the Contractor.
- Conduct acceptance reviews of shop drawings and materials certifications
- Monitor Contractor's compliance with Buy American contract provision.
- Provide qualified resident engineer to monitor Contractor's conformance with Contract requirements. The Resident Engineer shall fully document contractor's performance, observe acceptance testing of construction materials and verify installed construction quantities. The Resident Engineer shall coordinate contractor's activities and progress with the Owner.
- Monitor Contractor's compliance with approved safety and phasing plan
- Maintain construction diary that documents daily work activities and contract time
- Prepare and submit weekly reports
- Perform quality acceptance testing in accordance with the project specifications

- Conduct site visit by Project Engineer to coordinate with Resident Engineer and observe Contractor's progress.
- Obtain and submit updated runway survey and commissioning data (As required per project)

Project Closeout

- Attend and conduct a final walk through and inspection of the completed project with the contractor and Owner.
- Monitor completion of punch list items
- Prepare and distribute record of final inspection.
- Prepare for sponsor signature FAA form "Sponsor Certification of Final Acceptance"
- Prepare and distribute a Final construction report that documents key project milestone dates, final project costs, summary of test results and material certifications, summary of contract modification, compliance with labor provisions and photographs of completed project work.
- Prepare and distribute record drawings
- Update and distribute revised Airport Layout Plan drawings (As Required)
- Submit above noted closeout documentation within 90 days of Owner's acceptance of project from contractor.

RESOURCES

Advisory Circulars

- [AC 150/5370-12](#): Quality Control of Construction for Airport Grant Projects

Forms

- [FAA Form 5370-1](#) (doc): Construction Progress and Inspection
- [SF 1445](#) (PDF)– Labor Standards Interview form from GSA

Grant Obligations

- [Airport Sponsor Assurances](#) (pdf)

1071 - Review of Construction Project Submittal Development Projects

A critical step in assuring a contractor's compliance with the approved plans and specification is the review of project submittals. Sometimes referred to as the "shop drawing" phase, this step involves the submittal and review of catalog cut sheets, product information sheets, schedules, fabrication details, installation diagrams and manufacturer's instructions.

Per Section 60-01 of the FAA Standards for Construction (AC 150/5370-10) the contractor shall submit to the Engineer complete statements as to the **origin, composition and manufacture** of all materials the contractor intends to use in the project work. Section 100 of Advisory Circular 150/5370-10 requires a submittals schedule as part of the Contractors Quality Control Program. The prime contractor thus assumes the key responsibility for assembling and submitting shop drawing documentation that demonstrates compliance with the contract plans and the project manual.

The Sponsor, through their consultant, shall review the shop drawing submittals for general conformance with the approved contract plans and specifications. This review should note any deviations or exceptions made by the contractor.

AIP Requirements

While the focus of the shop drawing review is typically heavily weighted toward checking conformance with the technical requirements of the contract specification, it is equally important that this review also address verification of contractor conformity with AIP provisions of the contract. Specifically, the Sponsor should confirm contractor compliance with the Buy America provisions and the Airport Lighting Equipment Certification Program.

Failure to verify conformance with AIP provisions could lead to a situation where the installed material or equipment satisfy the technical requirements of the contract but the FAA deems the work ineligible for AIP participation because the contractor failed to meet AIP provisions of the contract.

Buy American

In order to remain eligible for AIP participation, the apparent low bidder must certify that they will comply with Buy America preferences. If the bidder is unable to fully comply with furnishing 100% United States made equipment and manufactured products, the bidder may request a waiver of the 100% Buy America preference. The FAA will consider a waiver only if the bidder can demonstrate that more than 60% of the cost of components comprising the equipment or manufactured product are made in the United States and final assembly occurs in the U.S. A significant limitation to Buy America waivers is that FAA cannot approve a waiver request for steel products. All steel products such as concrete reinforcement and steel framing must be 100% U.S. made.

The FAA Office of Airports is evaluating airport FAA approved lighting equipment (AC 150/5345-53) for compliance with AIP Buy America provision. Equipment the

The FAA maintains a listing of equipment and products that they have either granted a national waiver or have found meet 100% Buy American preferences. Additional evaluation is not necessary for equipment identified on this listing. Sponsors and consultants may access the current list at the following web address:

http://www.faa.gov/airports/aip/procurement/federal_contract_provisions/media/buy_american_waiver.xls

The shop drawing stage permits the opportunity for the sponsor and their consultant to verify contractor compliance with Buy America. The Sponsor's consultant must confirm and document the origin of manufacture of proposed equipment and manufactured products. Equipment and products that are 100% U.S are acceptable. For equipment and products not fully made in the United States, the Sponsor and their consultant should verify whether the FAA Regional Office has approved a regional waiver for the

subject equipment or if the FAA Office of Airports has already deemed the equipment meets Buy America requirements. Sponsors should note that NAFTA and other trade agreements **do not** apply to the Airport Improvement Program.

Airport Lighting Equipment Certification Program

To remain eligible under the AIP, any installed airfield lighting equipment must be listed within the current version of Appendix 3 of AC 150/5345-53 (Approved Lighting Equipment) effective as of the date of the contract bid.

When reviewing submittals for airfield lighting equipment, the Sponsor and their consultant should not rely solely on vendor statements that claim compliance with FAA standards. The reviewer should instead base acceptance upon a crosscheck of the proposed vendor's product number with the number listed in appendix 3 of AC 150/5345-53. AIP cannot participate in costs associated with products from vendors who claim they meet the FAA standards but for which they do not have a valid FAA certification for said product.

Best Practices

1.

Submittal Log System: We strongly recommend the sponsor, through their consultant; maintain a submittal log system that adequately documents project submittal information. The submittal log system should not only address compliance with the technical requirements, but also address compliance with Buy America provisions and the FAA Airport Lighting Equipment Certification Program.

For purpose of third party audit and FAA verification, the sponsor should retain a copy of this log at the conclusion of the project in order to demonstrate they made due diligent effort to verify contractor compliance. Failure to maintain adequate documentation could lead to a situation where the FAA declares installed work ineligible because the sponsor cannot prove compliance with AIP requirements.

Contract Modification: The shop drawing review process should not serve as a means for establishing a contract modification from the approved plans and specifications. If there is mutual acceptance with a proposed modification or deviation, the Sponsor should initiate a written change order to address the modification or deviation rather than rely on a project submittal approval action.

1072 - Construction Records Development Projects

The Sponsor must have a resident observer maintain daily records that sufficiently describe the work accomplished that day. The Sponsor should identify this requirement as a responsibility in the consultant's agreement. FAA Form 5370-1 is available to assist Sponsors in documenting the construction progress. Consultants may use a customized format provided the format documents equivalent information.

The FAA does not require the Sponsor to submit the daily records to the FAA, however such records must be made available to the FAA upon request. The Sponsor shall maintain the records for a period not less than three years from the date of project acceptance.

As a minimum, the Sponsor's consultant shall record the following:

- Daily weather conditions and temperatures
- Worked accomplished that day, including the exact location
- Work day count and contract time
- Estimate of percentage of physical work completed to date
- Hours worked per day
- Quality and Quantity of material delivered on-site
- Type and amount of equipment in use
- Size of work force including presence of contractor's supervisor
- Acceptance tests conducted and results obtained
- Corrective actions taken by the contractor
- Status of approved Safety Plan measures
- Identification of critical construction issues

RESOURCES

Advisory Circulars

- [AC 150/5370-12](#): Quality Control of Construction for Airport Grant Projects

Forms

- [FAA Form 5370-1](#) (doc): Construction Progress and Inspection
- [SF 1445](#) (PDF)– Labor Standards Interview form from GSA

1073 – Monitoring Labor and Civil Rights Requirements Development Projects

Labor and Civil Rights

In addition to verifying contractor compliance with technical and contractual requirements, the Sponsor must also ensure the contractor complies with applicable labor and civil rights. These tasks, which are typically included in the consultant's contract, include but are not limited to the following:

1. Weekly review of payroll records to ascertain the contractor's compliance with the applicable wage rate determination.
2. Monitoring of the contractor's work force to verify proper classifications for the work being performed.
3. Verification of the Contractor's compliance with applicable requirements of the E.E.O provision.
4. Monitoring and verification of actual participation by DBE subcontractors including commercial useful functions.
5. Confirmation that the contractor has properly posted the required notices in a prominent and conspicuous location.

RESOURCES – Labor Requirements

Advisory Circulars

- [AC 150/5100-6](#): Labor Requirements for the Airport Improvement Program

Department of Labor Requirements and Guidance

- [Davis Bacon Wage Rate Determinations](#)
- [Davis Bacon Poster WH 1321](#) – DOL “Notice to All Employees” Poster
- [EEO Poster](#) – DOL Equal Employment Opportunity Poster
- [Employment Law Guide](#) – DOL Guidance
 - [Contract Work Hours and Safety Standards Act \(CWHSSA\)](#)
 - [Occupational Safety and Health Act](#)
- [Technical Assistance Guide for Federal Construction Contractors](#)

Federal Regulations

- [29 CFR - Labor](#)

1074 - Final Acceptance Development Projects

Final Acceptance

At the conclusion of construction work, the sponsor must conduct a final inspection for the purpose of accepting the work from the contractor. The contractor, resident engineer and Sponsor shall be present for this conference. The Sponsor should give the FAA project manager 10-days advance notice of this inspection in order to permit adequate time to properly schedule their attendance if so desired.

FAA attendance at the final inspection is generally limited to availability and the timing of the inspection. The FAA project manager does not conduct the final inspection. The FAA's purpose at the final inspection meeting is solely for ensuring that FAA and AIP interests are satisfactorily addressed. The Sponsor remains responsible for ensuring compliance with all technical and legal requirements of the contract. The determination of project final acceptance from the contractor must come from the Sponsor and not the FAA. The FAA may not substitute their judgment for that of the Sponsor.

Record of Final Inspection

The Sponsor must prepare a record of the final inspection that identifies the date of the inspection, those present and outstanding issues that effect final acceptance. The record should note any deficiencies and unfinished work along with a date for completion of any corrective action. If the deficiencies and unfinished work are minor in nature, the Sponsor may declare the project work substantially complete and thus accept the project conditioned upon the contractor taking corrective action to resolve any punch list items.

The record of final inspection should include a statement that indicates whether or not the sponsor/engineer find the project work be in substantial compliance with the requirements of the contract. The actual final acceptance occurs at the time the contractor and the Sponsor each sign the final construction pay estimate.

Runway Commissioning

The opening of a new or modified runway requires advance notification and submittal of critical aeronautical information. To meet critical publication dates, Sponsors should submit necessary information to the FAA no later than the cutoff date published on the insider cover of the Airport/Facility Directory. This date is typically six weeks prior to the publication date.

If the project involves impacts to precision and non-precision approaches, advance coordination as early as **18-24 months** prior to opening of the runway is necessary. Refer to AIP Sponsor Guide section AIP-1100 for additional information.

Sponsor Certification

FAA AIP concurrence with the Sponsor's final acceptance is contingent upon the satisfactory completion of the Sponsor certification for "[Construction Project Final Acceptance](#)". This certification identifies twelve critical AIP requirements presented in a checklist format. The Sponsor should seek assistance from their consultant when completing this form; however, the designated official of the Sponsor must sign and date the certification. Execution of this certification by the Sponsor's consultant is not permissible.

RESOURCES

Forms

- [FAA Form 5370-1](#) (doc): Construction Progress and Inspection
- **Sponsor Certification for Final Acceptance:** [MS Word](#) | [PDF](#)

1080 - Contract Modifications Development Projects

Overview

A contract modification may become necessary to facilitate the original intent of the project. Sponsors generally address such modifications by one of two contract instruments:

- 1) Change Order
- 2) Supplementary Agreement

Sponsors should address issues regarding eligibility, reasonableness of costs and AIP justification for the modification **prior** to executing a change order or supplemental agreement. Failure to do so may result in the Sponsor assuming the cost of the entire modification without Federal reimbursement. The Sponsor can realize substantial savings of time, money and effort by providing advanced notice of contract modifications to the appropriate FAA Project Manager. Concerns regarding eligibility, reasonableness of costs and justification may be resolved by a phone call thus reducing the chance of misdirected work efforts.

Sponsors should not use change orders and supplemental agreements to add work items that are outside of the approved scope of work as defined by the grant description. Savings that may result from the construction effort are not available to add work elements outside of the original scope or work.

Sponsors should note that the FAA's review and concurrence with a contract modification is limited to a determination of AIP eligibility and **does not** represent a commitment of Federal funds for the modification. The FAA's commitment of additional AIP funds can only be accomplished by a grant amendment. In the event approved costs overruns exceed the original grant amount, the Sponsor may request an amendment to the original grant amount. This typically occurs after the project is complete. Refer to AIP sponsor guide section 1630 for additional information.

Definitions

Section 10 of Advisory Circular 150/5370-10 establishes definitions for critical terms associated with a modification to contract work. These terms are as follows:

Change Order - A written order by the sponsor to the contractor covering changes in the plans, specifications, or bid quantities and establishing the basis of payment and contract time adjustment, if any, of the work affected by such changes. Work covered by the change order shall be within the general scope of the contract (Para. 10-12, AC 150/5370-10).

Extra Work - An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Engineer to be necessary to complete the work within the intended scope of the contract as previously modified (Para. 10-20, AC 150/5370-10A).

Supplemental Agreement - A written agreement between the Contractor and the owner covering:

- (1) Additional work within the original scope or work that increases or decreases the total amount of the awarded contract, or any major contract item, by more than 25 percent; or
- (2) Work that is not within the scope of the originally awarded contract (Para. 10-43, AC 150/5370-10A).

Major and Minor Contract Items - A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20 percent of the total amount of the award contract. All other items are minor contract items (Para. 10-27, AC 150/5370-10).

Contractual Responsibility

The Sponsor is the responsible authority, without recourse to the FAA, regarding the settlement and satisfaction of all contractual and administrative issues involving procurements in support of an airport aid grant (49 CFR Part 18.36(b)(11)). The reviews and approvals made by the FAA are solely for determinations of AIP eligibility. The FAA will not substitute its judgment for that of the Sponsor with regard to contractual matters.

Rights of Sponsor/Engineer

The Sponsor, as the owner, reserves the right to make alterations in the work as determined to be necessary or desirable to complete the work originally intended in an acceptable manner. The AIP standard General Provision authorizes the Engineer to make such alterations in the work as may increase or decrease the original contract quantities.

Such alterations that do not result in a 25% cost increase of a major item or a 25% increase in the total contract cost should be addressed under a change order. Sponsors must address alterations that exceed the 25% upper limit under a supplemental agreement. (Para. 40-02, AC 150-5370-10).

The Sponsor and Engineer should note that the above statements refer to the rights of the Sponsor & Engineer over the contractor. These rights do not imply that the FAA deems all such alterations eligible for AIP reimbursement. The FAA reserves the right to review the extent of the altered work for the purpose of making a determination of AIP eligibility.

RESOURCES

Advisory Circulars

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

Federal Regulations

- [49 CFR Part 18](#) - Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments

1081 - Change Order Development Projects

General

A Change Order is a contract instrument issued by the Sponsor to the Contractor that addresses modification to work items that fall within the general scope of the contract.

Change Order vs Supplemental Agreement

Sponsors typically initiate a change order to address extra work, eliminate items of work or adjust final contract quantities. To become eligible, Sponsors shall submit all proposed change orders to the FAA for a review and determination for AIP eligibility, need and reasonableness of cost. The work included in a change order must fall within the general scope of the contract. Sponsors should use a supplemental agreement for extra work that does not fall within the general scope of the contract.

Administering Change Orders

The Sponsor and Engineer should take appropriate measures to properly administer change orders. Failure of the Sponsor or the Engineer to adhere to proper change order administration can financially encumber the Sponsor with consequences regarding reimbursement under the AIP.

How a Sponsor administers a change order may depend on various factors including the extent of modification, time critical requirements and the cost of the modification. The larger the cost impact, the greater is the need for advanced notification with FAA for purposes of review and approval.

Sponsor Cost Analysis

Change orders that modify unit prices or add bid items must include a signed engineer's cost estimate as well a justification for the modification. Change orders that are limited to a modification of the existing contract to reflect actual field quantities do not require an independent cost estimate but still require the sponsor prepare a justification for the altered quantities.

FAA Review

The Sponsor must seek and obtain FAA concurrence for all change orders in order to determine AIP eligibility. Sponsors should note that the FAA's concurrence in a change order is a determination of AIP eligibility. Sponsors must not construe the FAA approval of a change order as a commitment of Federal funds for the modification. The formal commitment of additional AIP funds may only be made by a grant amendment.

To limit misdirected efforts, we strongly encourage Sponsors and Engineers contact the FAA project manager prior to initiating any change order. In order to remain eligible for AIP participation, formal written approval by the FAA is necessary **prior** to seeking reimbursement under the AIP. We caution Sponsors that change orders executed without prior FAA approval incur the risk of an ineligible determination by the FAA after the Sponsor realizes the associated costs.

Formal FAA Concurrence

As a minimum, the Sponsor's submittal of a proposed change order should contain the following:

- a. Sponsor cover letter that states whether they concur with the change order and states the justification for the change.
- b. Change Order document that identifies the estimated quantities, unit prices, description of work, reason for change and any adjustment of contract time.
- c. Copy of Engineer's independent cost estimate
- d. Justification for time extension (As Applicable)
- e. Drawings/Sketches (As Applicable)

Preliminary Concurrence

For time critical modifications and small cost changes, the sponsor may seek and obtain preliminary approval from the FAA on the condition that the Sponsor will promptly submit the formal request.

While the FAA's initial response may be preliminary, the Sponsor is still required to provide the FAA documentation on the proposed added work such as:

- Draft of the change order that includes a description of the modification.
- A justification explaining why the modification is necessary.
- Preliminary estimate of cost and time adjustments.

If deemed acceptable, the FAA will grant a preliminary concurrence conditioned upon a maximum approved cost increase. Change Order work that would exceed this maximum would require additional FAA review.

The Sponsor and Engineer should strive to formalize verbally approved change orders as quickly as possible.

Cost Analysis

Federal Regulation 49 CFR Part 18.36 requires all contract actions to be subject to a cost analysis. Sponsors typically address this requirement, which includes contract change orders, by one of two methods; 1) Engineer's Independent Estimate and 2) Justification for Quantity adjustment of existing contract items.

Engineer's Independent Estimate: An engineer's independent estimate is required for modifications that involve new contract work items. The purpose of the independent estimate is to ascertain a reasonable and just cost for the modification. In order to ensure integrity of the analysis, the consultant should prepare the engineer's estimate **prior to** negotiating with the Contractor.

Justification for Quantity Adjustment: Modifications that impact existing contract work items already have an established unit price for that item. Unless the modification falls within the criteria of a supplemental agreement (major versus minor contract item), we consider the established unit price a reasonable and fair price. It thus becomes an issue of justifying for the modified quantities.

We recommend that Sponsors establish a final change order that addresses the adjustment of final contract quantities to reflect actual field quantities. The final change order should include an itemization of all modified bid item quantities. The engineer shall also provide a justification that explains why these items require an adjustment.

The Sponsor and Engineer should note that if there is an upward quantity adjustment, the Contractor may be entitled to a proportional increase in the contract time (Para. 80-07, AC 150/5370-10).

Execution

Following FAA concurrence and execution of the change order between the Sponsor and the contractor, the Sponsor shall forward one signed copy of the change order to the FAA project manager. The contractor should not commence work addressed under a change order until there is a signed agreement between the Sponsor and the Contractor.

Grant Limitation

The Sponsor and Engineer should be aware that the approval and execution of change orders will likely impact the final Federal share of Grant Agreement. The FAA approval of a change order is subject to the limitations of the Grant Agreement. Each AIP grant contains a provision that limits upward adjustment of the maximum obligation to 15% over the original grant amount. Additional project costs the FAA declares eligible for AIP participation can actually be denied for reimbursement if the additional costs result in a Federal share that exceeds the 15% limitation.

We caution Sponsors that while the FAA may increase the maximum obligation of a Grant up to 15% over the original obligation, that actual reimbursement of costs that exceed the original grant is contingent upon the availability AIP funds to fund the increase. The FAA will first strive to fund such overruns with available sponsor entitlement funds. If entitlement funds are not available, the FAA will strive to fund the overage with recovered funds from other AIP grants. The FAA does not guarantee the availability of such funds. Sponsors should also note that funding amendments can take a significant amount of time.

RESOURCES

Advisory Circulars

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

Federal Regulations

- [49 CFR Part 18](#) - Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments

1082 - Supplementary Agreements Development Projects

General

A Supplemental Agreement is a written agreement between the Contractor and the owner covering:

1. Work that is not within the scope of the originally contract (Para. 10-43, AC 150/5370-10) or;
2. Work that would increase or decrease the total amount of the awarded contract, or any major contract item, by more than 25 percent, such increased or decreased work being within the scope of the originally awarded contract.

A major contract item is any item listed in the proposal for which the total cost is equal to or greater than 20 percent of the total amount of the award contract. All other items are minor contract items (Para. 10-27, AC 150/5370-10).

In general, it is best to view a supplemental agreement as a separate contract requiring execution by both parties; the Sponsor and the Contractor. Sponsors should be aware that execution of a supplementary agreement could impact various provisions of the Contract. When proposing a supplementary agreement, the Sponsor must address the impact to the following contract requirements:

1. **Wage Rates:** Because a supplemental agreement is essentially a separate contract, the Sponsor should incorporate the current wage rate determination (Par. 940b, 5100.38) if the supplement agreement exceeds \$2,000.
2. **Surety & Bonding:** Issuance of a supplemental agreement may require the consent of the Contractor's surety. If the supplement is significantly large in value, the sponsor may need to revise the existing performance and payment bonds.

FAA Review and Concurrence

To remain eligible under the AIP, Sponsors must submit all supplemental agreements to the FAA for review and approval. We recommend that the Sponsor and the Engineer contact the FAA in advance to discuss reasonableness of costs and the justification for the supplement. As a minimum, the Sponsor submittal for a proposed supplemental agreement shall contain the following:

1. Sponsor cover letter that states the justification and their concurrence with the supplemental agreement.
2. Copy of Supplemental Agreement document with estimated quantities, unit prices, and description of work and justification.
3. Engineer's independent cost analysis.
4. Drawings/Sketches (As applicable).
5. Revised Performance and Payment Bonds (As applicable).
6. New wage rate determination (As applicable).

Execution

Following FAA review and concurrence, the Sponsor shall submit one executed copy of the supplemental agreement to the FAA project manager. Work covered by a supplemental agreement should not proceed until an executed agreement is in place.

RESOURCES

Advisory Circulars

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

Federal Regulations

- [49 CFR Part 18](#) - Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments

1083 – Liquidated Damages Development Projects

Project owners assess liquidated damages on a contract where the contractor did not successfully complete the contract in the specified contract time. Sponsors accept a level of cost and inconvenience when engaging in construction. The application of liquidated damages offsets the burden of ongoing construction after the contract time has expired.

Setting Liquidated Damages

The most important consideration in setting liquidated damages is the contract time and how it is charged.

Section 80-08 of AC 150/5370-10E typically identifies the dollar amount of liquidated damages for a specific project. The Sponsor must incorporate this section into every AIP-supported contract. The Sponsor may set a single amount, or may set different amounts based on different parts of the contract such as divisions, schedules, or bid alternates.

The amount of liquidated damages must not be a punishment to the contractor for their failure to perform. Rather, it should be a fair reflection of the actual cost burden the Sponsor will incur as a result of the contractor's delay.

Liquidated damages should, at a minimum, cover the incurred cost of additional engineering services such as construction observation. They may also cover a reasonable amount of lost airport revenue or other direct, substantiated costs that will occur if the project completion is delayed.

Liquidated damages cannot cover third-party costs such as lost FBO, flight school, or maintenance shop revenue. They also cannot cover speculative or opportunity costs.

For large airports where the impact on airport operations may be great, it is not practical to attempt to recover all loss of revenue through liquidated damages. The amount of liquidated damages must be balanced to avoid having contractors inflate bids to insulate themselves against the possibility of excessive damages.

Assessing liquidated damages

To assess liquidated damages, you must document the contractor's performance throughout the contract time. Sponsors should ensure that their representative is consistently documenting the construction progress in a diary or log. While the burden is on the contractor to demonstrate that the delays were not his fault, the Sponsor must have the ability to refute these claims.

Sponsors should typically process liquidated damages under a change order to the contract. It is usually best to include it with the final change order reconciling as-built quantities.

The FAA expects Sponsors to administer and enforce the contract. To the maximum extent possible, Sponsors should not charge the AIP for additional costs due to contractor-caused delays. Sponsors should recover such costs through application of liquidated damages.