

ENGINEERING GUIDANCE 2012-05

SUBJECT: Standard Handout for Predesign Conference and Design Report.

PURPOSE: Provide guidance for predesign conferences and design reports.

CANCELLATION: This Guidance replaces Engineering Guidance 2011-01 dated June 14, 2011.

DISCUSSION: The Predesign conference offers the opportunity for discussion of project issues related to acceptable design parameters, airport safety considerations, construction phasing, and environmental considerations.

The Design Report serves to document the design considerations, engineering analysis and design selections that occur early in the design phase. The report must be an explanation of the engineer's design based on scope of the project, critical aircraft dimensions and weight, and analysis of materials and site conditions.

GUIDANCE: The attached handout should be used for AIP projects in the Northwest Mountain Region. Any suggested changes or comments should be forwarded to Safety and Standards Branch, Paul Johnson, at (425) 227-2622.

REFERENCES: None.

APPROVAL: Bill Watson
Bill Watson, Manager, ANM-620
Northwest Mountain Region
Safety & Standards Branch, Airports Division

DATE: 5/8 / , 2012

Project Design:

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 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.

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.

Pre-design Conference:

The pre-design 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. The pre-design conference should be held prior to formally establishing the scope of services for the consultant contract. The sponsor and consultant should contact the FAA project manager about the level and extent of pre-design conference required for the project.

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. More information on pre-design conferences can be found in Advisory Circular (AC) 150/5300-9 – *Pre-design, Prebid & Preconstruction Conferences*.

Attendees

The magnitude and complexity of the project will be a factor in who needs to attend the pre-design 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 Air Traffic Organization, FAA Airport Certification personnel (for Part 139 certificated airports), airport maintenance supervisors, FBOs, airlines, affected utility companies, and airport tenants.

Listed below are some items to be discussed at a pre-design conference. This list should not be construed as being inclusive of all such project issues. Minutes of the Pre-design Conference should be prepared by the consultant and distributed to all participants.

Pre-design Conference Checklist

Airport: _____ **Location:** _____

AIP Project No. _____ **Fiscal Year:** _____

Sponsor: _____ **Date:** _____

Consultant: _____ **Date:** _____

FAA: _____ **Date:** _____

Project Description: _____

1. Scope of Work:

- a. Discuss scope of project including federally and non-Federally-funded work.
- b. AIP participation limits including identification of non-participating work.
- c. Discuss environmental mitigation requirements and environmental checklist requirements.
- d. Discuss Status of Airport Layout Plan and requirement for FAA Standards.
- e. Coordination of project with airport users and FBO's.

Notes:

2. Funding:

- a. Identity proposed project funding sources as applicable:
 - 1) State Apportionment.
 - 2) Entitlement (Primary and Nonprimary).
 - 3) Discretionary.
 - 4) Multi-year.
 - 5) Passenger Facility Charge Funds.
 - 6) Transfer of entitlement funds (timing of transfer documents).

Notes:

3. Engineering Fees:

- a. Amount of engineering fee eligible for Federal participation must be approved by ADO. ADO will make a "reasonableness of cost" determination.
- b. Design work performed prior to FAA approval is at consultant's/sponsor's own risk. Refer to Advisory Circular (AC) 150/5100-14 (Current addition) for consultant negotiation process.
- c. Sponsor should provide to the ADO:
 - 1) Detailed scope of work.
 - 2) Consultant estimate.
 - 3) Independent estimate.
 - 4) Cost analysis comparing estimate.
 - 5) Record of negotiations.
 - 6) Letter requesting approval of design and/or construction management fees
 - 7) Sponsor Certification for Selection of Consultants.

Notes:

4. Project Schedule:

- a. Develop a project schedule that identifies elements listed in the "AIP Development Schedule" form. (Appendix 1). The Sponsor, Consultant, and ADO Project Manager must all sign this schedule.
- b. Advise Sponsor that funding may be lost if project schedule is delayed and bids are not opened per the signed schedule.

Notes:

5. Reimbursable Agreements:

- a. Determine if any FAA owned navigation aids need to be installed, moved, or altered as part of construction.
- b. Sponsor must initiate a reimbursable agreement with ATO-Planning and Requirements.
- c. Reimbursable agreements can take up to 24 months to develop and require advance payment to the FAA prior to starting work.

Notes:

6. Project Impacts on existing NAVAID's and Instrument Approach Procedures (IAP):

- a. Discuss design and construction Impacts on Navigational aids. Work in critical areas or changes to grading near equipment such as VOR, ILS Glide Slope and Localizer, RVR's or any other equipment need to be airspaced.
- b. For projects changing runway grade, runway location, or runway length, discuss impact to existing NAVAIDS and IAPs, including the possible need for surveying, submittal, and approval through Airports GIS, reimbursable agreements, and flight checks.
- c. Discuss Airspace submittal schedule.
- d. Discuss Impacts on project schedule if flight check is required after construction. Technical Operations reviews the project airspace case and makes the determination if flight checks required after construction.

Notes:

7. Flight Check Requirements:

- a. Discuss flight check requirements for new AIP installed Precision Approach Path Indicators or REIL's and coordinate with FAA nonfederal installation coordinator. Reference the Data Information for VGSI Facilities Form to be submitted. (Flight check required for any airport instrument approach including circling only approaches)

Notes:

8. Airspace Requirements:

- a. Identify items to be airspaced. The airspace process may take 60 days for each airspace case. Potential items include:
 - 1) Initial Project Airspace (see Engineering Guidance 2012-03)
 - 2) Cranes, concrete pumps, drill equipment, or other equipment taller than typical construction equipment (reference AC 150/5370-2F, paragraph 104b.(14).
 - 3) Batch Plants.
 - 4) Construction Safety Phasing Plan.

Notes:

9. Modification to Standards:

- a. Use current edition of applicable FAA Advisory Circulars and Northwest Mountain Region current Specification Notice. Any modification to standards must be approved by FAA.
- b. FAA Order 5300.1 requires all design modification to standards be submitted to FAA Headquarters office for approval. Processing time for HQ is 30 days and coordination with other FAA offices takes 60-90 days. (Appendix 2).
- c. Construction specification modifications can be approved by the ADO provided changes do not need HQ approval. These are listed in paragraph 11 of Order 5300-1.(Appendix 3).
- d. Modifications to General Provisions of AC 150/5370-10 may be made only to make them consistent with local law or regulation.

Notes:

10. Disadvantage Business Enterprise (DBE):

- a. For grants that exceed \$250,000, insure sponsor's Disadvantaged Business Enterprise (DBE) plan is approved by Civil Rights and the project DBE goals are in conformance with the annual DBE.
- b. States in the Ninth Circuit Court of Appeals (Washington, Oregon, Idaho, Montana), no DBE goal should be included in the contract documents, however an approved plan is still required. Delete contract goals paragraph from FAA Standard Construction Contract Provisions.
- c. States in the Tenth Circuit Court of Appeals (Utah, Colorado, and Wyoming) must have a DBE goal, or be race neutral.
- d. ANM Civil Rights Office, Ricky Watson, Telephone: (310) 725-3940.

Notes:

11. Federal Wage Rates:

Obtain latest Federal Wage Rates on internet

Notes:

12. Contract Provisions:

- a. Obtain latest copy of FAA Contract Provisions at: <http://www.faa.gov/airports/> or listed on the Sponsors Guide, http://www.faa.gov/airports/northwest_mountain/airports_resources/sponsor_guide/

Notes:

13. Buy American Provisions:

- a. Discuss Buy American Provisions and requirements for waivers.

Notes:

14. Airport Construction Safety & Phasing Plan (CSPP):

- a. Provide a Construction Safety Phasing Plan. The plan may be incorporated into the plans and specifications; however an electronic copy must be submitted to the Airport District Office for coordination with other FAA lines of business using the airspace process. Plan should include:
 - 1) Plan sheets showing contractor construction routes, Issuance of Notices to Airmen (NOTAM) and Procedure NOTAMS, temporary marking and lighting, safety areas, OFZ, temporary threshold displacements, runway shutdowns, construction phasing, etc.
 - 2) Routing of aircraft.
 - 3) Address each applicable item identified in AC 150/5370-2. Include estimated dates that navigational aids will be shut down during construction.
 - 4) Discuss need for review of draft CSPP and timing of submittal of final CSPP for airspace coordination.

Notes:

15. Design Report:

- a. Review and discuss Design Report requirements.

Notes:

16. Construction Management Plan:

- a. Construction management plans are required for all paving projects over \$250,000 as a grant special condition. Review plan requirements.

Notes:

17. Plans and Specification Review:

- a. Prior to advertizing and in accordance with the project schedule, submit following as a package for FAA review and acceptance: (Allow 3 weeks for FAA review for items 1-3 and 8 weeks for item 4)
 - 1) Engineer's project cost estimate.
 - 2) Project Plans and Specifications.
 - 3) Design Report.
 - 4) Revised sign or marking plan on a Part 139 airport for approval by inspector.

Notes:

18. Coordination with ATCT Manager:

- a. ADO Project Manager must contact Tower Manager and inform them of any projects that impact the National Airspace System. This should be done by phone call followed by e-mail and should include the approximate dates of construction. The ATO may initiate a Safety Risk Management evaluation of proposed change.

Notes:

19. Sponsor Coordination with other users and agencies:

- a. Advise airport users of construction activities and scheduled.
- b. Coordinate with State aeronautics.
- c. Coordinate with other agencies for construction permits, zoning, legal, or political issues.
- d. Issue NOTAM during construction activities.

Notes:

20. Survey requirements for runway environment:

Discuss survey requirements to assure flight procedure is available when facility is operational. Flight procedure development takes two years from the time the new design runway coordinates are entered into the AGIS system and verified by NGS. Any proposed procedure development or amendment must be coordinated with the Regional Airspace Procedures Team (RAPT) 2 years in advance. (Don Larson is our RAPT representative)

- a. As a general rule (reference Order 8260.19E, paragraph 8-58e), runway geometry changes equal to or greater than 50 feet along the longitudinal axis, 10 feet about the centerline axis, or threshold change of 3 feet vertically, require existing approach and/or departure procedures be amended and a survey is required in accordance with AC 150/5300-16/17&18, including imagery of the approach and departure surfaces. This is a general rule and revisions or amendments may be needed for threshold changes that are less than this. (Discuss runway geometry changes with the RAPT representative to verify when new procedure development or amendments would be required)
- b. As-built surveys are required in accordance with AC 150/5300-16/17&18 for the following items listed below (items taken from the AGIS Transition Policy). These may not require procedure development or amendments and imagery.
 - Relocate/move runway end more than 1 foot longitudinal, 1 foot transverse, or 6 inches vertical
 - Displaced thresholds
 - Extend/shorten/shift runway
 - Widen or extend runway
 - Add/modify stopway, clearway, or EMAS
 - Modify declared distances
 - New/revised instrument procedures
 - Install/relocate NAVAID (electronic or visual)
 - Changes to airport elevation or airport reference point
 - Airports currently listed as needing SMGCS charts
- c. As-built surveys for construction items not included under 20b are not required to be submitted through AGIS, but must be conducted per the requirements of AC 150/5370-

10F. These are the as-built surveys for meeting final pavement surface grade that are done by the contractor as part of the acceptance testing required by the contract specifications.

- d. Performing as-built surveys in accordance with AC 150/5300-16/17 & 18 and submittal through AGIS may be expanded to include additional construction items in the future.

Notes:

21. Application for Federal Assistance requirements:

- a. Discuss the requirements for the Application for Federal Assistance.

Notes:

22. Sponsor Certifications:

- a. Discuss required sponsor certifications:
 - 1) Selection of Consultants.
 - 2) Plans and Specifications.
 - 3) Equipment/Construction Contracts.
 - 4) Drug Free Workplace.
 - 5) Real Property Acquisition.
 - 6) Certificate of Title.

Notes:

23. Revised Sign and Surface Painted Hold Sign (SPHS) Plan:

- a. Submit a revised sign and SPHS marking plan to the Airports District Office.

Notes:

24. Airport Diagram Changes:

- a. Airport Diagrams must be changed for any project that changes airports geometry. The Airport Sponsor is responsible updating diagrams and coordinating changes with the Air Traffic Control Tower (for towered airports). Requirements for airport diagram changes are outlined in Order 7910.4C. Changes must be coordinated at least three months in advance to assure diagram changes are published within the 56 day publication schedule. The Sponsor or consultant should contact Chris Criswell, Federal Aviation Administration at: 9-AWA-ATS-Diagrams@faa.gov to determine charting requirements in the Airport Facility Directory.

Notes:

25. Events conflicting with construction:

- a. Identify any events at the airport that may conflict with project construction.

Notes:

26. Security:

- a. Discuss how airport will maintain adequate level of security at all contractor access gates and any TSA requirements.

Notes:

27. Project Closeout:

- a. Review project closeout requirements per Regional Guidance (for land, development, and equipment), including:
 - 1) Summary of Change Orders.
 - 2) Record Drawings.
 - 3) Summary of Testing (projects greater than \$300K)
 - 4) Before and After project photos.
 - 5) Updated Airport Master Record (FAA Form 5010)
 - 6) Revised or Updated ALP/Exhibit A Property Map/Sign Plan
 - 7) Non-expendable personal property form (equipment).

Notes:

28. Strategic Interruptions Service Level Agreement:

Discuss sponsor requirement to notify Planning and Requirements preferably 45 days in advance for any runway closures at all airports, significant taxiway closure at OEP airports (SEA,DEN,SLC,PDX) , or temporary shutdown of navaids at any airport. A shutdown of NAS equipment must be reported for consecutive days in excess of 4 hours daily or for time periods greater than 24 hours, or for runway/taxiway closures greater than 24 hours. Reference NAS Strategic Event Interruptions Agreement. Assistance regarding the electronic form (Appendix 5), may be requested from Andrea Chay. Planning and Requirements, (425) 203 4788.

Notes:

29. Other:

Notes:

Design Report:

The design report serves to document the design considerations, engineering analysis and design selections that occur early in the design phase. A design report must be prepared and submitted for all projects greater than \$300,000. As each individual project will present unique design considerations, the degree to which topics will be addressed within the design report will vary with each specific project.

For small projects less than \$300,000 the extent of design report required should be discussed with the FAA project manager.

The report must be an explanation of the engineer's design based on scope of the project, critical aircraft dimensions and weight, and analysis of materials and site conditions. Since the report provides the rationale for the total design, the plans and specifications cannot be properly reviewed without it. The design report must be available before or at the same time as the plans and specifications are submitted.

The design report outline must be submitted using the following format.

Design Report

1. Scope of Work:

- a. A brief narrative on the scope of work including AIP eligible and ineligible work items.
- b. Unique and unusual site conditions.
- c. Age of the existing pavement
- d. Current PCI value.
- e. History of work performed in project area.

2. Photographs:

- a. Include a representative number of photographs that depict the existing condition of the project site.

3. Life Cycle Cost Analysis:

- a. Compute a life cycle cost analysis comparing asphalt design sections to concrete sections and explain reasons for selecting final design. Final selection of pavement options may consider impacts to airport capacity during construction and project budget.

4. Design Standards:

- a. List applicable standards in AC 150/5300-13, *Airport Design*, related to project and address:
 - 1) Design aircraft.
 - 2) Dimensional standards for project pavements.
 - 3) Longitudinal and transverse grades for runways, taxiways, shoulders, aprons, safety areas.
 - 4) Object free areas.
 - 5) Runway line of sight.
 - 6) Threshold siting for displaced or relocated thresholds.
 - 7) Runway and Taxiway lighting layout color.
 - 8) Siting and aiming criteria for sponsor installed PAPI.
 - 9) Siting criteria for REILS or sponsor installed approach light systems.

5. Environmental Protection

- a. Address requirements specific to project and any monitoring required by other governmental agencies.

6. Soils and Grading -

- a. The geotechnical report should follow requirements outlined in AC 150/ 5320-6, *Airport Pavement Design and Evaluation*. A summary of the geotechnical report should be referenced in the report and include:
 - 1) Site conditions.
 - 2) Soil classification.
 - 3) Internal drainage.
 - 4) Frost depth.
 - 5) Water table.
 - 6) Soils characteristics and classification.
 - 7) Estimated CBR or K values and how derived.
 - 8) For pavement sections subjected to frost that use the reduced subgrade design option, specify the Frost Group (FG-1 thru FG-4) and corresponding CBR value.
 - 9) Identify any special compaction requirements of the existing subgrade materials.
 - 10) Identify potential for removal and replacement of unsuitable or wet material.

7. Drainage:

- a. Address rainfall, runoff, storm drains, and detention ponds design.
- b. Describe pond design and special features taken to mitigate wildlife hazards.
- c. In flood plain areas, discuss any potential changes from the increase in pavement areas.

8. Pavement Design:

- a. Use AC 150/5320-6 and current pavement design program to develop pavement sections, layout, and standard details. When Portland Cement Concrete pavement is selected, use the Northwest Design Guide Supplement for Portland Cement Concrete, dated October 2002, as a supplement to AC 150/5320-6. The pavement report must include:
 - 1) Design assumptions.
 - 2) Fleet mix (aircraft, load, and frequency of operations).
 - 3) Number of departures for each aircraft.
 - 4) Computer program pavement design output.
 - 5) Final design summary on FAA Form 5100-1. (Appendix 4)
 - 6) Report pavement PCN number and gross weights in accordance with AC 150/5335-5B, Standard Method of Reporting Pavement Strength-PCN and COMFAA 3.0 (ACN/PCN Software Calculations).

9. Recycling:

- a. Identify materials that can be recycled and used on or off the project.

10. Material Availability:

- a. 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.

11. Pavement Marking:

- a. Address marking requirements for compliance with AC 150/5340-1. Application of temporary marking should also be addressed. Surface painted hold sign markings must be approved by the FAA Part 139 Certification Inspector prior to bid.

12. Signage:

- a. Address standard layout and design criteria for airport signage in accordance with AC 150/5340-1. For Part 139 airports, a revised sign plan must be submitted for approval prior to project bids.

13. Lighting:

- a. Define the scope of the lighting project and identify:
 - 1) Design criteria, design selection, and lighting layout.
 - 2) Existing power sources and circuit loading that was considered for new lighting installations.
 - 3) Existing cable and equipment conditions, including age, circuit loads, and reliability or grounding problems.
 - 4) Provide summary of electric design calculations that support the design selections.
 - 5) Location of rotating Beacon (installations must be coordinated using the 7460 airspace process.)
 - 6) If LED lights are being proposed, a satisfactory life-cycle analysis must be prepared.

14. FAA Owned Facilities:

- a. Identify Impacts to FAA owned facilities and equipment. Address:
 - 1) Construction impacts on FAA equipment when working in critical areas.
 - 2) Grading impacts in FAA equipment critical areas.
 - 3) Temporary outages required during construction on FAA equipment (VOR, Glide Slope, Localizer, RVR, PAPI, VASI, REILS, etc).
 - 4) Schedule of NAVAID shutdowns.

15. Non-AIP work

- a. Separately identify all work items, including quantities that are not eligible for AIP participation. These items must be listed on a separate bid schedule.

16. Engineers Estimate:

- a. Provide an engineer's estimate of probable construction costs.
- b. Provide a project budget that identifies all anticipated project costs (administrative, engineering design, construction inspection, construction, etc.).

17. Precision Approach Path Indicators:

- a. Provide location, threshold crossing height, aiming angle. Address schedule requirements for FAA flight check when an airport has an instrument approach (circling or straight-in).

18. Modifications to Standards:

- a. Provide listing, description and justification for all sponsor initiated modifications to FAA standards.
- b. Proposed Modifications to Construction Standards must be listed by specification and paragraph and include a justification. (Appendix 3)
- c. Modifications to design standards or construction standards referenced in Order 5300.1 must be documented on a separate form. (Appendix 2) These modifications require coordination with Headquarters and other FAA organizations. Review times can take 60-90 days.

19. DBE participation:

- a. Identify potential work items that are suitable for participation by available DBE's firms.

20. Buildings:

- a. The size and design features of Snow Removal Equipment (SRE) and Aircraft Rescue Fire Fighting (ARFF) buildings must be justified and approved by the FAA. The design report must address the size and features using AC 150/5220-18 for SRE and AC 150/5210-15 for ARFF buildings.

21. Equipment:

- a. Justify equipment requirement and need for the airport.
- b. Describe existing equipment and age of equipment to be replaced.
- c. For Snow Removal Equipment (SRE) justify size and capacity using requirements in AC 150/5200-30 and AC 150/5220-20.

- d. For Aircraft Rescue Fire Fighting Vehicles (ARFF) state the current Part 139 index and index of the replacement vehicle. Vehicle specifications must meet AC 150/5220-10 requirements.

22. Airport Operational Safety:

- a. Provide a Construction Safety Plan as a separate section in the specifications.
- b. Show contractor staging area, construction access and routes, sequence and phasing of construction, pavement closures, temporary marking and lighting, barricade requirements, safety areas, protection of OFZ, temporary threshold displacements, etc.
- c. Address each applicable item identified in AC 150/5370-2. (Appendix 5). Submit safety phasing checklist, checking items applicable to project that have been incorporated into the plan.
- d. The FAA requires that a copy of the final safety plan (preferably in a .pdf format) be submitted to the FAA project manager early in the project phase for the purpose of coordinating construction impacts with other FAA organizations. The Air Traffic Organization will use this plan to perform a risk analysis using the Safety Management System (SMS) process for towered airports.

23. Miscellaneous Work Items:

- a. Address other project related work items such as seeding, fencing, site access, etc.
- b. Fencing should be installed along the airport property line. The report must show property line limits and fence location. Any proposal to not install a fence along the property boundary must be discussed with the FAA project manager.

24. Predesign Meeting Minutes:

- a. Include a copy of the Predesign Meeting Minutes in the Design Report.

Reference Documents:

AC 150/5200-30	<i>Winter Safety Operations</i>
AC 150/5210-15	<i>Aircraft Rescue Fire Fighting Building Design</i>
AC 150/5220-10	<i>Guide Specification for ARFF Vehicles</i>
AC 150/5220-18	<i>Buildings for Storage and Maintenance of Airport Snow and Ice Control Equipment and Materials</i>
AC 150/5220-20	<i>Airport Snow and Ice Control Equipment</i>
AC 150/5300-13	<i>Airport Design</i>
AC 150/5320-6	<i>Airport Pavement Design and Evaluation</i>
AC 150/5370-2	<i>Operational Safety on Airports During Construction</i>
FAA Form 5100-1	<i>Airport Pavement Design (ANM Modified Form)</i>

Design Guide Supplement Portland Cement Concrete, FAA, Northwest Mountain Region, October 2003.

AIP DEVELOPMENT PROJECT SCHEDULE

AIRPORT: _____ AIP NO: _____
 SPONSOR: _____ DATE: _____
 CONSULTANT: _____ DATE: _____
 FAA : _____ DATE: _____
 PROJECT DESCRIPTION: _____

ITEM	DATE		COMMENTS
	ESTIMATED	ACTUAL	
1. Environmental Approved			
2. CIP Data Sheet Submitted			
3. Work Scope and Record of Negotiations Submitted			
4. Signed Engineering Contact Approved by FAA			
5. DBE Plan and Goal Submitted to Civil Rights			
6. Construction Safety Plan Submitted for Airspace			
7. Modification to Standards Submitted			
8. Plans and Design Report Submitted			
9. Plans Reviewed by FAA and Returned with Comments			
10. Final Plans Accepted by FAA			
11. Advertising Date			
12. Bid Opening Date			
13. Recommendation of Award and Bid Tab Submitted			
14. Grant Application Submitted by Sponsor			
15. Grant Issued			
16. Construction Management Plan Submitted			
17. Mix Design Submitted (if applicable)			
18. Construction Complete			
19. Acceptance Testing Submitted to FAA			
20. Final Inspection			
21. ALP Revised and Submitted to FAA			
22. Exhibit "A" Revised and Submitted to FAA			
23. PAPI Flight Checked (if instrument approach)			
24. Navaid Commissioned			
25. Airport Facility Diagram Updated			
26. Project Closeout Submitted to FAA			

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL AVIATION ADMINISTRATION
 NORTHWEST MOUNTAIN REGION
 AIRPORT IMPROVEMENT PROGRAM

MODIFICATION OF AIRPORT DESIGN STANDARDS

BACKGROUND		
1. AIRPORT:	2. LOCATION(CITY,STATE):	3. LOC ID:
4. EFFECTED RUNWAY/TAXIWAY:	5. APPROACH (EACH RUNWAY): <input type="checkbox"/> PIR <input type="checkbox"/> NPI <input type="checkbox"/> VISUAL	6. AIRPORT REF. CODE (ARC):
7. DESIGN AIRCRAFT (EACH RUNWAY/TAXIWAY):		
MODIFICATION OF STANDARDS		
8. TITLE OF STANDARD BEING MODIFIED (CITE REFERENCE DOCUMENT):		
9. STANDARD/REQUIREMENT:		
10. PROPOSED:		
11. EXPLAIN WHY STANDARD CANNOT BE MET (FAA ORDER 5300.1E):		
12. DISCUSS VIABLE ALTERNATIVES (FAA ORDER 5300.1E):		
13. STATE WHY MODIFICATION WOULD PROVIDE ACCEPTABLE LEVEL OF SAFETY, ECONOMY, DURABILITY, AND WORKMANSHIP (FAA ORDER 5300.1E):		
ATTACH ADDITIONAL SHEETS AS NECESSARY – INCLUDE SKETCH/PLAN		

**U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL AVIATION ADMINISTRATION
 NORTHWEST MOUNTAIN REGION
 AIRPORT IMPROVEMENT PROGRAM**

MODIFICATION OF AIRPORT DESIGN STANDARDS

MODIFICATION:		LOCATION:		PAGE 2 OF 2	
14. SIGNATURE OF ORIGINATOR:		15. ORIGINATOR'S ORGANIZATION:		16. TELEPHONE:	
17. DATE OF LATEST FAA SIGNED ALP:					
18. ADO RECOMMENDATION:		19. SIGNATURE:		20. DATE:	
21. FAA DIVISIONAL REVIEW (AT, AF, FS):					
ROUTING SYMBOL	SIGNATURE	DATE	CONCUR	NON-CONCUR	
COMMENTS:					
22. AIRPORTS' DIVISION FINAL ACTION:					
<input type="checkbox"/> UNCONDITIONAL APPROVAL		<input type="checkbox"/> CONDITIONAL APPROVAL		<input type="checkbox"/> DISAPPROVAL	
DATE:	SIGNATURE:		TITLE:		
CONDITIONS OF APPROVAL:					

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
NORTHWEST MOUNTAIN REGION
AIRPORT IMPROVEMENT PROGRAM

MODIFICATION OF AIRPORT DESIGN STANDARDS

ITEMS 1-17 ARE TO BE COMPLETED BY THE AIRPORT SPONSOR(ORIGINATOR). ALL OTHER ITEMS WILL BE COMPLETED BY THE FAA.

THE COMPLETED FORM WILL BE TRANSMITTED BY THE ORIGINATOR TO THE APPLICABLE ADO/AFO. THE ADO/AFO WILL TRANSMIT THE FINAL FAA DETERMINATION TO THE ORIGINATOR.

MODIFICATION TO AIRPORT DESIGN STANDARDS REQUESTS SHOULD INCLUDE SKETCHES OR DRAWINGS WHICH CLEARLY ILLUSTRATE THE NONSTANDARD CONDITION.

ITEMS

1. LEGAL NAME OF AIRPORT.
2. ASSOCIATED CITY.
3. AIRPORT LOCATION IDENTIFIER (SEE APPROACH PLATES/AIRPORT FACILITY DIRECTORY).
4. IDENTIFY THE RUNWAY(S), TAXIWAY(S) OR OTHER FACILITIES EFFECTED BY THE PROPOSED MODIFICATION TO STANDARDS REQUEST.
5. IDENTIFY THE MOST CRITICAL APPROACH FOR EACH RUNWAY IDENTIFIED IN #4.
6. AIRPORT REFERENCE CODE - SEE PARAGRAPH 2, PAGE 1 AC 150/5300-13(CHANGE 4) - I.E. C-II, B-II, A-I (SMALL).
7. NOTE THE DESIGN AIRCRAFT (ARC OR SPECIFIC AIRCRAFT) FOR EACH FACILITY IDENTIFIED IN #4. A DESIGN AIRCRAFT MUST MAKE REGULAR USE OF THE FACILITY. NORMALLY, FAA CONSIDERS REGULAR USE TO BE 500 OR MORE ANNUAL INTINERANT OPERATIONS.

IF THE AIRPORT SERVES A WHOLE FAMILY OF AIRCRAFT IN A PARTICULAR GROUP, THE ARC (I.E. B-II) SHOULD BE SPECIFIED. IF, HOWEVER, THE AIRPORT IS USED BY ONLY 1 OR 2 OF A FAMILY OF AIRCRAFT (IX- BEECH KING AIR C90), THE MOST DEMANDING (APPROACH SPEED, WINGSPAN) AIRCRAFT SHOULD BE SPECIFIED.
8. IDENTIFY THE SPECIFIC NAME OF THE STANDARD THAT IS PROPOSED TO BE MODIFIED FOR THE SUBJECT LOCAL CONDITION.
9. DESCRIBE (WORDS AND NUMBERS) THE DIMENSIONS AND REQUIREMENTS OF THE STANDARD AS PROVIDED IN AC 150/5300-13.
10. STATE THE PROPOSED MODIFICATION TO THE STANDARD.
11. DISCUSS THE LOCAL CONDITIONS THAT MAKE IT IMPRACTICAL OR IMPOSSIBLE TO MEET THE STANDARD.
12. IDENTIFY ALTERNATIVES TO THE SUBJECT PROPOSED MODIFICATION, AND SHOW WHY THESE ALTERNATIVES ARE NOT VIABLE.
13. DISCUSS HOW THE PROPOSED MODIFICATION WOULD IMPACT AIRPORT SAFETY AND EXPLAIN WHY AN ACCEPTABLE LEVEL OF SAFETY, ECONOMY, DURABILITY, AND WORKMANSHIP WOULD STILL EXIST.
14. TYPED NAME AND SIGINATURE OF AIRPORT AUTHORITY REPRESLNTATIVE.
15. SELF-EXPLANATORY.
16. SELF-EXPLANATORY.
17. SELF-EXPLANATORY.
18. TO BE COMPLETED BY FAA.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
AIRPORT IMPROVEMENT PROGRAM

MODIFICATION OF AIRPORT CONSTRUCTION STANDARDS

SPECIFICATION & PARA. REQUESTED MODIFICATION & JUSTIFICATION

--

DATE

SPONSOR

DATE

APPROVED BY (FAA)

Attachment A

AIRPORT PAVEMENT DESIGN									
STATE			CITY				AIRPORT		
PROJECT NUMBER			SPONSOR				DESIGN ENGINEER		
PROJECT DESCRIPTION									
GROSS ALLOWABLE AIRCRAFT WEIGHT (KIPS) <small>(Gear configuration or aircraft type)</small>									
SINGLE WHEEL		DUAL WHEEL		DUAL TANDEM		DDT			
DESIGN CRITERIA									
DESIGN A/C	PCN #			CBR	K			FLEX STRENGTH	
TYPICAL SECTIONS <small>(Show and number each course)</small>									
NONCRITICAL AREAS					CRITICAL AREAS				
DESIGN DETAILS									
NO.	COURSE	THICKNESS OF PAVEMENT						SPECIFICATION	
		RUNWAY	NONCRITICAL RUNWAY	TAXIWAY	NONCRITICAL TAXIWAY	APRON			

SOIL ANALYSIS																	
		GRADATION (% PASSING)															
TEST HOLE	DEPTH OF SAMPLE	3"	2"	1"	3/4"	1/2"	3/8"	4	10	40	100	200	% FINER ¹ THAN .02 MM	L.L.	P.I.	USC	
SUBGRADE CHARACTERISTICS																	
AVERAGE FROST PENETRATION			SUBSURFACE DRAINAGE				FROST DESIGN METHOD ²										
							CP	<input type="checkbox"/>	LSP	<input type="checkbox"/>	RSP	<input type="checkbox"/>	RSS	<input type="checkbox"/>	NONE	<input type="checkbox"/>	
COMMENTS ³								NOTES: 1. Applies only when material is used above frost line. 2. Select one. 3. Attach sketch showing location of borings.									
								SUBMITTED BY			TITLE			DATE			
								APPROVED BY			FAA REGIONAL PAVING ENGINEER			DATE			
								APPROVED BY			FAA STATE AIRPORT ENGINEER			DATE			

National NAS Strategic Interruptions Service Level Agreement AIRPORT SPONSOR STRATEGIC EVENT SUBMISSION FORM

**Submit this form preferably 45 days prior to the event to the Federal Aviation Administration,
Air Traffic Organization, Planning and Requirements, Western Service Area
Please email form to 9-AJV-SEC-WSA@faa.gov**

AIRPORT NAME _____ **LOCATION ID** _____

CITY, STATE _____

Referenced NRA NUMBER _____

PROJECT SCOPE (Example: Reconstruct Runway 18/36)

PROJECT PHASE (Example: Phase 1 of 3) _____

EVENT (Example: Runway 18/36 closure) _____

Duration: Start Date _____ End Date _____

Hours: 24 hrs a day or from: _____ to: _____ daily.

Other hours of Operation Specify: _____

FACILITIES IMPACTED:

Are any facilities impacted? Yes No If yes, list impacted facilities below along with the duration of the impacts if different than duration of the event (these facilities may be found on the NRA determination letter).

Facility: _____ (Example: RWY 18 localizer) Start Date _____ End Date _____ Hours: Start/End Time _____	Facility: _____ Start Date _____ End Date _____ Hours: Start/End Time _____
Facility: _____ Start Date _____ End Date _____ Hours: Start/End Time _____	Facility: _____ Start Date _____ End Date _____ Hours: Start/End Time _____
Facility: _____ Start Date _____ End Date _____ Hours: Start/End Time _____	Facility: _____ Start Date _____ End Date _____ Hours: Start/End Time _____

Submitted by Sponsor Representative:

Print Name _____

Title _____

Signature _____ Date _____