



**US Army Corps  
of Engineers®**

# ENGINEERING AND CONSTRUCTION BULLETIN

No. 2011-17

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**Subject:** Review Requirements for Airfield Pavement Mix Designs and Job Mix Formulas for USACE-Managed Airfield Pavement Projects During Construction Phase

**Applicability:** Directive

1. The purpose of this Engineering and Construction Bulletin (ECB) is to provide additional direction requiring USACE Transportation Systems Center review of airfield pavement Portland Cement Concrete (PCC) mix designs and hot mix asphalt job-mix formulas (JMFs) during the construction phase for all USACE-managed Airfield Pavement Projects.

2. References:

a. AR 420-1, Army Facilities Management, 12 February 2008.

b. MIL-STD-3007F, Standard Practice for Unified Facilities Criteria (UFC) and Unified Facilities Guide Specifications (UFGS), dated 13 December 2006.

c. [UFGS 32 13 11](#), Concrete Pavement for Airfields and Other Heavy-Duty Pavements More Than 10,000 Cubic Yards.

d. [UFGS 32 12 15](#), Hot-Mix Asphalt (HMA) for Airfields

e. TSC Review Procedures for Mix Designs and Job Mix Formulas for Air Force-Constructed Airfield Pavement Projects

[https://transportation.erdc.usace.army.mil/tsmcx/consulting\\_construction.html](https://transportation.erdc.usace.army.mil/tsmcx/consulting_construction.html)

3. Background. Airfield pavements projects are costly and complex, requiring a high degree of technical skills, specialized knowledge and extensive experience during both design and construction phases in order to construct and deliver quality airfield pavements for our military programs customers. References 2.a. and 2.b. require all Army and Air Force airfield pavement projects to be designed and constructed using UFGSs (regardless of the delivery method used or the DOD organization managing the project).

In order to help ensure required quality levels, the Air Force Civil Engineer Support Agency (AFCESA) requires that the PCC mix designs submittals and the HMA JMFs submittals for all Air Force-constructed airfield pavement projects be sent to the USACE Transportation Systems Center for review prior to approval of the submittals. This policy and process have been cost effective in helping to ensure high quality airfield pavements and avoid costly delays and poor quality pavements.

4. Directions. Reviews of various design and construction problems with USACE-managed airfield pavement projects reveal that one common cause of design and construction problems on airfield pavement projects is the inadequate review of contractors' proposed mix designs and job

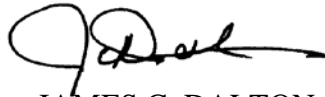
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mix formulas. Accordingly, effective upon receipt of this ECB, PCC mix design submittals and HMA job-mix-formula submittals for USACE-managed airfield pavement projects will be submitted to the USACE Transportation Systems Center for review prior to approval of these submittals by the construction contracting officer or his representative. The specific procedures for USACE TSC review of PCC mix designs and HMA job mix formulas for USACE constructed airfield pavement projects are attached.

5. HQUSACE point of contact for this ECB is Paul Dicker, CECW-CE, 202-761-0995, email: [paul.f.dicker@usace.army.mil](mailto:paul.f.dicker@usace.army.mil). Technical issues are to be directed to Terry Sherman, USACE Transportation Systems Center ([www.tsmcx.com](http://www.tsmcx.com)), 402-995-2399, email: [terry.w.sherman@usace.army.mil](mailto:terry.w.sherman@usace.army.mil).

Encl  
Attachment 1 -Procedures for USACE  
TSC Review of Mix Designs and  
Job Mix Formulas for USACE-Managed  
Airfield Pavement Projects



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## Attachment 1

### Procedures for USACE TSC Review of PCC Mix Designs and HMA Job-Mix-Formulas (JMFs) for USACE-Constructed Airfield Pavement Projects

**Reviews:** Reviews will be performed by the USACE Transportation Systems Center (TSC).

**Cost:** Each Portland Cement Concrete (PCC) Mix Design or Hot Mix Asphalt (HMA) JMF review will cost approximately \$1,000. Re-submittal reviews will cost about \$100 - \$500.

**Schedule:** Plan on two weeks for each review. Reviews can usually be complete within 1 to 5 days, depending on workload, and will be completed ASAP. Expedited reviews will be considered on a case-by-case basis. Please plan ahead.

**Reviewers:** Primary reviewers of mix designs and mix formulas will be:

John Hawkins, 402-995- 2409, [john.c.hawkins@usace.army.mil](mailto:john.c.hawkins@usace.army.mil)

Gene Gutierrez, 402-850-7081, [gene.gutierrez@usace.army.mil](mailto:gene.gutierrez@usace.army.mil)

#### Procedures:

- 1) Prior to forwarding the submittal data for review by the USACE TSC staff, district construction staff need to be sure that the submittal includes all the information required by UFGS 32 13 11 (02753), Submittals Paragraph, SD-05 Design Data, for PCC mix designs and/or all of the requirements of UFGS 32 12 15 (02749), Part 2 Paragraph "JMF Requirements", including all reports of aggregate quality testing and asphalt cement certification testing, for HMA JMFs.
- 2) Send an e-mail with the complete submittal and the appropriate contract specifications with addendums (Spec 32 13 11 and/or 32 12 15) in electronic (pdf) format to the primary reviewers above, with an info copy to Terry Sherman, USACE TSC [terry.w.sherman@usace.army.mil](mailto:terry.w.sherman@usace.army.mil). For Air Force airfield projects, please also info Dr. Craig Rutland, HQ AFCESA, [craig.rutland@tyndall.af.mil](mailto:craig.rutland@tyndall.af.mil)
- 3) The USACE TSC will electronically confirm the receipt of submittal documents from district construction managers and provide back an expected completion date (normally 1-5 days), depending upon workloads.
- 4) Reviews will be completed and comments/recommendations will be provided via e-mail to the requestor and any other person cc'd on the original request, plus a copy to Mr. Ali Achmar, HQ IMCOM, [ali.achmar@us.army.mil](mailto:ali.achmar@us.army.mil) for Army airfield projects.
- 5) Funding will be provided to the USACE TSC by the requesting USACE district activity via a cross charging labor (CCL) code. Funding source will be the requesting district's S&A account. Cost will be tracked for each review by the USACE TSC.