AC 5370-10 Update

Proposed Changes for Various Specifications in -10J

Presented to: TRB 2025 - Airfield Asphalt User/Producer Meeting

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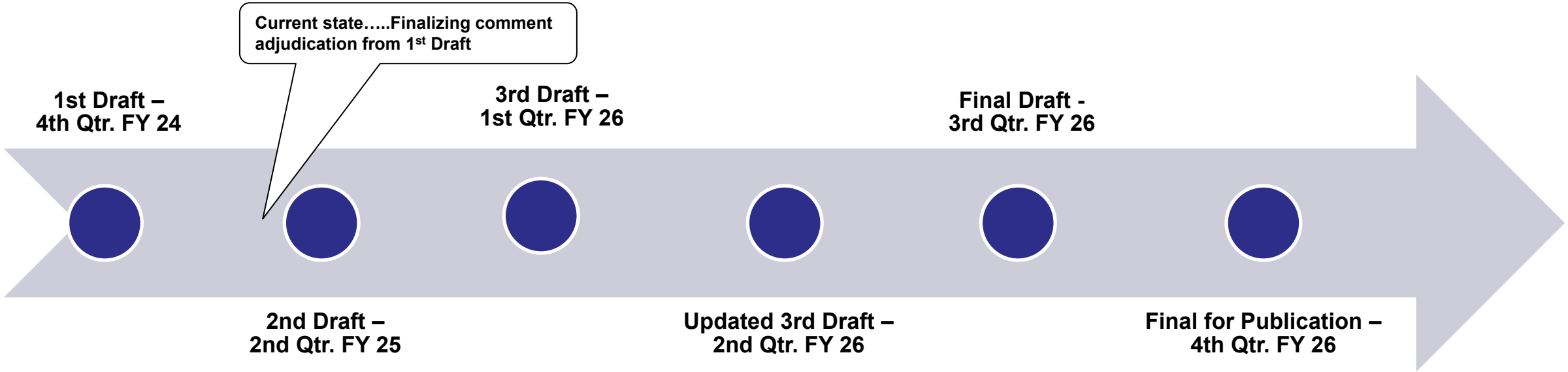
Federal Aviation Administration

Advisory Circular Update Process

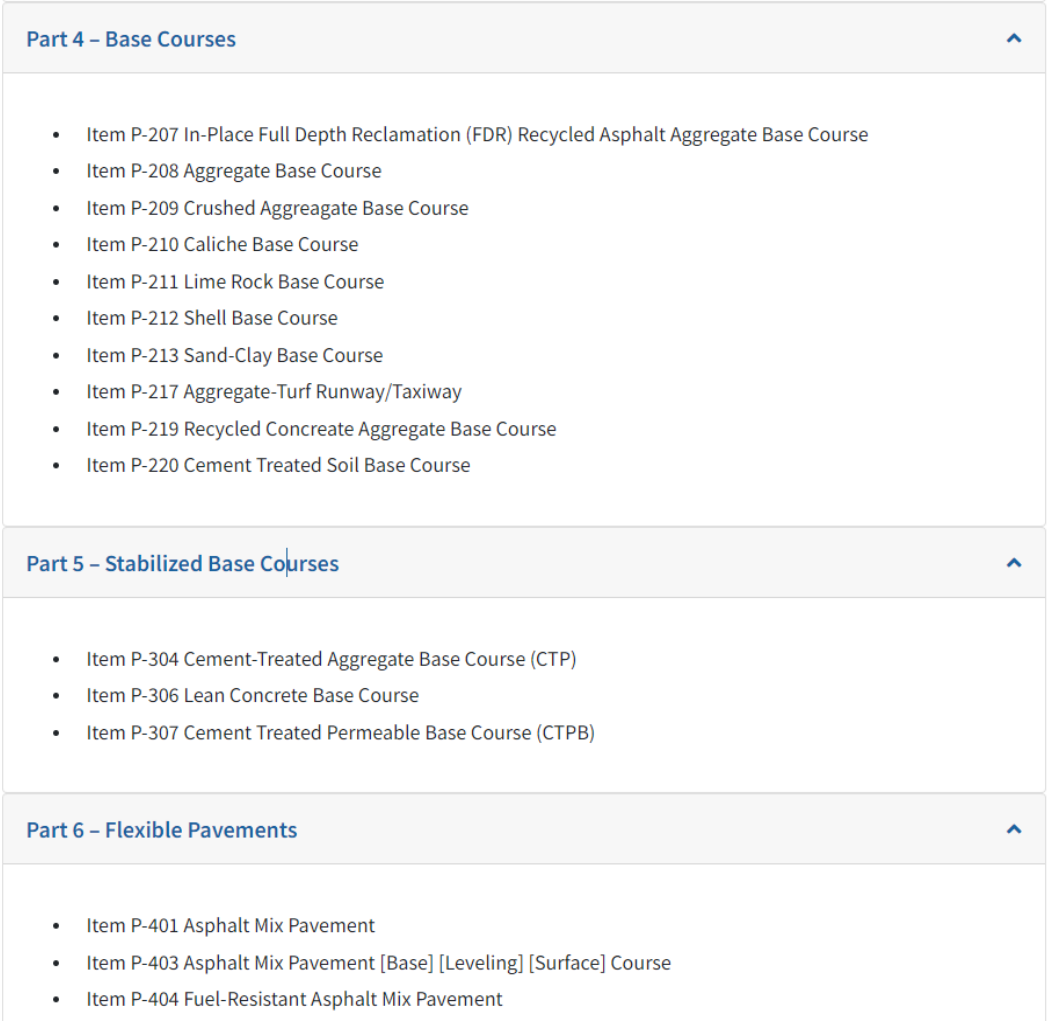
- **1st Draft : internal FAA review** & coordination with HQ, Regions and other LOB's
  - Consolidate and resolve internal review comments and prepare Industry Draft
  - This stage is nearing completion – Finalizing comment adjudication from internal review
- **2nd Draft: provided to industry** for review & comment
  - Consolidate and resolve industry comments and prepare FAA Legal (AGC) Draft
- **3rd Draft: submitted to FAA Legal (AGC)** for initial review and comment
  - Is there any infringement of regulatory authority
  - Have FAA and Industry comments been properly adjudicated
  - Address comments and Prepare QA/QC Review Draft
- **Updated 3rd Draft: submitted for QA/QC Review**
  - Review with AGC for any remaining comments and final clearance
  - Prepare final draft for ARP Management Review
- **Final Draft presented to ARP Management**
- **Final Package** prepared for signature & publication

Current Timeline for -10J Update



General Updates

- Incorporate capability to download individual specs from FAA website
  - Additionally, the entire AC will be available for download
- Improved editing of Word Documents
  - One click removal of unused units and Notes to Engineer
- Establish process for annual updates
  - Incorporates agility for specs to be updated annually if necessary



General Updates – Cont'd

- Section 50 – Control of Work
  - Expanded upon the authority of the RPR and determination of conformity to plans and specifications
- Item C-101 Airfield Work Zone Operational Safety
  - Adding specification and payment items for construction safety and phasing
  - Developed by an FAA Working Group led by Mike Rottinghaus
- Item C-106 Environmental Product Declaration
  - Projects including P-401 and P-501 will need to submit a Type III EPD
- Item P-204 – Subbase Course
  - Previously P-154
  - Relocated specification from Part 3 - Sitework to Part 4 – Aggregate Subbase and Base Courses

General Updates – Cont'd

- Item P-209 Crushed Aggregate Base Course
  - Incorporated material requirements (for pavements supporting less than 60K lbs.) from P-208
  - Modest differences between P-208 and P-209 in terms of material properties
    - P-208 LA Abrasion – 50% max loss; P-209 LA Abrasion – 45% max loss
    - P-208 Fractured Faces – 60% with two and 75% with one; P-209 Fractured Faces – 90 % with two and 98% with one
    - Moving forward – LA Abrasion will be 45%, but fractured faces will vary dependent upon design weight of traffic

- Item P-215 Rubblized Concrete Pavement Base Course
  - Incorporated specification introduced in Engineering Brief 66
  - Edited specification based upon experience from several airfield projects

- Item P-307 Stabilized Drainable Base Course
  - Incorporated Item P-407 (Asphalt Stabilized Drainage Layer) from Engineering Brief 102
  - Specification will allow for either cement or asphalt stabilization

Item P-401 Asphalt Mix Pavement

- Incorporated aspects from P-403 and P-404
  - P-403 is a base/leveling course spec (& surface course for aircraft less than 30K lbs.)
  - P-404 is a fuel resistant asphalt (FRA) mix
- Only reference gyratory compaction mix design
  - Accommodates request from NAPA comments received prior to 1st draft
- Added provisions/requirements for Warm-Mix Asphalt (WMA)
  - Includes language relative to warm-mix additive, conditioning of specimens for rut testing and natural sand limits

Item P-401 Asphalt Mix Pavement – Cont'd

- Added Uncompacted Voids to Coarse and Fine Aggregate Materials
  - Coarse Aggregate (AASHTO T326): Uncompacted voids > 45% for pavements supporting >/= 60K lbs.; Uncompacted Voids >40% for pavements supporting <60K lbs.
  - Fine Aggregate (ASTM C1252, Method A): Uncompacted voids >45% for pavements supporting >/= 60K lbs; Not required for pavements supporting <60K lbs.

- Adjusted Percentage of Fractured Faces
  - 100% two fractured faces for pavements supporting >/= 60K lbs.; 75% with two fractured faces and 85% with at least one fractured face for pavements supporting <60K lbs.

- Adjusted Natural Sand Limits
  - 0 – 10% for pavements supporting >/= 60K lbs.; 0 – 15% for pavements supporting <60K lbs.
  - 0% for WMA and FRA

Item P-401 Asphalt Mix Pavement – Cont'd

- Adjusted Design Criteria for Rut Test Performance
  - APA (using a 250 lb. wheel load & 250 psi hose pressure): 8 mm @ 4,000 passes for pavements supporting greater than 100K lbs.; 10 mm @ 4,000 passes for pavements supporting less than 100K lbs.
  - APA (using a 100 lb. wheel load & 100 psi hose pressure): 4 mm @ 8,000 passes for pavements supporting greater than 100K lbs.; 5 mm @ 8,000 passes for pavements supporting less than 100K lbs.

- Added Requirement for Pre-Paving Meeting
  - Facilitated by the RPR or Contractor
  - Pre-paving mtg added with Control Strip Language
  - Specific items to address are identified; For example: JMF review, production plan, paving plan, QC testing plan, QA testing plan, response to failed tests, how will data be reported, coordination with airfield operations, traffic control

- Adjusted Acceptance Criteria for Control Strip
  - Addresses request from NAPA comments received prior to 1st draft
  - Mat Density >/= 94.0%, Air Voids >2% and <5%, Joint Density within 2% of Mat Density

Item P-401 Asphalt Mix Pavement – Cont'd

- Job Mix Formula
  - Added allowance for a state accredited laboratory to develop JMF
  - Added language allowing a JMF to span multiple construction seasons
    - Provided that materials are retested to ensure they meet quality requirements in 401-2
  - Added allowance for a JMF to be used from a previous AIP funded project provided the following:
    - Must have been used on an AIP project within the past 24 months
    - Same aggregate sizes and sources, same binder and same design compaction level
    - All required JMF documentation must be provided to RPR for review and approval
    - Must complete current material quality tests; Must verify design criteria with trial batches

- Added Asphalt Binder Testing
    - Prior to control strip and during production (every 8,000 tons)
    - Verify that binder grade used complies with binder grade specified in design documents

Item P-401 Asphalt Mix Pavement – Cont'd

- Basis of Payment
  - No change to PWL computation
  - If PWL for joint density is less than 90, 5% pay reduction; If PWL for joint density is less than 80, 10% pay reduction
  - Coordinated language for grinding and grade pay reductions to be consistent with P-501; Removed 95% pay limit cap

Item P-603 Tack Coat

- Added options to use virgin binder and reduced tracking materials
  - Addresses request from NAPA comments received prior to 1st draft

Thank You

FAA Airport Safety & Standards
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Federal Aviation Administration