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**2020 AIRFIELD PAVEMENT DESIGN, EVALUATION & ANALYSIS WORKSHOP**

**March 10-12, 2020 / Raleigh, NC**

**MONDAY, MARCH 9, 2020**

6:45 – 8:00 p.m. Welcome Reception / Registration

**TUESDAY, MARCH 10, 2020**

7:30 – 8:15 a.m. Breakfast / Registration

8:15 – 8:30 a.m. Workshop Introduction

8:30 – 9:15 a.m. Overview of Airfield Pavement Design

 *David G. Peshkin, P.E., Vice President/Chief Engineer, Applied Pavement*

 *Technology, Inc.*

* The Evolution of Airfield Pavement Design
* Empirical Procedures
* Mechanistic-Empirical Procedures

9:15 – 10:00 a.m. Airfield Pavement Types and Pavement Performance

 *David G. Peshkin, P.E., Vice President/Chief Engineer, Applied Pavement*

 *Technology, Inc.*

* Overview of Pavement Types (Flexible, Rigid, and Composite)
* Paving Materials
* Base/Subbase Materials
* Pavement Performance

10:00 – 10:15 a.m. Break

10:15 – 11:15 a.m. Subgrade Soils and Granular Materials

 *Monty Wade, P.E., President, Applied Pavement Technology, Inc.*

* Characterizing Pavement Materials
* Evaluating In-Place Conditions
* Determining Inputs for Pavement Design
* Frost Protection Considerations

**TUESDAY, MARCH 10, 2020 (CONTINUED)**

11:15 – 12:00 noon Aircraft Traffic

*David G. Peshkin, P.E., Vice President/Chief Engineer, Applied Pavement Technology, Inc.*

* Gear Types and Naming Conventions
* Cumulative Damage Factor (CDF)
* Pass-to-Coverage Ratio (P/C)
* Characterizing Aircraft Loads in FAARFIELD

12:00 – 1:00 p.m. Lunch

1:00 – 2:00 p.m. Flexible Pavement Design

*Monty Wade, P.E., President, Applied Pavement Technology, Inc.*

* Failure Mechanisms
* Required Input Variables
* Flexible Pavement Design
* Using FAARFIELD

2:00 – 3:15 p.m. Workshop: Flexible Pavement Design

 *Monty Wade, P.E., President, Applied Pavement Technology, Inc.*

3:15 – 3:30 p.m. Break

3:30 – 4:15 p.m. Rigid Pavement Design

 *Monty Wade, P.E., President, Applied Pavement Technology, Inc.*

* Failure Mechanisms
* Required Input Variables
* 3-D Finite Element Model
* Rigid Pavement Design
* Using FAARFIELD

4:15 – 5:00 p.m. Workshop: Rigid Pavement Thickness Design

 *Monty Wade, P.E., President, Applied Pavement Technology, Inc.*

5:00 – 5:15 p.m. Daily Workshop Wrap-Up

**WEDNESDAY, MARCH 11, 2020**

7:30- 8:15 a.m. Breakfast

8:15 – 9:00 a.m. Update on AC 150/5370-10H: Standard Specifications for Construction

 of Airports

 *Doug Johnson, P.E., Civil Engineer – Pavement, FAA AAS-100*

**WEDNESDAY, MARCH 11, 2020 (CONTINUED)**

9:00 – 10:30 a.m. Rigid Pavement Design Details

*David G. Peshkin, P.E., Vice President/Chief Engineer, Applied Pavement Technology, Inc.*

* Slab Size
* Joint Considerations (Types, Spacing, Sealant)
* Load Transfer
* Reinforcing Steel

10:30 – 10:45 a.m. Break

10:45 – 11:30 a.m. Workshop: Rigid Pavement Design Details

 *Monty Wade, P.E., President, Applied Pavement Technology, Inc.*

11:30 – 12:00 noon Pavement Design for Airfield Shoulders

 *Doug Johnson, P.E., Civil Engineer – Pavement, FAA AAS-100*

* The Purpose of Shoulders
* Material Requirement
* Shoulder Design Procedure

12:00 – 1:00 p.m. Lunch

1:00 – 1:45 p.m. Overlay Design

 *Doug Johnson, P.E., Civil Engineer – Pavement, FAA AAS-100*

* HMA Over HMA
* HMA Over Rubblized PCC
* HMA Over PCC
* PCC Over PCC
* PCC Over HMA

1:45 – 3:15 p.m. Pavement Evaluation and Overlay Considerations

 *David G. Peshkin, P.E., Vice President/Chief Engineer, Applied Pavement*

 *Technology, Inc.*

* Pavement Evaluation Process
* Analysis of Existing Pavements
* Overlay Considerations
* Reflection Crack Control Measures

3:15 – 3:30 p.m. Break

3:30 – 4:30 p.m. Workshop: Overlay Design

 *Monty Wade, P.E., President, Applied Pavement Technology, Inc.*

**WEDNESDAY, MARCH 11, 2020 (CONTINUED)**

4:30 – 5:00 p.m. Current Airfield Pavement-Related Research

 *Doug Johnson, P.E., Civil Engineer – Pavement, FAA AAS-100*

5:00 – 5:15 p.m. Workshop Daily Wrap-Up

**THURSDAY, MARCH 12, 2020**

7:15 – 7:45 a.m. Breakfast

7:45 – 9:00 a.m. ACN-PCN Background and Concepts

 *Doug Johnson, P.E., Civil Engineer – Pavement, FAA AAS-100*

* History and Background
* Concept, Purpose and Definitions
* FAA Advisory Circular and COMFAA Program
* AC 150/5335-5C

9:00 – 9:30 a.m. PCN Approach for Rigid Pavements

 *Monty Wade, P.E., President, Applied Pavement Technology, Inc*.

* How to Determine PCN for PCC Pavements
* PCC Pavement Sample Problems and Solutions

9:30 – 9:45 a.m. Break

9:45 – 10:30 a.m. Workshop: PCN Determination for Rigid Pavement

*Monty Wade, P.E., President, Applied Pavement Technology, Inc.*

10:30 – 11:00 a.m. PCN Approach for Flexible Pavements

 *Doug Johnson, P.E., Civil Engineer – Pavement, FAA AAS-100*

* How to Determine PCN for HMA Pavements
* HMA Pavement Sample Problems and Solutions

11:00 – 11:45 a.m. Workshop: PCN Determination for Flexible Pavement

 *Doug Johnson, P.E., Civil Engineer – Pavement, FAA AAS-100*

11:45 – 12:00 noon Workshop Wrap-Up/Closing Remarks