

Base Courses

Technical Session #2: Base Courses

Stephen R. Mueller, P.E.
Pavement and Materials Engineer
Federal Highway Administration



U.S. Department of Transportation
Federal Highway Administration

IRC
Industrial Resources Council

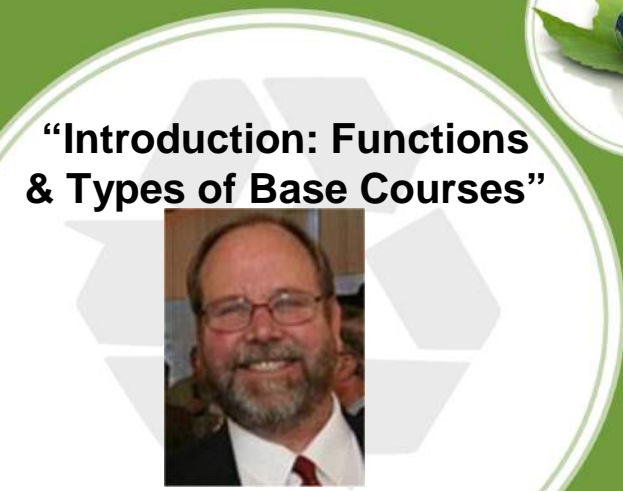


November 29, 2012

Session Agenda



- **Introduction: Functions & Types of Base Courses**
Steve Mueller, Pavement & Materials Engineer, FHWA Resource Center, Lakewood, CO
- **“Recycled Concrete Aggregate (RCA) in Base Courses”**
Cecil Jones, President, Diversified Engineering Services
- **“Foundry Sand Use in Blended Bases”**
John Dingeldein, Senior Principal/Vice President, Soil and Materials Engineers
- **“Dual Level Pavement Systems Using CCP’s”**
Keith Bargaheiser, National Manager for CCP Utilization, Headwaters Resources

“Introduction: Functions & Types of Base Courses”

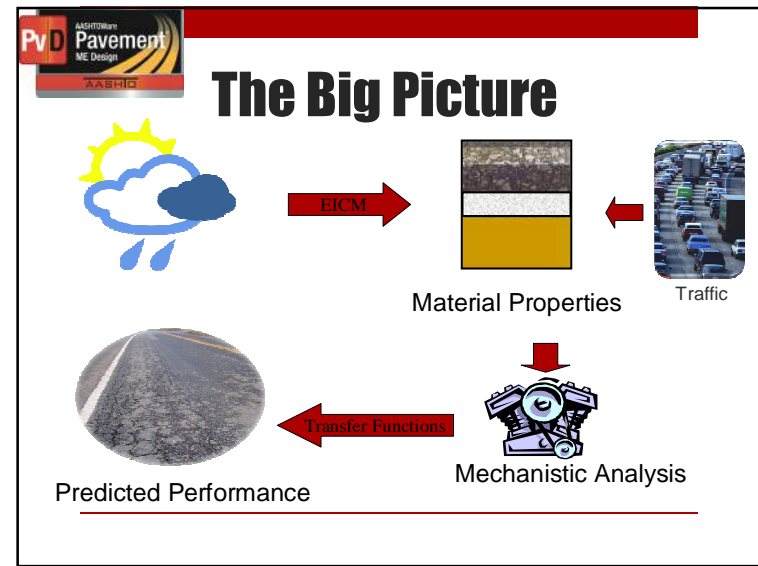
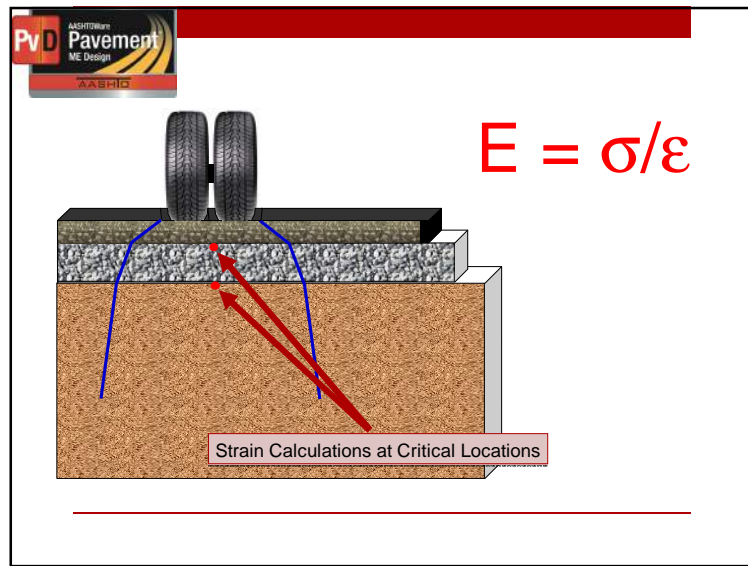
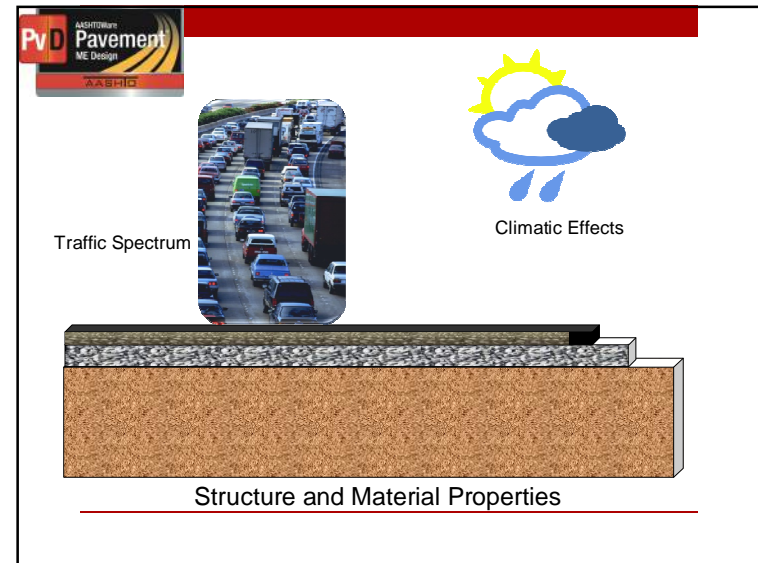
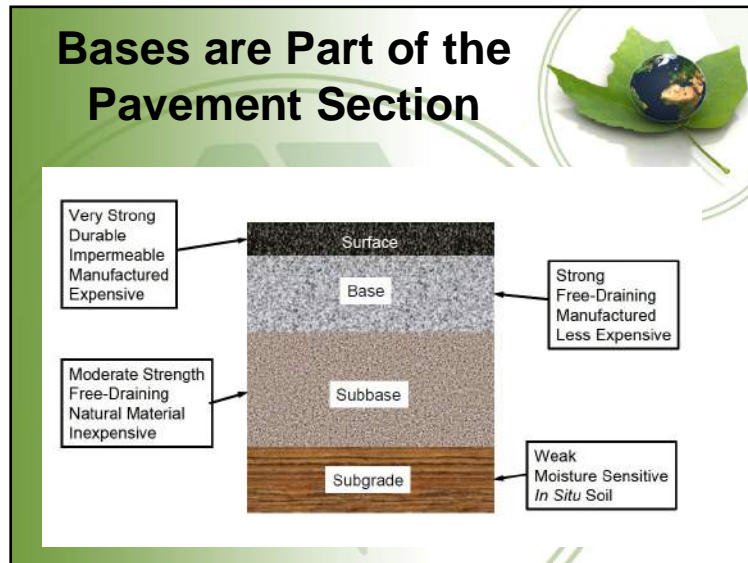


Steve Mueller, P.E., MPA FHWA Resource Center

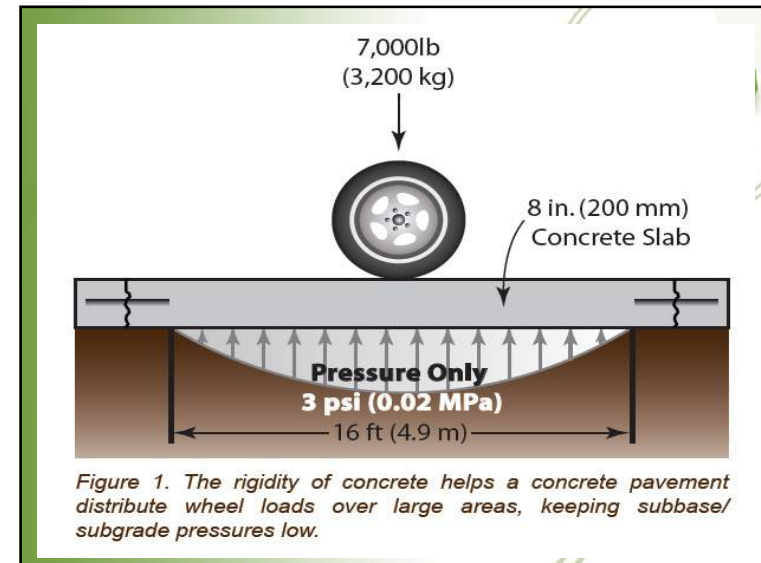
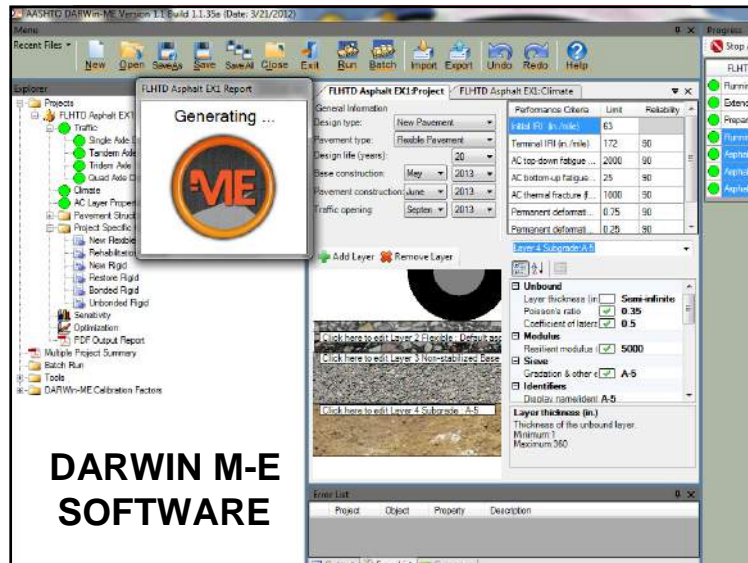


- **Pavement and Materials Engineer.**
- Former Co-Chair of the Environmental Stewardship Team for FHWA’s Pavement and Materials Program, member of FHWA’s Recycling Team, and Co-COTR for the RMRC II.
- FHWA Technical Liaison for RMRC 3-G
- Active with TRB, NCHRP, AASHTO, and SHRP-2
- Former District Engineer for the Asphalt Institute and Pavement Management Engineer for the City of Aurora, Colorado.
- Began working in the highway industry in 1974.

Base Courses



Base Courses



Types of Base Courses

- Aggregate Base Course (ABC)
- Asphalt Treated Base
- Cement Treated Base
- Lime Treated Base
- Etc.
- Etc.
- ...Materials that can transfer loads and resist environmental degradation.
- ...Mixtures/Blends of materials that can do this!

“Recycled Concrete Aggregate (RCA) in Base Courses”



Base Courses

Cecil Jones, PE, FACI
President,
Diversified Engineering Services

- Former State Materials Engineer, NCDOT
- Former Chair, AASHTO Recycling Task Force
- Active in TRB, NCHRP, and AASHTO throughout his career.
- Attended NC State – NOT that other school.

**“Foundry Sand Use in
Blended Bases”**



John Dingeldein, P.E.,
Senior Principal/Vice President,
Soil and Materials Engineers

- Former Principal of EDP Consultants, 20+ years, acquired by SME.
- Extensive experience with designing many types of infrastructure projects using a variety of recycled and industrial materials in a projects for public and private sector clients in northeast Ohio.

**“Dual Level Pavement
Systems Using CCP’s”**



Base Courses

Keith Bargaheiser

**National Manager for CCP Utilization,
Headwaters Resources**

- 30 years in the cement and concrete industry
- Chairs both the Technical Committee and the Sustainability Committee of the American Coal Ash Association (ACAA)
- Active in numerous cement and coal ash organizations and other professional organizations.
- BS and MS From Bowling Green State University, College of Technology.



**THANK YOU FOR ATTENDING
AND PARTICIPATING!!!**