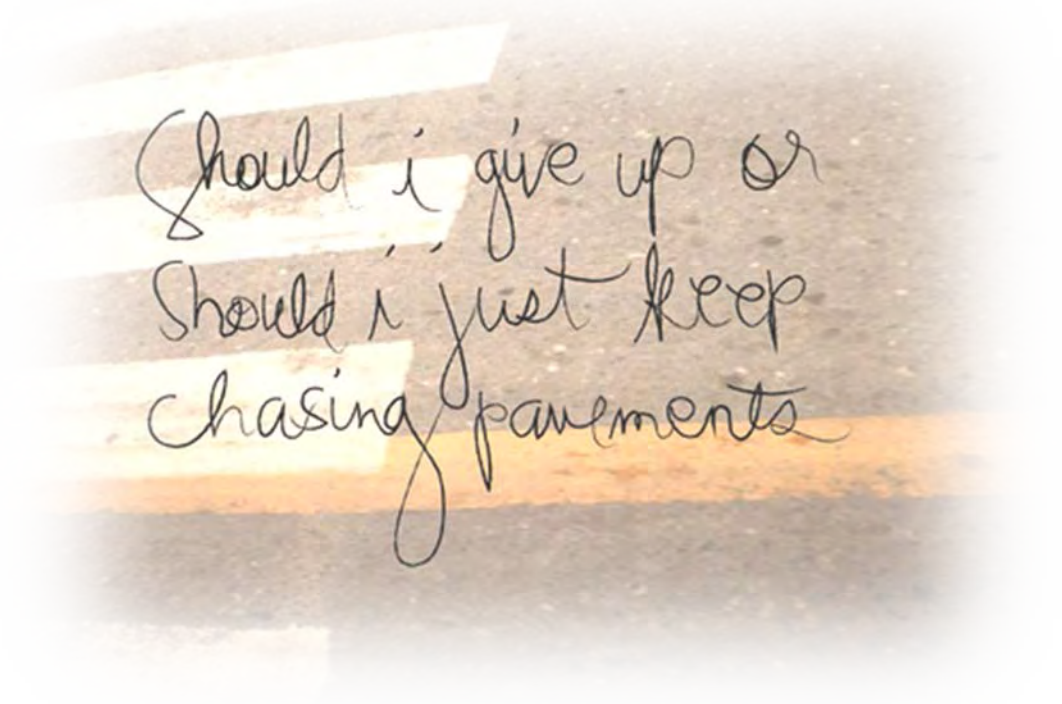
Joint Technical Committee on Pavements (JTCP)

Georgene M. Geary, P.E.
State Materials and Research Engineer
Georgia DOT
2011 SOM
Burlington, Vermont

OUTLINE

JTCP

- Who
- What
- Why



- What does it have to do with SOM?

JTCP

- 20 State DOT members +Chair & Vice-Chair
  - ½ SOD, ½ SOM
  - All AASHTO Regions
- Liaisons
  - AASHTO, NCHRP, FHWA, SHRP2, NAPA, ACPA
- Meet once/year in person
  - Webinars
  - Teleconferences
- 4 Technical Groups

Technical Groups

- Pavement Design and Analysis
- Pavement Management
- Sustainability and Surface Characteristics
- Low Volume Roads

Publications (Reports and Guides)

AASHTO Guide for Design of Pavement Structures

Pavement Friction Guide

Pavement Management Guide

Pavement Deflection Data Exchange: Technical Data Guide

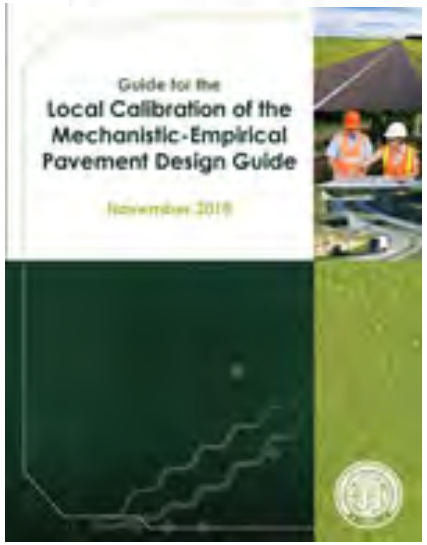
Pavement Management Roadmap

Guide to Local Calibration of the MEPDG

COMING SOON:

Pavement Type Selection Guide

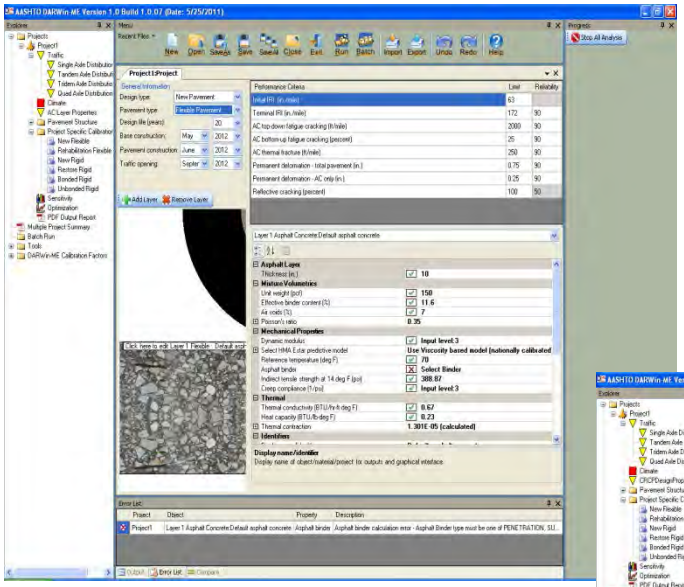
Pavement Management Handbook



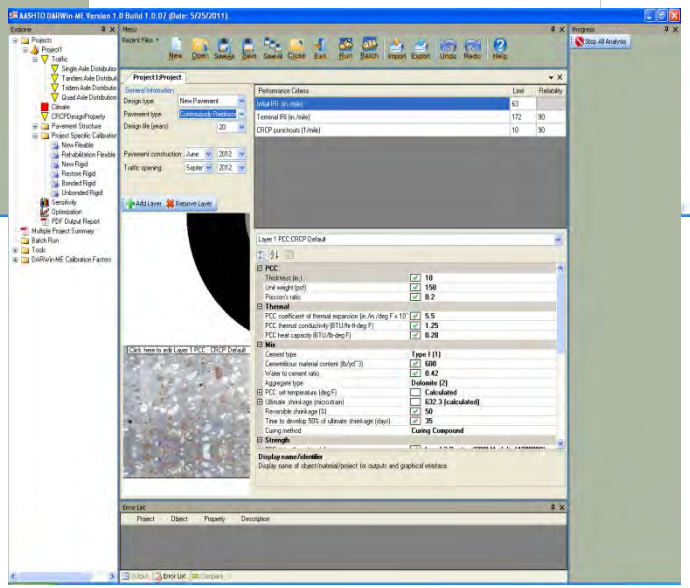
DARWin-ME: Mechanistic-Empirical Pavement Design

"DARWin-ME™ is the next generation of AASHTOWare® pavement design software

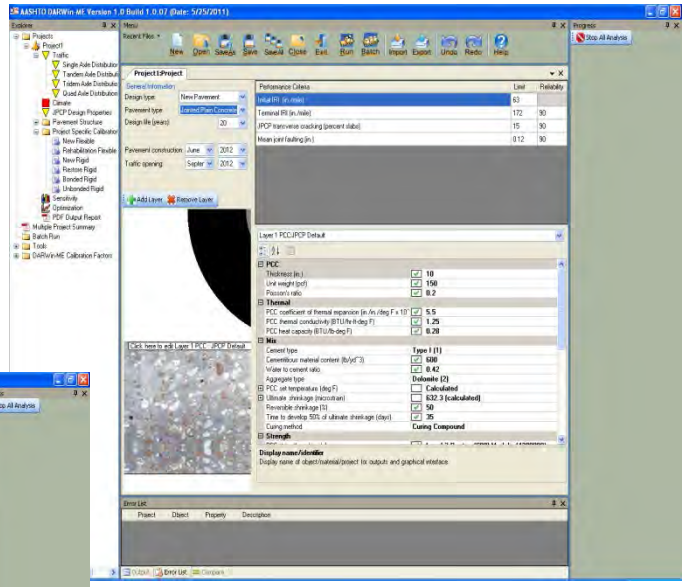
New Pavement Design



Flexible Pavement (AC)



Continuously Reinforced Concrete Pavement (CRCP)

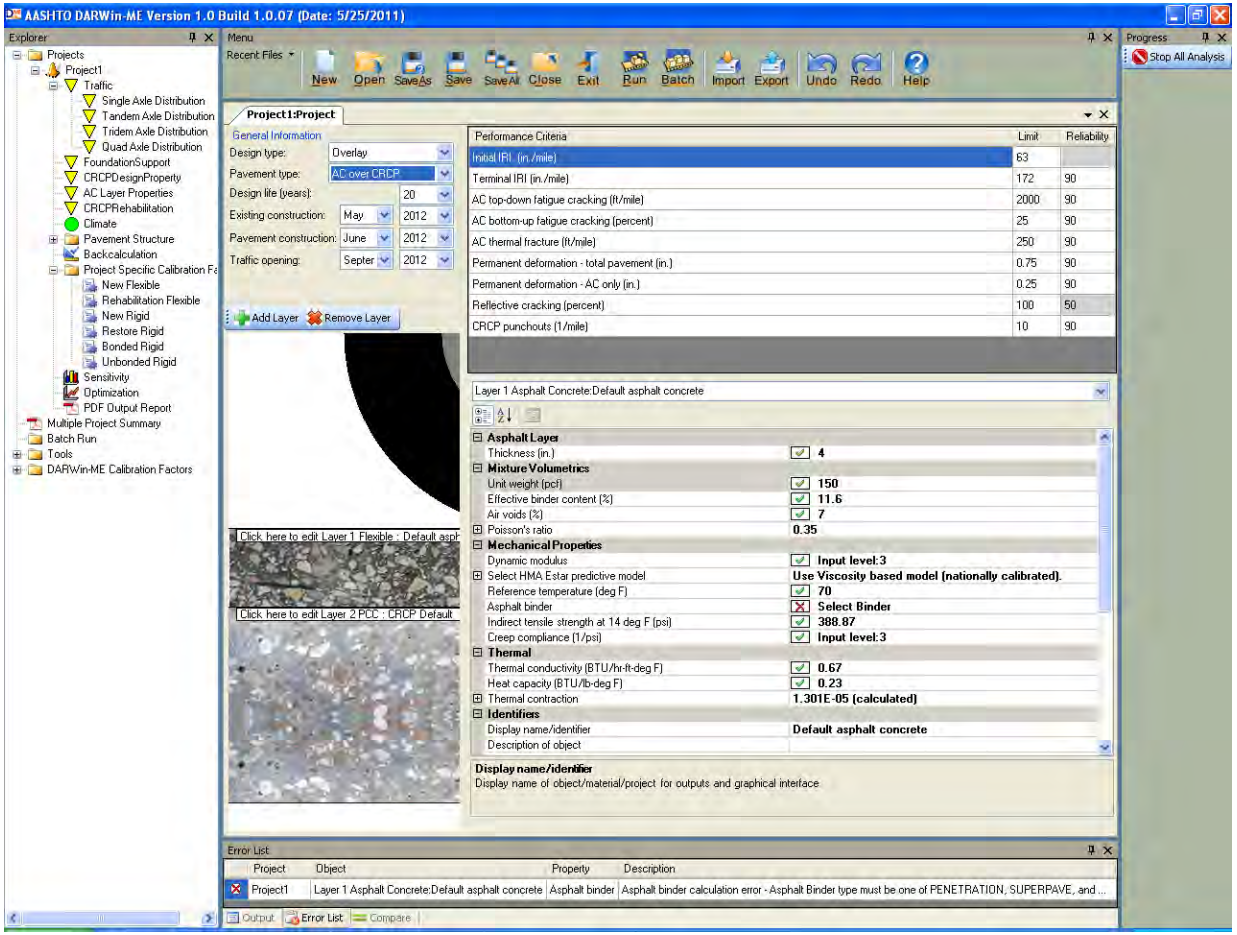


Jointed Plain Concrete Pavement (JPCP)

Overlay Design

Types of Overlays:

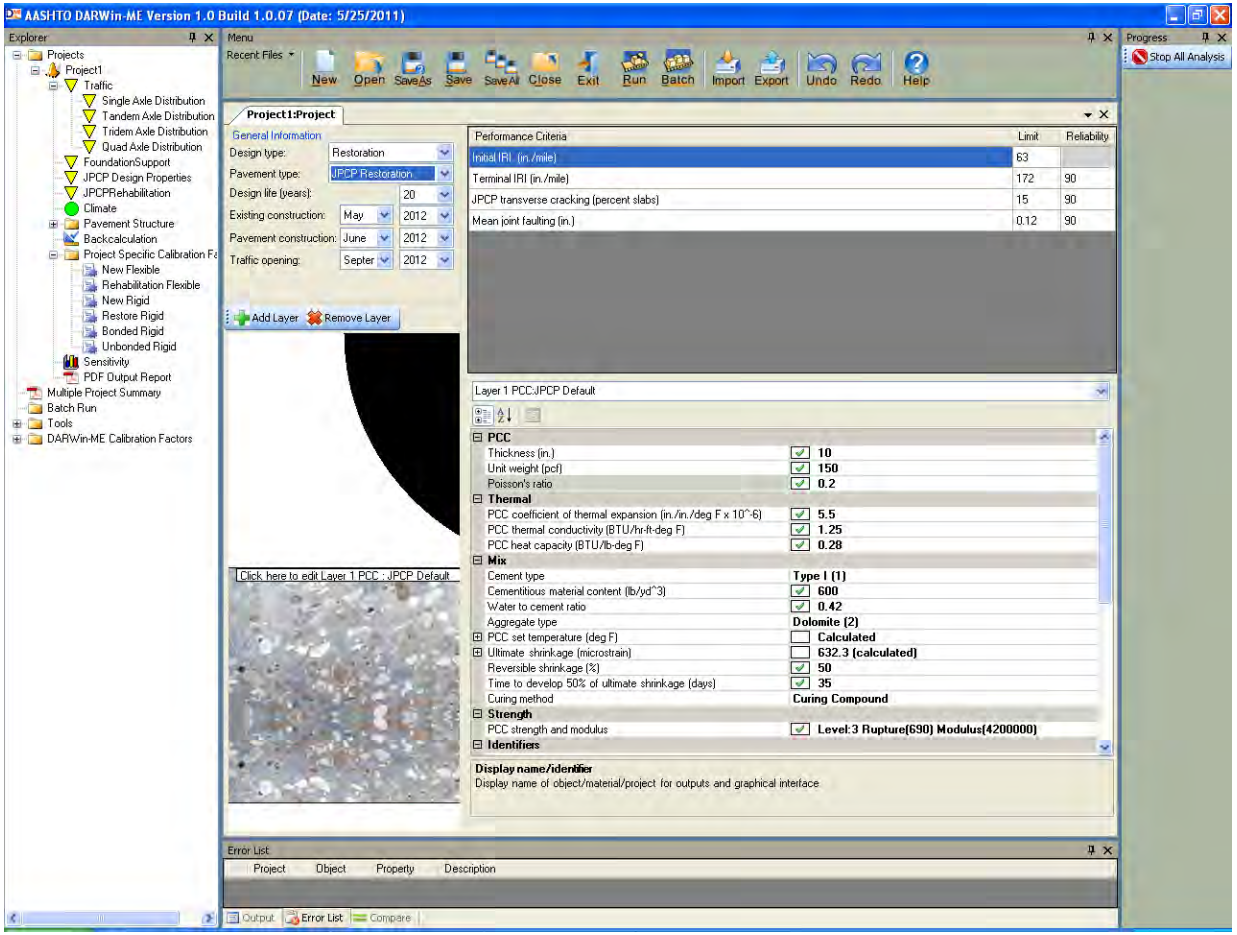
1. AC over AC
2. AC over JPCP
3. AC over CRCP
4. AC over JPCP (fractured)
5. AC over CRCP (fractured)
6. Bonded PCC/JPCP
7. Bonded PCC/CRCP
8. JCPC over CRCP (unbonded)
9. JPCP over JPCP (unbonded)
10. CRCP over CRCP (unbonded)
11. CRCP over JPCP (unbonded)
12. JPCP over AC
13. CRCP over AC



Pavement Restoration

Types of Restorations:

1. JPCP Restoration

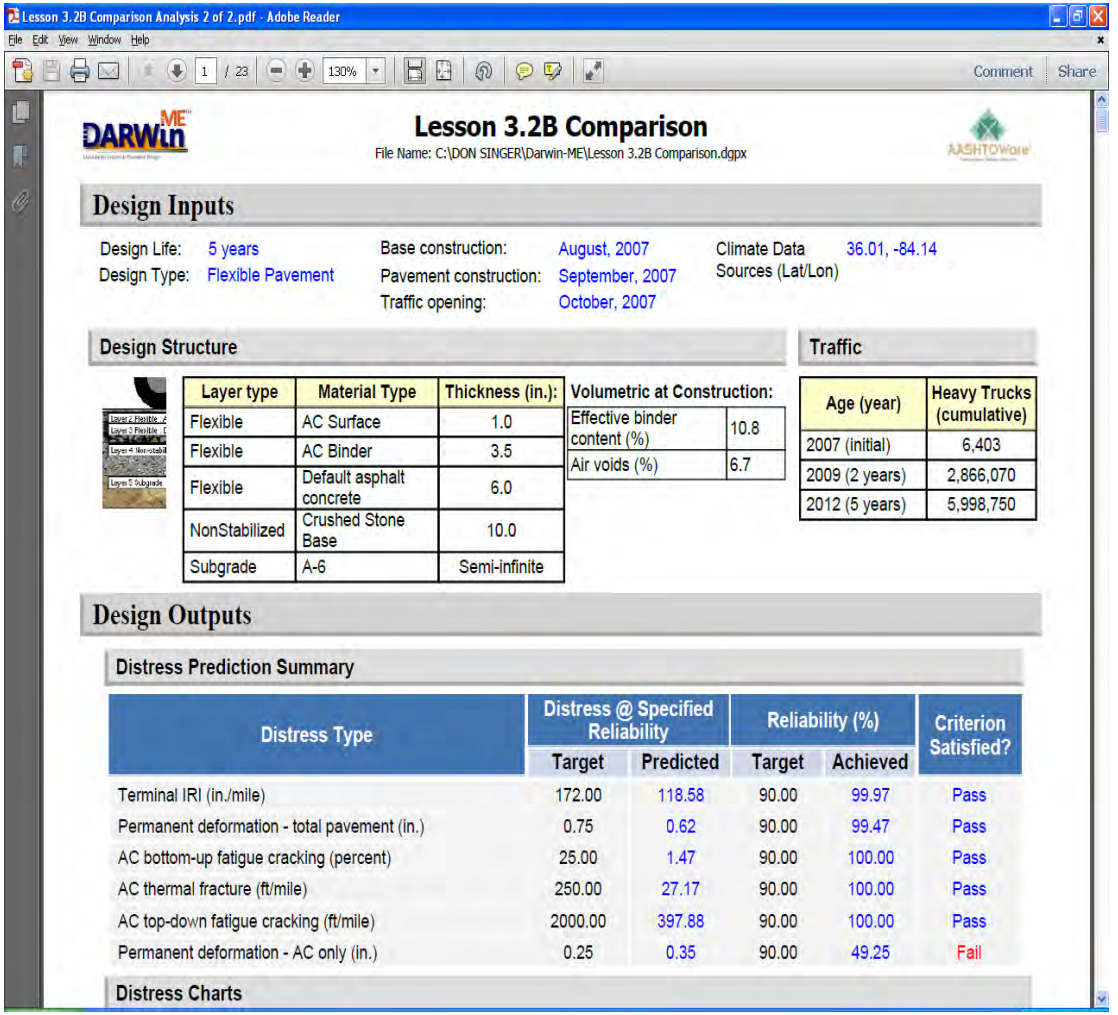


Analysis Summary Page

Included in Analysis Summary:

Inputs
- Traffic
- Climate
- Layer Design Properties

Outputs
- Distress Prediction Summary
- Distress Charts



Lesson 3.2B Comparison Analysis 2 of 2.pdf - Adobe Reader

File Edit View Window Help

DARWin ME

Lesson 3.2B Comparison

File Name: C:\DON SINGER\Darwin-ME\Lesson 3.2B Comparison.dgpx

AASHTOWare

Design Inputs

Design Life: 5 years
Design Type: Flexible Pavement

Base construction: August, 2007
Pavement construction: September, 2007
Traffic opening: October, 2007

Climate Data Sources (Lat/Lon): 36.01, -84.14

Design Structure

Layer type	Material Type	Thickness (in.):
Flexible	AC Surface	1.0
Flexible	AC Binder	3.5
Flexible	Default asphalt concrete	6.0
NonStabilized	Crushed Stone Base	10.0
Subgrade	A-6	Semi-infinite

Volumetric at Construction:

Effective binder content (%)	10.8
Air voids (%)	6.7

Traffic

Age (year)	Heavy Trucks (cumulative)
2007 (initial)	6,403
2009 (2 years)	2,866,070
2012 (5 years)	5,998,750

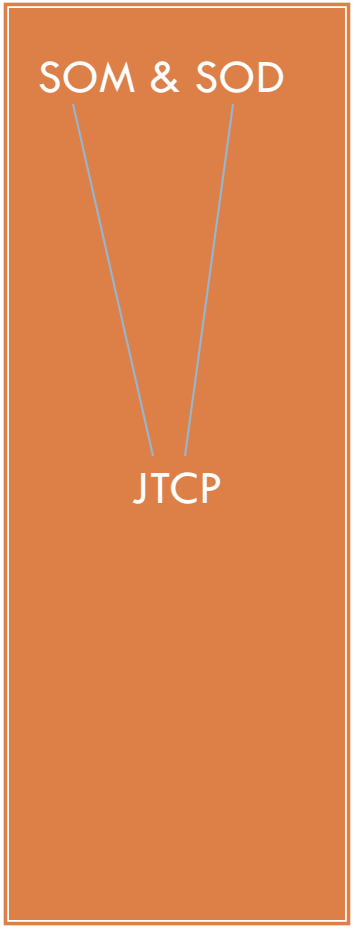
Design Outputs

Distress Prediction Summary

Distress Type	Distress @ Specified Reliability		Reliability (%)		Criterion Satisfied?
	Target	Predicted	Target	Achieved	
Terminal IRI (in./mile)	172.00	118.58	90.00	99.97	Pass
Permanent deformation - total pavement (in.)	0.75	0.62	90.00	99.47	Pass
AC bottom-up fatigue cracking (percent)	25.00	1.47	90.00	100.00	Pass
AC thermal fracture (ft/mile)	250.00	27.17	90.00	100.00	Pass
AC top-down fatigue cracking (ft/mile)	2000.00	397.88	90.00	100.00	Pass
Permanent deformation - AC only (in.)	0.25	0.35	90.00	49.25	Fail

Distress Charts

JTCP Needs YOU!!



- We need support from the Subcommittee on Materials for research statements:
  - Pavement Management
  - Concrete recalibration for CTE correction
  - ….future research need statements