2012 Spring MEO

Pavement Design Unit

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Your Destination...Our Priority

Pavement Thickness Rounding

- Written procedure to round to the nearest 0.5 inch?

Pavement Thickness Rounding

- How about:

  < 0.25”, round down
  ≥ 0.25”, round up

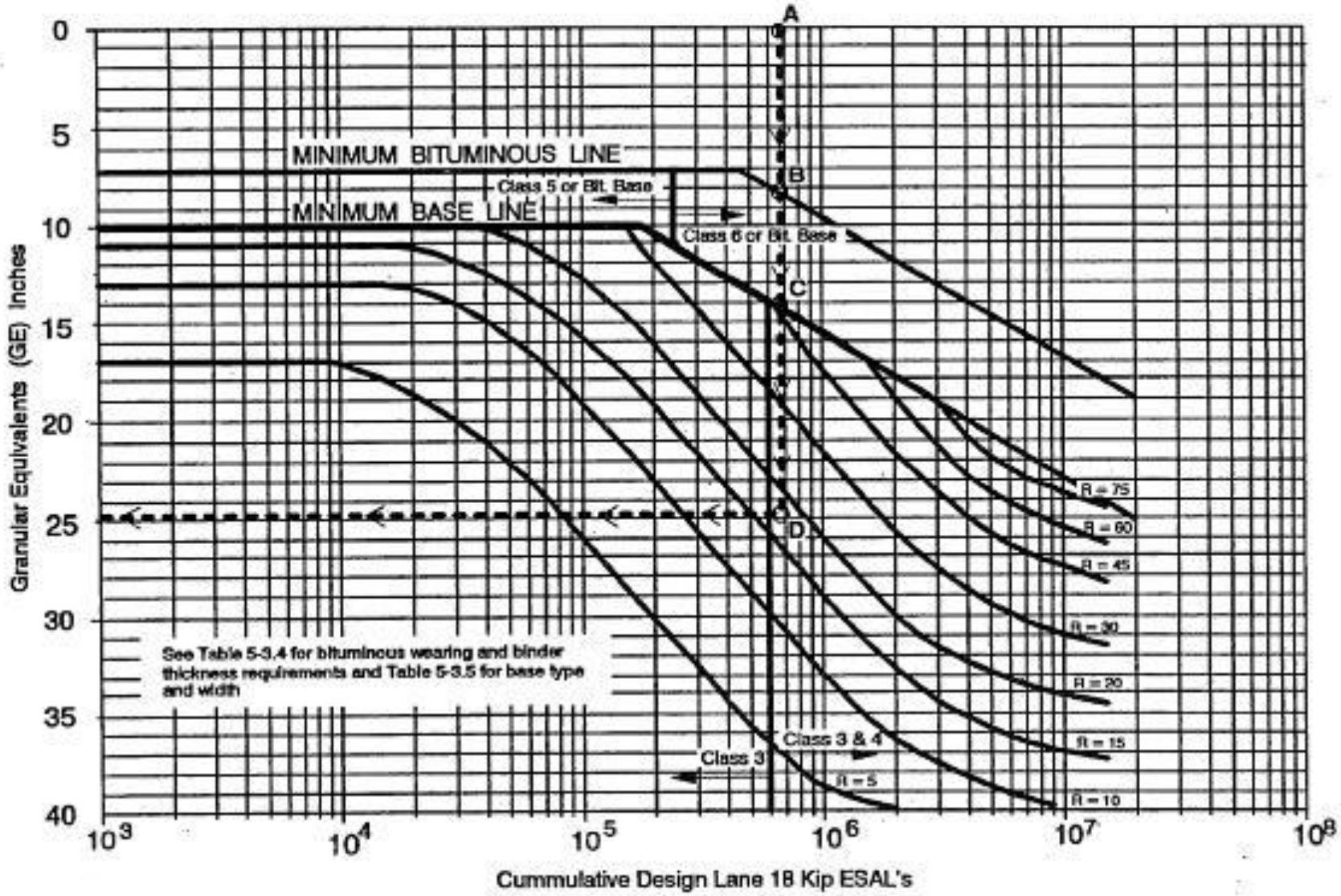
Which R-Value to use for Pavement Design Programs?

- MnPAVE
  - Use the mean R-value from FWD or lab tests
  - Reliability is built into the program (Monti Carlo)

- FlexPave, RigidPave, UBOL, & Whitetopping
  - Use 85% R-value from FWD testing
  - Use mean – one standard deviation for lab tests
  - Reliability in NOT built into the programs

Which HMA Program to Use?

- HMA on Aggregate Base/FDR
  - Mn/PAVE
  - FlexPave – will be phased out over time
    - Good tool to determine a starting HMA thickness
    - Lines on the "Bituminous Pavement Design Chart (Aggregate Base)" stop ≈15 Million 20 year BESALs
- HMA on SFDR
  - Mn/PAVE
- HMA on Rubblized PCC
  - Mn/PAVE



BITUMINOUS PAVEMENT DESIGN CHART (AGGREGATE BASE)

Figure 5-3.6 Bituminous Pavement Design Chart (Aggregate Base)

Which PCC Program to Use?

- PCC on Aggregate Base/FDR
  - RigidPave
- PCC on HMA
  - Whitetopping
  - Looking at a new program develop by the pool fund study
- PCC over PCC
  - UBOL

LCCA

- Report sent to the legislature in January
  - Did not receive any comments
- When pavement design thickness is less the minimum pavement thickness
  - Use the actual thickness (rounded to the nearest ½") for that design service life
  - Note on the bottom of the option that this design falls below the minimum pavement thickness and will not be used

Minimum Pavement Thickness

- HMA
  - New/Reconstruction with agg. base = 4.0 inches
  - SFDR/CIR = ???
- PCC
  - New/Reconstruction = 6.0 inches
  - UBOL = 6.0 inches
    - 5.0 inches with Pavement Design Unit coordination
  - Whitetopping = 5.0 inches

FWD

- Ordered a new FWD last summer
- Still taking requests for this summer testing
- Alternate Bid Projects
  - Can run FWD to determine a design R-value
  - On existing PCC pavements
    - Run FWD on the shoulder if the shoulder was built at the same time as the mainline
    - Obtain subgrade samples through the pavement to determine lab R-values