

# Performance of Recycled Pavements

Study Overview and  
Preliminary Findings

# Performance of Recycled Pavements

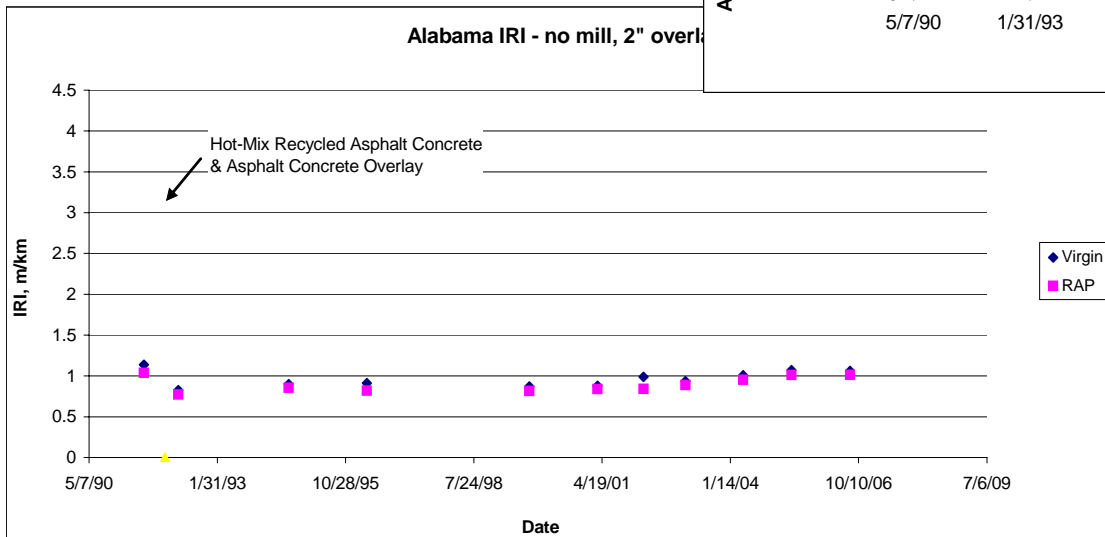
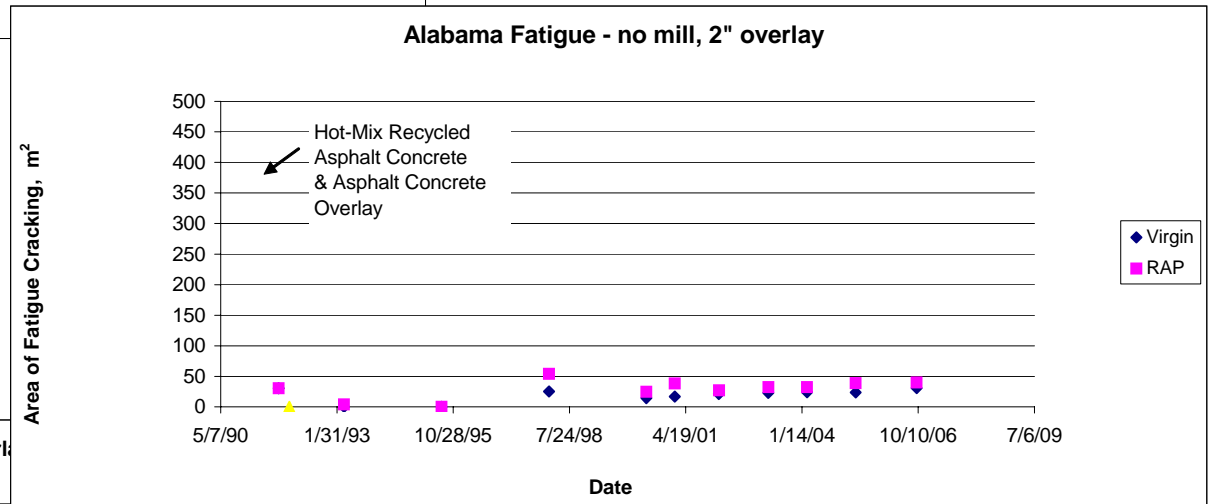
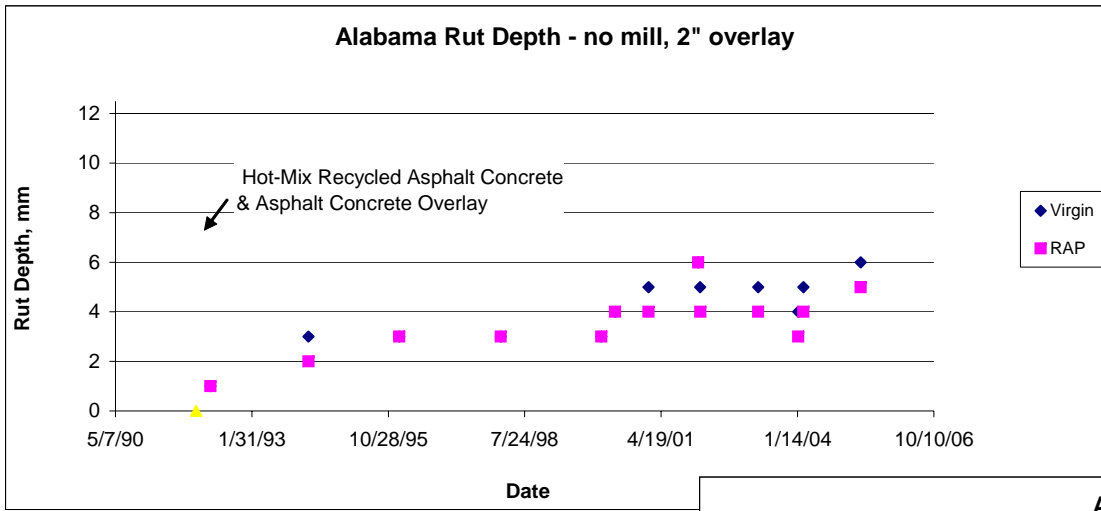
- Documentation of performance comparisons between HMA pavements with and without RAP is limited.
- Some people believe recycled HMA is inferior to all virgin HMA, which stifles the recycling program.
- A comprehensive study comparing field performance of RAP and virgin mixes is needed to address this issue.

# A Performance Comparison of RAP vs. Virgin Mixes

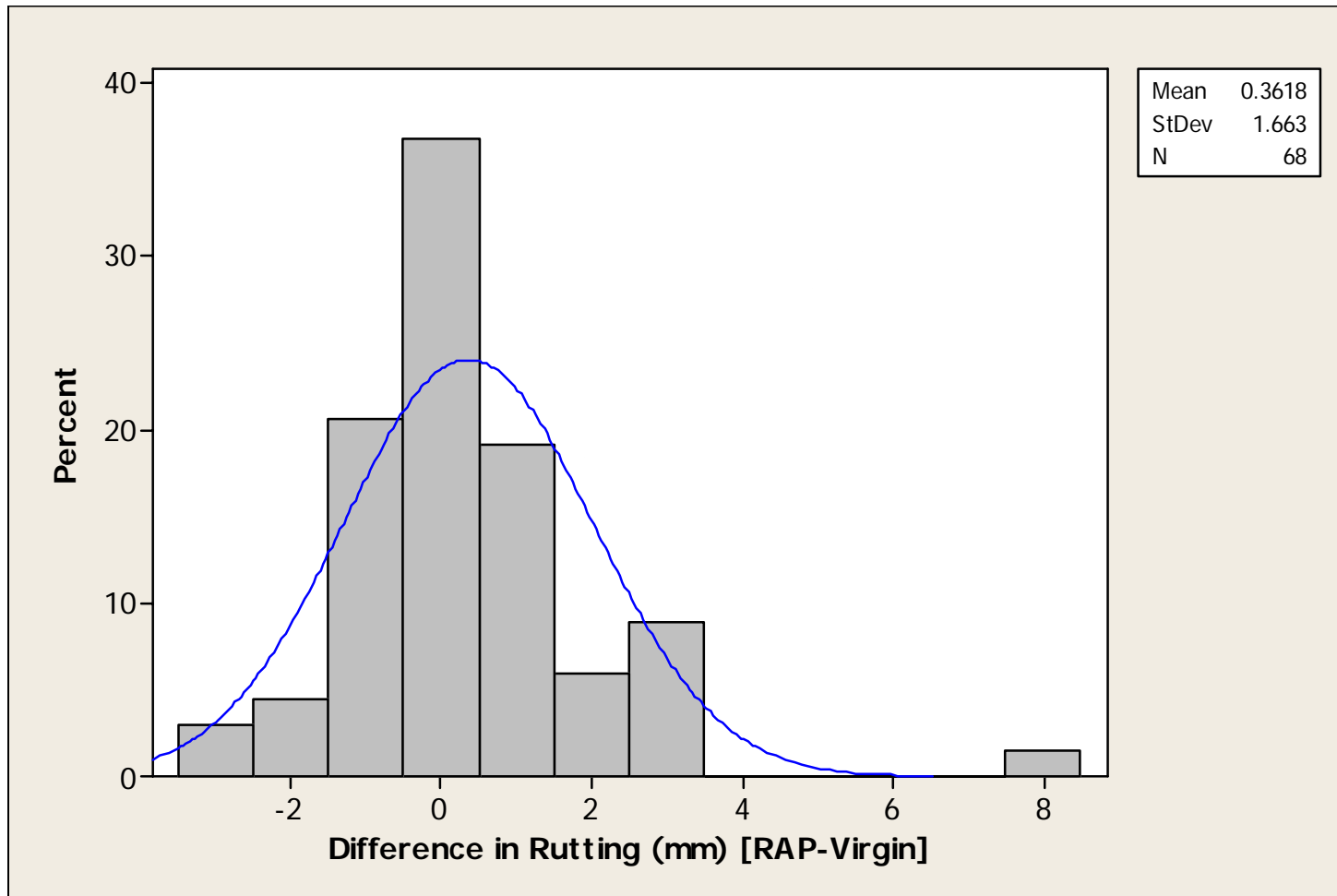
- Jennifer Michael – AU / NCAT graduate student
- LTPP SPS-5 pavements
- At least 30% RAP used in recycled mixes
- 18 states and Canadian provinces
- Projects range in age from 6 to 17 yrs

# LTPP SPS-5: RAP vs. Virgin

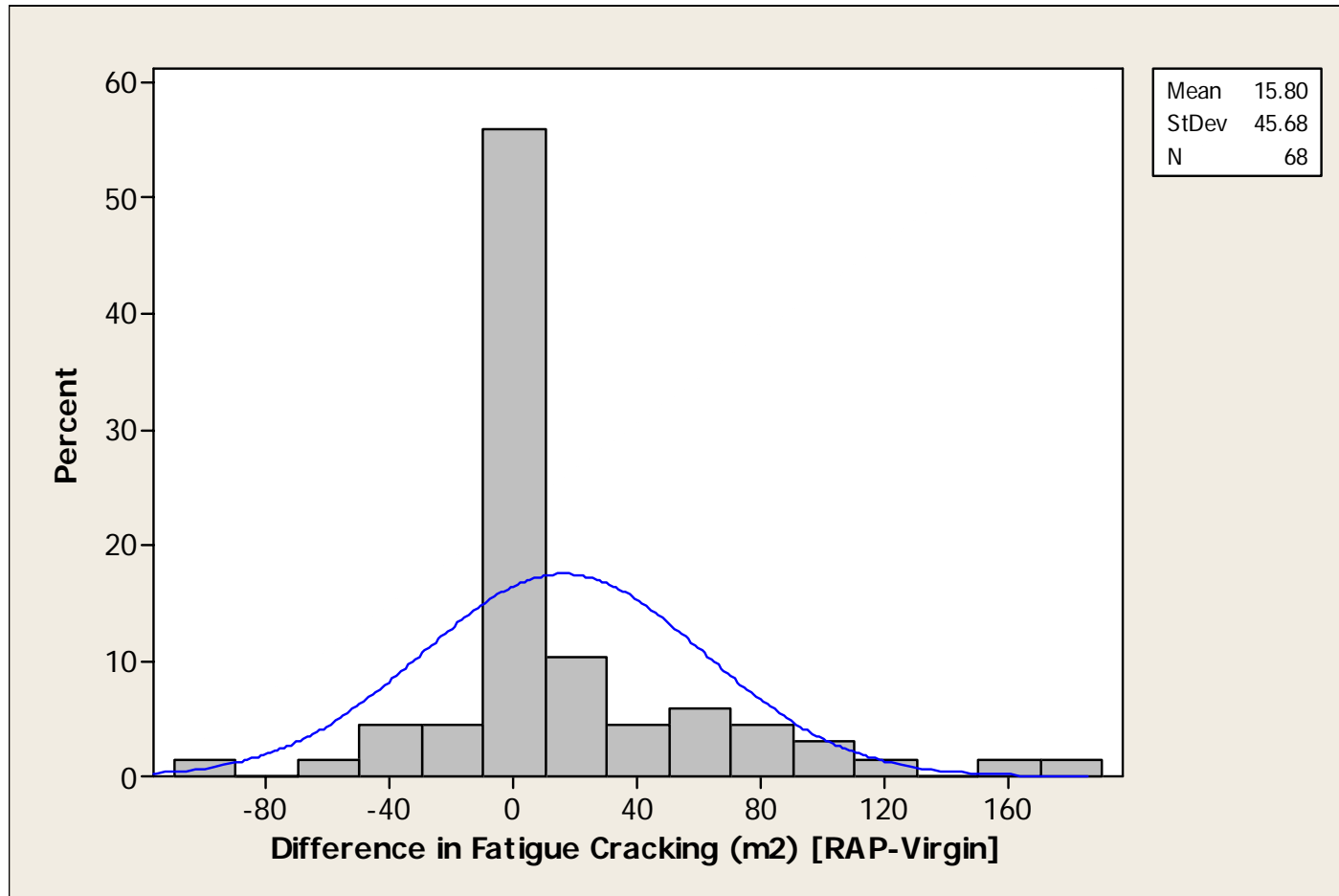
- Four sections per project
  - 2" overlay, no mill
  - 2" overlay with mill
  - 5" overlay, no mill
  - 5" overlay with mill
- Five performance measurements (annual)
  - Rutting, mm
  - IRI, m/km
  - Fatigue cracking, m<sup>2</sup>
  - Transverse cracking, # per section
  - Longitudinal cracking, m
- 340 comparisons: graphed, tabulated differences, statistical analyses



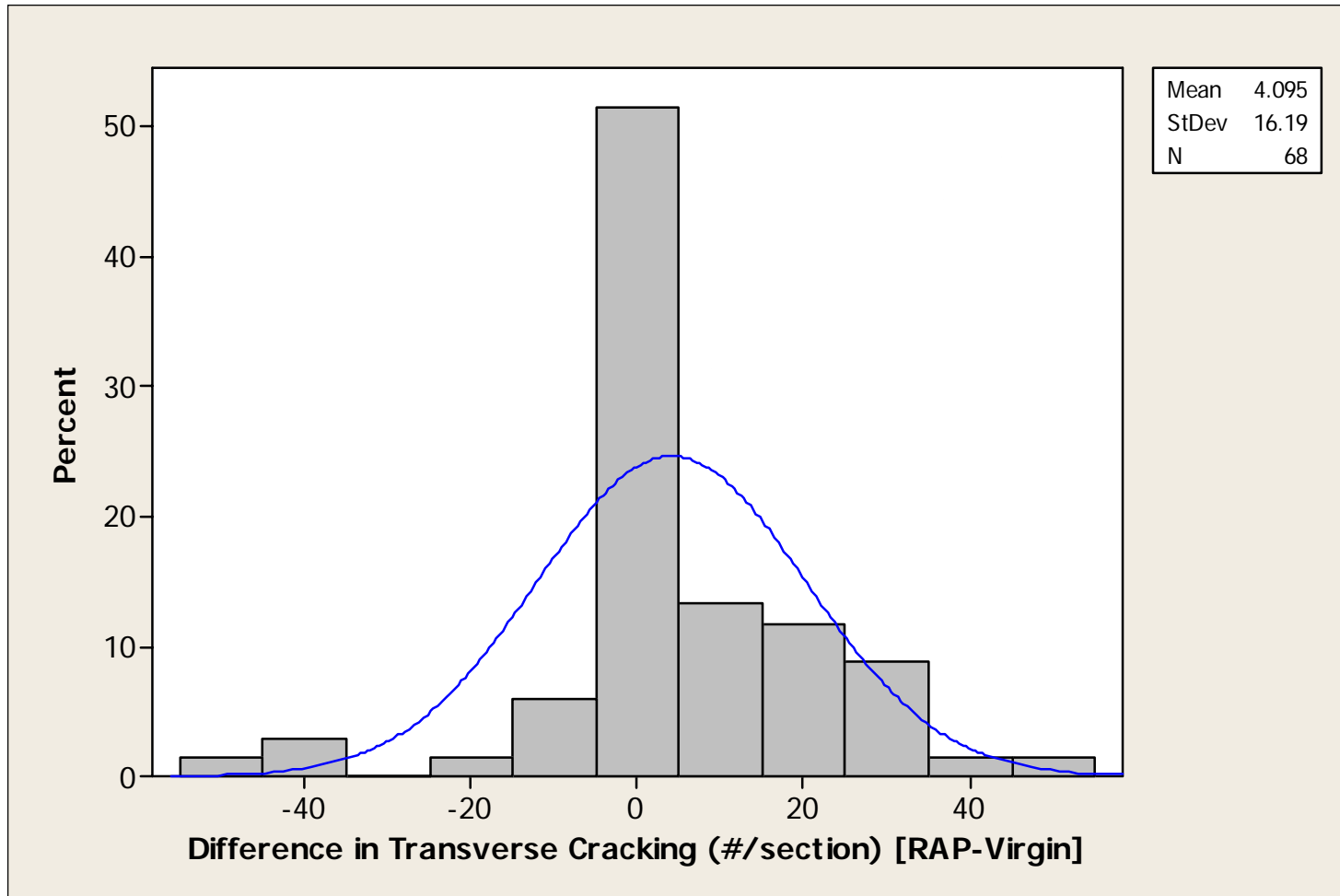
# Rutting



# Fatigue Cracking

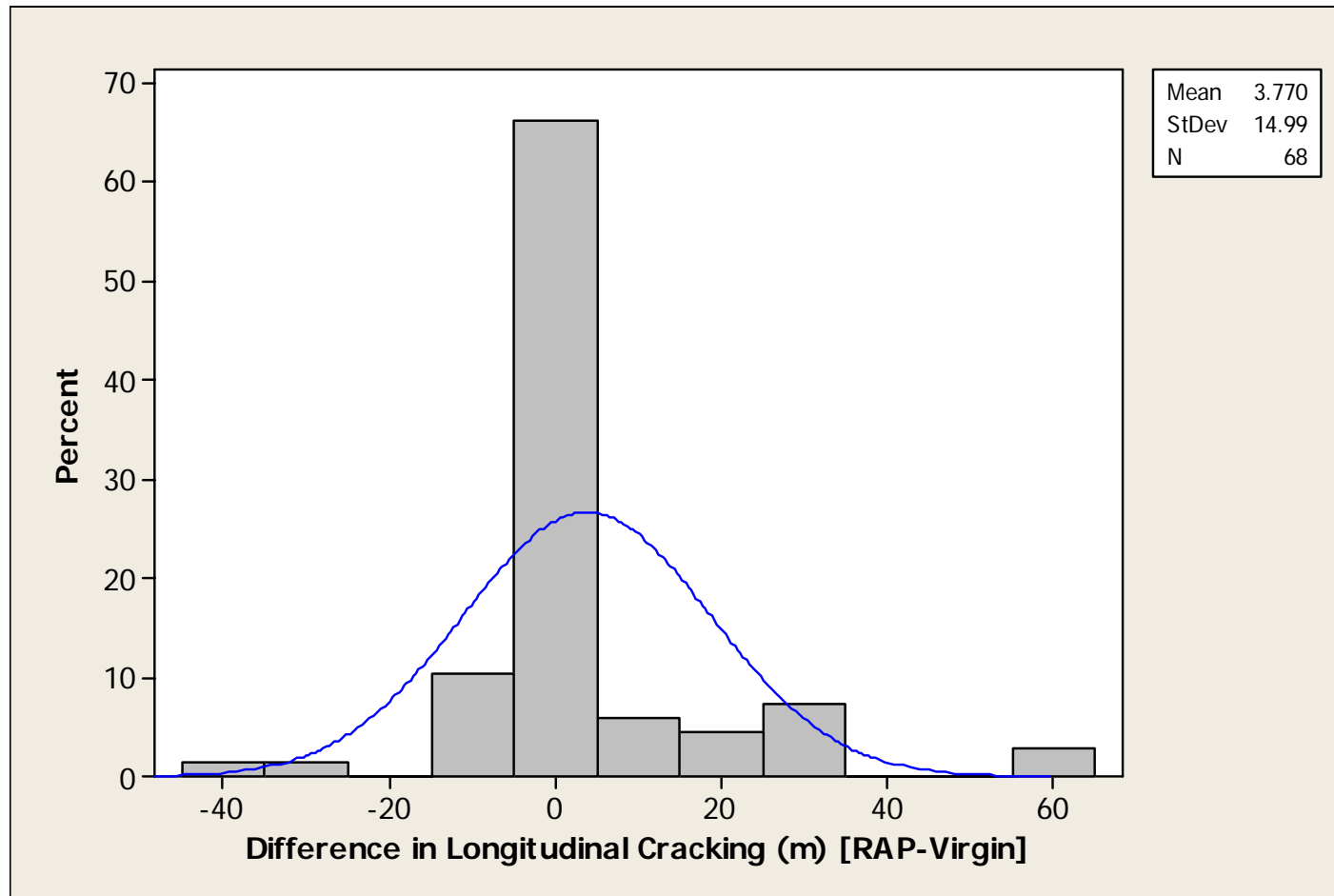


# Transverse Cracking

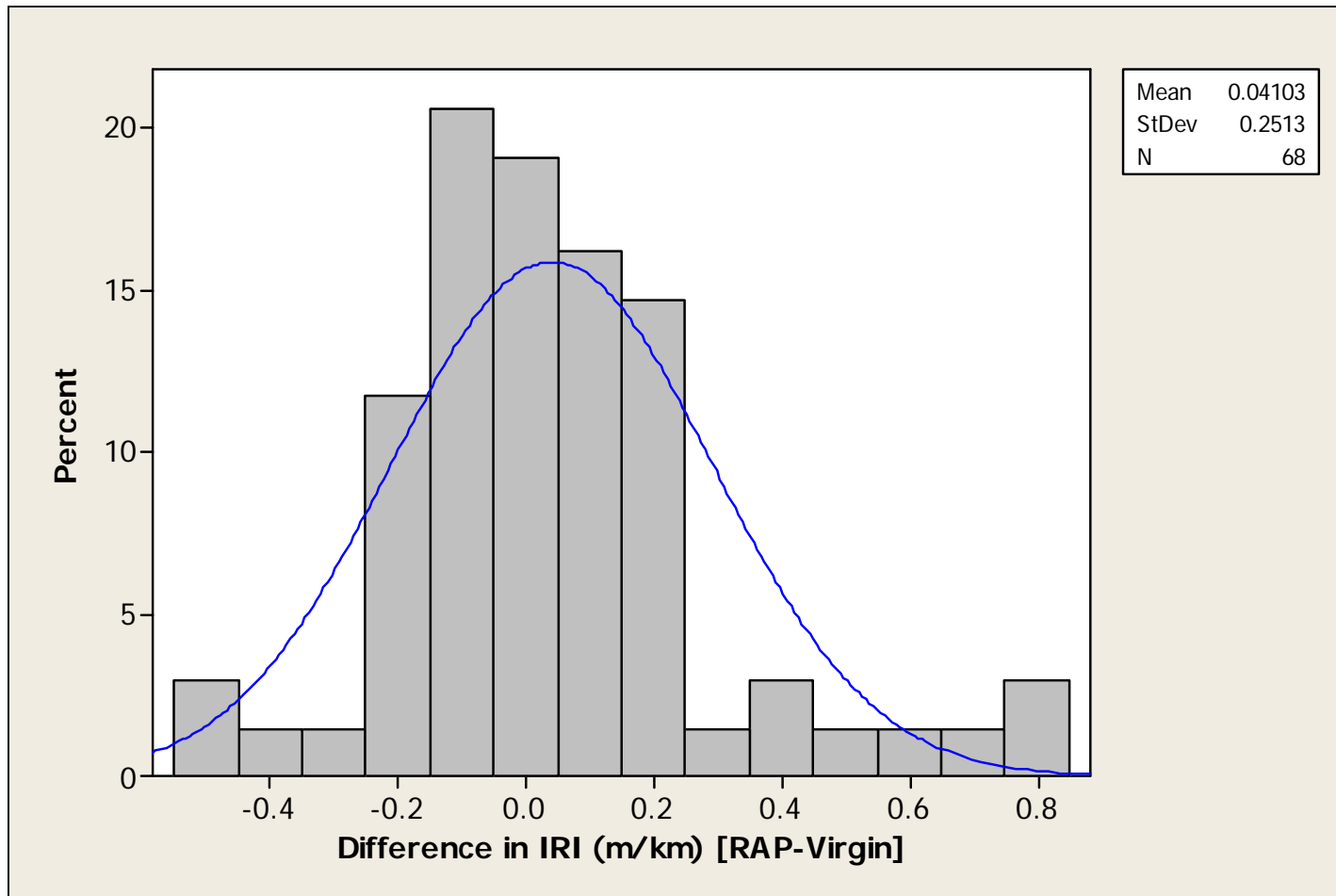




# Longitudinal Cracking



# IRI



# LTPP SPS-5: RAP vs. Virgin

- Preliminary report due in a few weeks
- Further exploration of mix designs
- NCAT report – documenting all data
- TRB paper