

SMA Density Determination

- SMA Density - What's the problem?
 - How to measure it?
 - How to get density and
 - How not to break all the aggregate while getting compaction?

SMA Density Determination



SMA Density Determination

- Past Methods tried include:
 - Water
 - P-200
 - Slurry
 - Correlation to cores
 - Test strip with correlation

SMA Density Determination

- No matter the method, our SMA continues to perform
- Want to ensure consistency of compaction
- Need method of contractual acceptance
- New procedure used last year in Dist. 3

DENSITY ACCEPTANCE FOR SMA PAVEMENTS

- 1000 foot Control Strip section
 - 1 Qc test
 - 12 random locations for nuclear density
 - 2 cores (total)
- Nuclear density tests
 - Direct readings
 - No additional materials to seat gauge
- Cores used to visually evaluate the integrity of the aggregate structure

DENSITY ACCEPTANCE FOR SMA PAVEMENTS

- Control Strip Target Density
 - Median of the 12 nuclear tests
 - Qc air voids 3.5% - 5.0%
- Criteria for determining when new target is needed
- Remainder accepted based on 750 ton lots
- Density incentive and disincentive deleted

DENSITY ACCEPTANCE FOR SMA PAVEMENTS

- WAPA/DOT Tech Team Density Subcommittee to meet in February to finalize specification
- Plan to include in supplemental specs for use in 2005 season

Density Acceptance of SMAs

Review / Evaluation

END-OF-YEAR REVIEW :

- **Field Notes from Projects** (feasibility aspects)
- **Core Data from BHC Lab** (T166 vs. Corelok)
- **QMP data**
- **WAPA/WisDOT HMA Technical Team to re-evaluate SMA Standard Specifications for the Part 4 Re-write** (Ndes, Va target, Pb, etc.)
- **Construction Guidelines per NCHRP 9-8**





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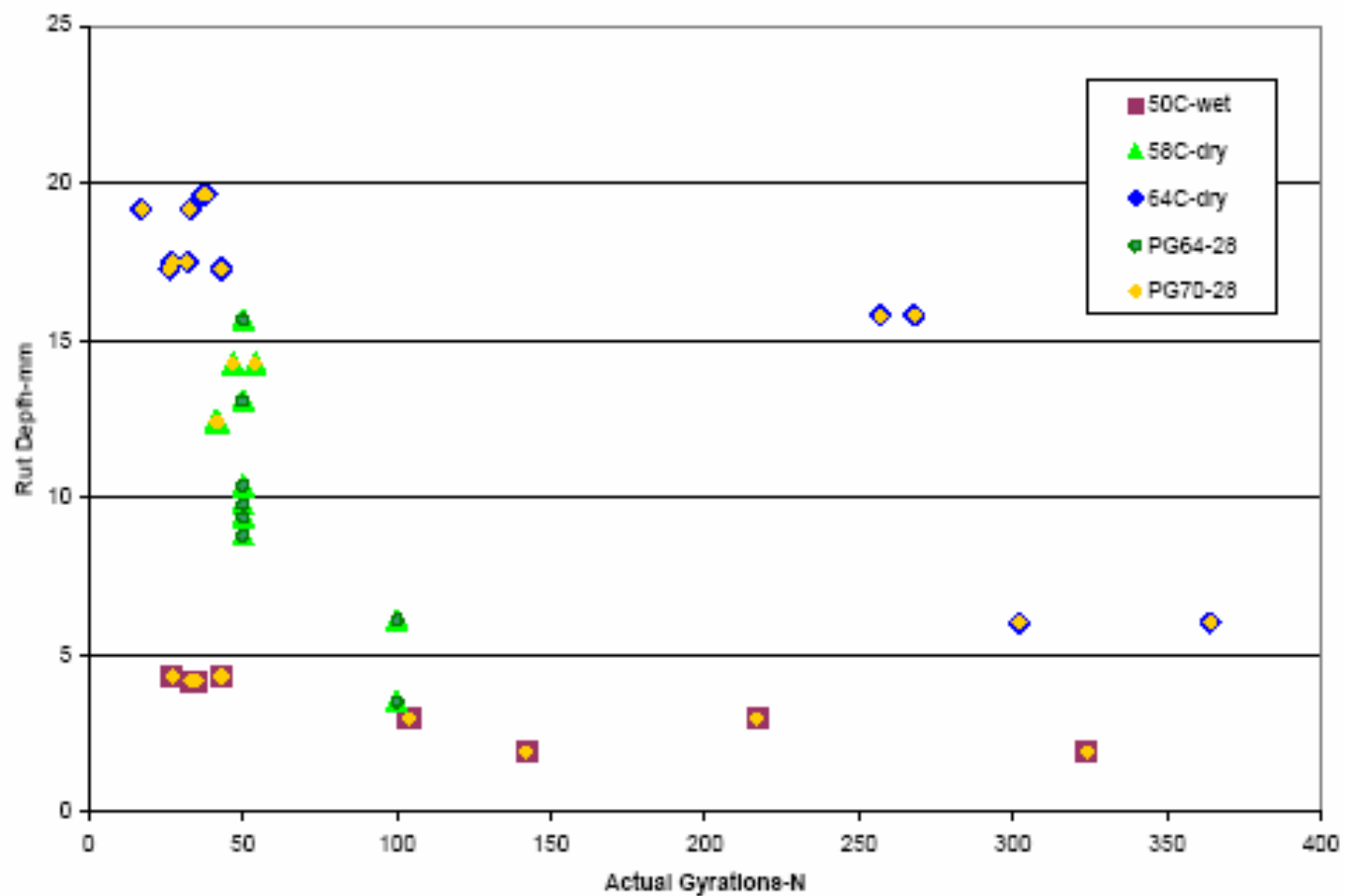


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Rut Depth vs Nact



Rut Depth vs Pbe

