



NJDOT

Perspective on SUPERPAVE

Eileen Sheehy, P.E.

Manager, Bureau of Materials

New Jersey Dept. of Transportation

(609) 530-2307

Implementation

- **PG Binder Fully implemented in 1997 (PG 64-22 = AC-20)**
- **First Superpave project constructed in 1997**
- **Six pilot projects in 1998**
- **Steady increase in projects every year since 1998**
- **Mix designation development**

Mix Designations

Superpave Hot Mix Asphalt 25H64 Base Course

- Nominal Maximum Aggregate Size
- Compaction Level
- PG Binder Grade
- Location within Pavement

Mix Designations (cont.)

- **Nominal Maximum Aggregate Size**
 - 9.5 mm
 - 12.5 mm
 - 19 mm
 - 25 mm
 - 37.5 mm
- **Based on proposed lift thickness and location within pavement.**

Mix Designations (cont.)

- **Compaction Level (x10 ESALs)**
 - L < 0.3
 - M 0.3 to < 3
 - H 3 to < 30
 - V ≥ 30
- **Based upon traffic level. Used in determining levels of compaction for mix design.**

Mix Designations (cont.)

- **PG Binder**
 - 64 = PG 64-22
 - 70 = PG 70-22
 - 76 = PG 76-22 (SB or SBS modified)
- **Based upon climate and traffic level.**
It is not recommended that other grades be used unless asphalt refiners have been contacted regarding availability.

Mix Designations (cont.)

- **Location within Pavement**
 - **Surface Course**
 - **Intermediate Course**
 - **Base Course**
- **Surface course on the surface. Intermediate within the top 4" but not on surface. Base below 4". Used in determining aggregate requirements, allowable RAP, etc.**

Superpave vs. Marshall Mixes

- **Traditional New Jersey (Marshall) Mixes – 7 Options**
 - I-1, I-2, I-3, I-4, I-4 HD, I-5, I-6
- **Superpave Mixes – 180 Options**
 - 9.5, 12.5, 19, 25, 37.5
 - PG 64-22, 70-22, 76-22
 - ESAL Categories – L, M, H, V
 - Base, Intermediate, Surface

Most Common NJDOT Surface Course Mixes

- **Superpave HMA 12.5 H64 Surface Course**
- **Superpave HMA 12.5 H76 Surface Course**

Most Common NJDOT Intermediate/Base Course Mixes

- **Superpave HMA 19 H64 Intermediate Course**
- **Superpave HMA 19 H76 Intermediate Course**
- **Superpave HMA 25 M64 Base Course**
- **Superpave HMA 25 H64 Base Course**

Specialty Mixes

- **Superpave HMA 9.5 M64 Surface Course**
- **Superpave HMA 12.5 M64 Surface Course**
- **Superpave HMA 19 M64 Intermediate Course**
- **Superpave HMA 37.5 M64 Base Course**
- **Superpave HMA 37.5 H64 Base Course**

Current Status of Superpave Implementation

- **All NJDOT projects are now being designed using Superpave.**
- **Superpave in 2001 Specifications – Sections 406 and 920**
- **Local Aid projects not required to be Superpave but can be.**
- **Hudson County had award winning Superpave project last year.**

COST

- **Marshall Mixes (I-2, I-4, I-5)**
 - \$ 40-50 /ton
- **Superpave Mixes**
 - \$ 40-55 /ton
 - (Polymer modified binder adds \$ 8-10/ton)