# Stability Design

**Project**
- Profile
- Underdrains
- Thickness
- Fatigue Cracking
- Cross Slope
- # of Lanes
- Width
- Pay Items

**Contract**
- Rideability
- Stability
- Surface Friction
- Durability
- Cracking
  - Transverse
  - Longitudinal
- Moisture Resist.
- Joints

## Design

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PAY ITEMS (Rideability, Stability, Durability)
- Nominal Size
  - 401 Section
    - QC/QA HMA 5, 76, SURFACE 9.5 mm
  - 400 Section
    - Aggregate Reqm’ts
    - PG Binder

QC/QA
- Greater than 600 tons of Surface, or
- Greater than 1000 tons of Base or Intermediate

PAY ITEMS (Stability, Durability, Moisture)
- Nominal Size
  - 401 Section
    - QC/QA HMA 5, 76, SURFACE 9.5 mm
  - 400 Section
    - Aggregate Reqm’ts
    - PG Binder

HMA
- 400 ITEM
  - SUPERPAVE MIX DESIGN

PAY ITEMS
- Nominal Size
  - 401 Section
    - QC/QA HMA 5, 76, SURFACE 9.5 mm
  - 400 Section
    - Aggregate Reqm’ts
    - PG Binder

5 (5: Stability, 1: Durability)
- ESAL RANGE calculated from traffic and percent trucks for each project
  - 1 Low Traffic
  - 5 High Traffic
PAY ITEMS

Nominal Size

401 Section

QC/QA HMA 5, 76, SURFACE 9.5 mm

400 Section

Aggregate

Req'ts

PG Binder

76 (76: Stability, 22: Cracking)

PG Binder 76 – 22 all binders are designed for project based on LTPP's SHRP Bind Computer Program

PAY ITEMS

Nominal Size

401 Section

QC/QA HMA 5, 76, SURFACE 9.5 mm

400 Section

Aggregate

Req'ts

PG Binder

SURFACE (Surface Friction)

Mixture Designation controlling surface aggregate type and quality of aggregates

PAY ITEMS

Nominal Size

401 Section

QC/QA HMA 5, 76, SURFACE 9.5 mm

400 Section

Aggregate

Req'ts

PG Binder

9.5 mm (Rideability)

Name of mixture
INDOT SPECIFICATIONS
- SPECIFICATION BOOK
- SUPPLEMENTAL SPECS
- SPECIAL PROVISIONS

CONTRACT DESIGN ISSUES
- Mix Design Method
  - SUPERPAVE (401)
- Binder Selection (Project)
  - PG Binder (902)
- Aggregate Selection
  - Fine Aggregate (904 / 904.02)
  - Coarse Aggregate (904 / 904.03)

VOLUMETRIC PROPERTIES
- AIR VOIDS
- VMA
- BINDER CONTENT
- DENSITY

PLATE SAMPLE

Taking a Core Sample

VOLUMETRIC ACCEPTANCE
VOLUMETRIC ACCEPTANCE
- 10 % VMA
- 20 % Binder Content
- 35 % Air Voids
- Gyratory Compactor Samples
- 35 % Density

2003 QC/QA HMA
- Surface
  - 1,509,000 Tons/Mg
  - 2,514 Sublots
- Intermediate
  - 1,449,000 Tons/Mg
  - 1449 Sublots
- Base
  - 1,087,000 Tons/Mg
  - 1087 Sublots
- Total – 4,045,000 Tons/Mg

Referred to M & T
- VMA – 0
- Binder Content – 0
- Gyratory Low Voids – 34
- Gyratory High Voids – 31*
- Density – 16*
- Total – 80
  * 1 Sublot referred for Voids & Density

Referred to M & T 80 / 5040
- 45 Sublots in Lot 1 (19,16,5,5)
- 12 Sublots in Lot 2 (7,3,1,1)
- 13 Sublots in Lot 3 (2,4,5,2)
- 7 Sublots in Lot 4 (2,2,2,1)
- 0 Sublots in Lot 5 (0,0,0,0)
- 2 Sublots in Lot 6 (1,0,1,0)
- 2 Sublots in Lot 7 (0,0,1,1)

THANK YOU