FIBER REINFORCED CHIP SEAL

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Outline

- What is Fiber Chip Seal
- Why Fiber Chip Seal was designed
- How is the Fiber Chip Seal Applied
- The Benefits of Fiber Chip Seal
- Questions
Fiber Reinforced Chip Seal

- Aggregate
- Emulsion
- Glass Fibers

Diagram:
- Aggregate
- Binder
- Chopped glass fiber
- Binder
- Cracked surface
Utilize the Best properties of both products

Combine Emulsion with Glass Fiber’s

Asphalt Emulsions = *the waterproof membrane*

Glass Fiber Strands = *the ability to withstand stresses and give enhanced tensile properties (bridge the cracks)*
Fiber Reinforced Chip Seal Type A & B

**Type A**
- Polymer Modified Fiber Chip Seal Asphalt Emulsion
  - $0.4 - 0.6 \text{ gal/sy}$
- Fiberglass
  - 2 - 3 oz/sy
- Aggregate
  - 17 - 25 lbs/sy
  - $\frac{1}{2}$", 3/8" or $\frac{3}{4}$" and combination

**Type B**
- Polymer Modified Fiber Chip Seal Asphalt Emulsion
  - $0.35 - 0.45 \text{ gal/sy}$
- Fiberglass
  - 3 - 4 oz./sy
- Aggregate
  - 10 - 15 lbs/sy
  - $\frac{3}{4}$" blinding aggregate

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**Type A**
- Wearing Surface

**Type B**
- Interlayer
Fiber Reinforced Chip Seal was designed to:

- Enhance tensile strength and reduce reflective cracking.
- To be quickly applied and easily shaped.
- Has great wearing as well as tensile properties.
- Used at various levels in the pavement structure. (base, levelling & wearing)
Benefits of Fiber Reinforced Chip Seal

- Slows propagation of cracks

Penn State Study Field Cores

- Crack Terminates
- No Treatment
- Crack Propagates through overlay

FRSC Interlayer
Quickly applied and easily shaped

Typical application speed is 220 - 260 ft./min
City of Calabasas

Type II Slurry Seal over FRCS vs. Type II Slurry Seal without FRCS

These pictures were 10 months after construction
Groveton, TX

21 months after construction
Old US Hwy 1

FRCS

Overlay
FIBER REINFORCED CHIP SEAL

The Right treatment, to the Right road at the Right time

Thank You