Full Depth Reclamation

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Full Depth Reclamation (FDR)

What is FDR?

Bituminous pavement needing repair

FDR Example

- Overlay
- 8-12 inches stabilized material
- Granular base
- Soil
Stabilization/FDR

- Performed on wide variety of materials
- Heavy duty and long service life
- Contributes structurally .30 or better
- Permanent
- Primary, Secondary, Neighborhood streets, and Parking Lots!
Moisture infiltrates base:
- Through high water table
- Through capillary action
- Causes softening, lower strength, and reduced modulus

Cement stabilization:
- Reduces permeability
- Helps keep moisture out
- Maintains high level of strength and stiffness even when saturated
Strength vs. Cement Content

Unconfined Compressive Strength (psi)

Cement content by weight (%)

Target: 300 psi
Curing

- Ensures surface durability and normal strength gain

Curing Methods:
- Moist Cure
- Asphalt Emulsion
- Chip Seal
What roads are Candidates?

- Distress from base failure
- Distorted section
- Full depth patching exceeding 15%
- Sections that need structural upgrade
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Keys to Success

- Pavement & material assessment
- Engineered mix design
- Choose correct additive for the application
- Performance-related specifications
- Construction guidelines & QC specs