

# “Recycling with FDR”

RMACES In Place Recycling  
Session 2/19/20  
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## Stabilized Full Depth Reclamation (SFDR)



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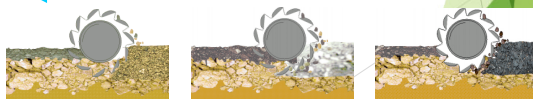
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## Stabilized Full Depth Reclamation Types of SFDR

- ▶ **Mechanical stabilization** - FDR without addition of binder (Pulverization)
- ▶ **Chemical stabilization** - FDR with chemical additive (Calcium or Magnesium Chloride, Lime, Fly Ash, Kiln Dust, Portland Cement, etc.)
- ▶ **Bituminous stabilization** - FDR with asphalt emulsion, emulsified recycling agent, or foamed/expanded asphalt additive



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**Stabilized Full Depth Reclamation (SFDR)**  
**The Construction Process**

1. Pulverize, blade & lightly compact before reclamation
  - Aids in material sizing if additive is added later
  - Corrects road profile, if needed
  - May not be necessary with very powerful reclaimers
2. Adjust moisture, reclaim/stabilize & mix additive (if applicable) with 6-10 inches of in-place with reclaimer or recycling train
  - Bituminous & granular material or granular material

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**SFDR**  
**The Construction Process**

3. Compact
  - Padfoot roller
  - Blade to desired profile & remove pad marks
  - Final compaction - pneumatic and/or steel rollers
4. Cover with appropriate wearing surface after curing

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**SFDR**  
**Keys to Success**

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




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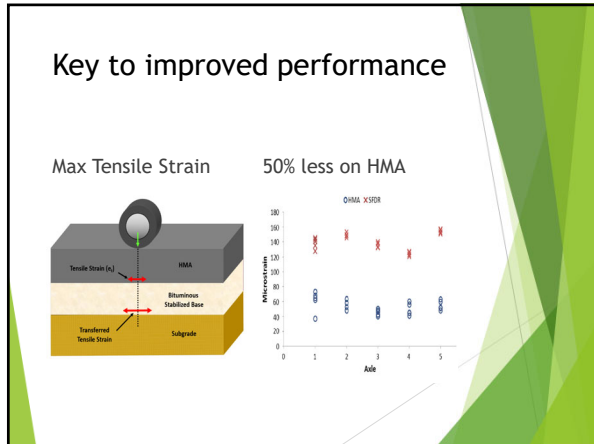
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- ### Recycling Pitfalls/ Need for Best Practices
- ▶ Unrealistic expectations from poor research conclusions
  - ▶ Proprietary product performance claims
  - ▶ Lack of proper up front assessment work
  - ▶ Product/Process selection

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