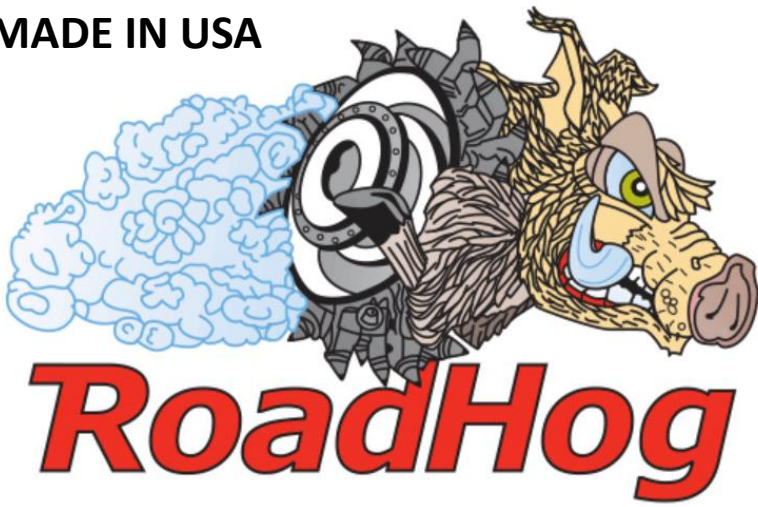


MADE IN USA



Engine Driven  
Equipment  
Self contained  
without any external  
electrical or  
hydraulics to  
connect/Power

## General Idea & Analysis

# Full-Depth Reclamation



**THE BEST SOLUTION FOR  
STRENGTHENING, WIDENING AND  
UPGRADATION OF ROAD WITH HARD/  
PAVED SHOULDER.**

*Saves Money and Natural Resources*



## What is Full-Depth Reclamation?

Full-depth reclamation (FDR) rebuilds worn out asphalt pavements by recycling the existing roadway. The old asphalt and base materials are pulverized, mixed with cement and water, and compacted to produce a strong, durable base for either an asphalt or concrete surface.

### Recycling Saves Money and Natural Resources



Full-depth reclamation uses the materials from the deteriorated asphalt pavement, and, with the addition of cement, creates a new stabilized base.

A surface consisting of a thin bituminous chip seal, hot-mix asphalt, or concrete completes the road. The recycled

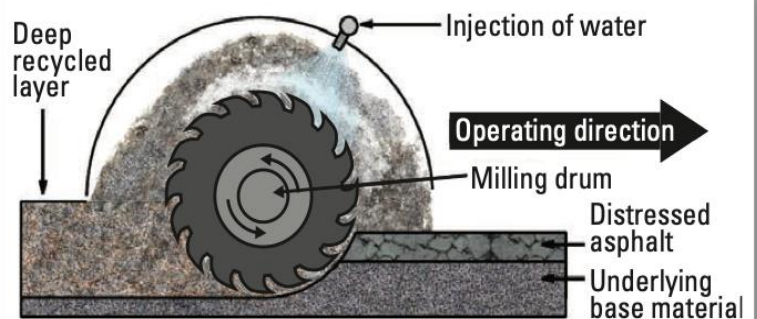
base will be stronger, more uniform, and more moisture resistant than the original base, resulting in a long, low-maintenance life.

*Recycling costs are normally at least 25 to 50 percent less than the removal and replacement of the old pavement.*



## Material Conservation: A Wise Choice

Conserving construction materials through recycling with cement makes smart economic and strategic sense. A century of modern growth and urbanization in America has depleted once plentiful aggregate supplies. Frequently, aggregates either come from distant quarries at great expense or from local sources offering only marginal quality. Continuing to exhaust these valuable resources to rebuild existing roads only propagates and accelerates the problem.





## Full-depth reclamation has numerous benefits, including the following:

- Cost-effectiveness
- Increased structural capacity
- Increased durability (compared to granular base materials)
- Opportunity to improve roadway geometry
- Shortened construction schedule and improved staging
- Early opening to traffic
- Reduced impacts on the community during construction
- Reduced carbon footprint

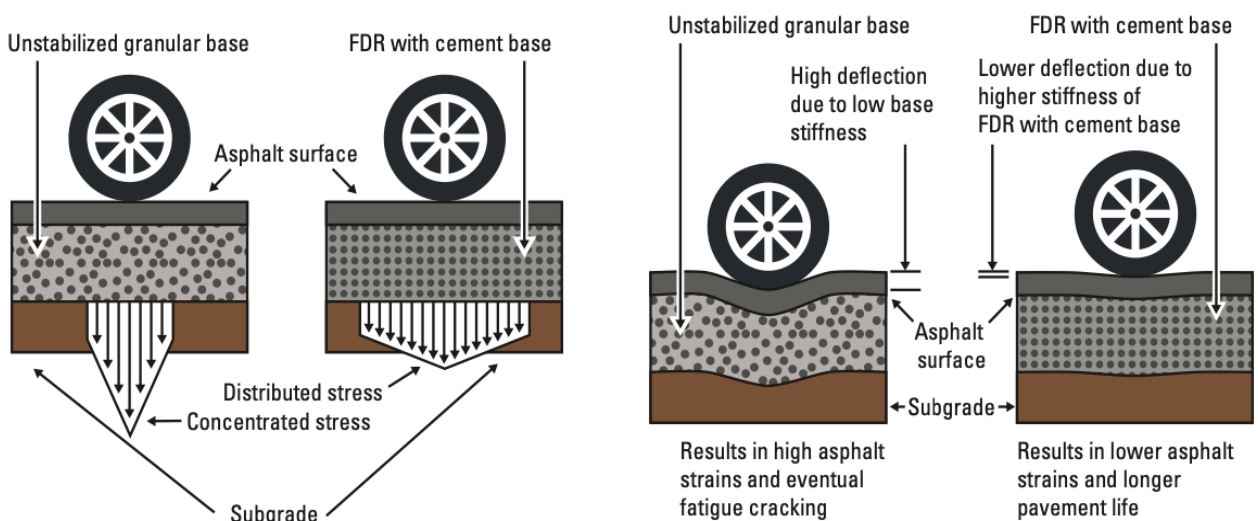
By using in-place materials, FDR does not require the existing pavement to be removed from the site, unless a small amount of material must be removed to retain the existing elevation. Full-depth reclamation also reduces the amount of new material to be hauled to the site compared with methods that require granular material to be trucked to the site. By limiting the effort involved in removing and disposing of existing material and in hauling and placing new material, FDR saves time and money, minimizing hauling and labor costs compared with remove-and-replace construction methods.





## About FDR

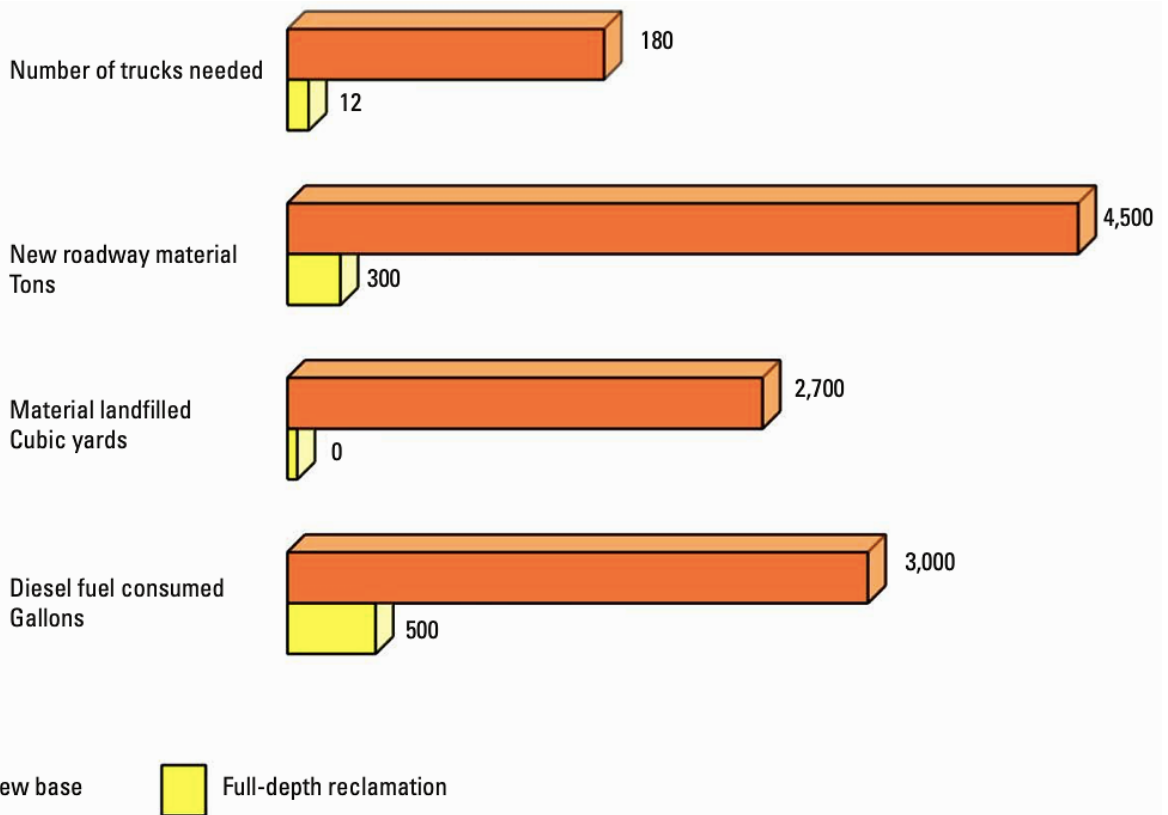
- Full-depth reclamation with cement increases the structural capacity of the new roadway by providing a stronger and more consistent base. The pulverized, stabilized, and compacted pavement and subsurface layers become a new roadway base with an improved structural capacity. With a cement-stabilized FDR base, the thickness of the new surface course can be decreased.
- The strong uniform support provided by FDR with cement results in reduced stresses on the subgrade, particularly when the surface course is asphalt. In fact, a thinner cement-stabilized FDR layer can reduce subgrade stresses more than a thicker untreated aggregate base layer. Subgrade failures, potholes, and road roughness are thus reduced. The slab-like characteristics and beam strength of cement-stabilized FDR bases are unmatched by granular bases, which can fail when aggregate interlock is lost.
- In addition, compared to an unstabilized granular base, the stiffer base reduces deflections due to traffic loads, resulting in lower strains in an asphalt surface. This delays the onset of surface distresses, such as fatigue cracking, and extends pavement life.





## SAVINGS IN DEPLOYMENT OF TRUCKS

Based on : 1KM-7.5 Meter Wide Road and 150 mm Base



## Early Opening to Traffic

The completed FDR with cement layer can be opened to traffic after three days of curing if adequate stiffness is developed in the cement-stabilized FDR layer.

For more information, please contact:



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