Full Depth Reclamation (FDR) is a rehabilitation technique in which the full flexible pavement section and a predetermined portion of the underlying materials are uniformly crushed, pulverized or blended, resulting in a stabilized base course. This process is a cost effective, environmentally friendly pavement rehabilitation alternative to traditional methods of reconstruction.

**Features**
- Completely eliminates existing cracking pattern
- Re-uses existing roadway material to save on costs
- Machines uniformly size material for shaping and compaction
- Creates a “new” homogenous base suitable for various types of overlays

**Benefits**
- Reduces costs compared to traditional methods of reconstruction
- High quality base material is produced right on the job
- Work is fast getting the traveling public back on the road quicker
- Sound base is formed providing a stable platform for overlay
- Reclaimed roads last longer compared to overlaid roads with existing cracks
- Significantly lowers the pavements future corrective maintenance costs

**Applications**
- Highways
- Streets and Roadways
- State and Metro Parks
- Airport Runways and Taxiways
- Commercial and Industrial Lots

**Common Uses**
- Pulverization
- Mechanical Stabilization
- Bituminous Stabilization
- Chemical Stabilization
**Pulverization**

Pulverization is a process in which an existing pavement structure is pulverized and blended with a portion of the existing base materials to create a new, homogenous base course. Because no additives are being used, this process is the least expensive Full Depth Reclamation alternative. Pulverization is best suited for areas where base strength is sufficient enough to support the anticipated loads after a surface course overlay.

**Mechanical Stabilization**

Mechanical Stabilization is a process in which granular material, such as crushed stone, gravel or even milled material (RAP) from an existing asphalt roadway is added to improve the in-place materials' gradation and structural stability. Simple gradation analysis will help determine what type and how much granular material to add. Mechanical Stabilization is best suited for low to medium traffic volume pavements exhibiting the typical surface, and minor base defects associated with an aged, oxidized and overloaded pavement.

**Bituminous Stabilization**

Bituminous Stabilization is a process in which a bituminous material is mixed with the reclaimed materials to create a stabilized base that is flexible and resistant to fatigue and cracking. Virgin aggregate is sometimes added to increase the structural capabilities of the base. Small amounts of chemical stabilizers such as cement, lime or fly ash can also be added with or without virgin aggregate to increase retained strength while decreasing moisture susceptibility and cure time. Bituminous Stabilization is best suited for medium to high traffic volume pavements, in similar condition to those described under Mechanical Stabilization.

**Chemical Stabilization**

Chemical Stabilization is a process that allows otherwise unsuitable on-site roadway materials to be turned into a strong, structural base. Typical additives being used in this process, either alone or in combination with each other are lime, fly ash, Portland cement and various kiln dusts. Proper pre-project evaluation, design and testing are critical with this form of stabilization to insure that the additives proposed will perform to the level expected. During the stabilization process, the minimum workable thickness should be 10". Chemical Stabilization is a process suited for pavements showing severe distress due to insufficient sub-grade, sub-base or base materials.