

## Reclaiming the Pavement Checklist

FDR operations can be performed using a single pass or a two pass operation. Below is a checklist that helps distinguish the two operations, and that can be used when reclaiming the pavement on a FDR project.

Note that some specifications described in the following content may not be the same as the specifications followed by your agency. Always check with your State agency's standards and specifications when using these guidelines.

### Sections

- **Operation Types**
- **Passes vs. Coverages**
- **Pulverization Pass**
- **Mixing Pass**
- **Depth of Cut**

### Operation Types

- Single pass operation**
  - Often used with simple pulverization FDR or mechanical FDR
  - Occasionally used with chemical or bituminous stabilization if the reclamation depth is relatively shallow
- Two pass operation**
  - Typically used when chemical or bituminous stabilization agents are used

### Passes vs. Coverages

- Rollers and reclaimers are not as wide as a pavement lane; therefore it takes several passes to completely cover the lane (coverage)**
- In HMA compaction, reference is made to passes of the roller and coverages**
- FDR operations do not typically use the term coverages**

- ❑ However, the reclaimer is typically not as wide as the lane so it will take several passes to cover the full lane width completing the pulverization or mixing passes

### **Pulverization Pass**

- ❑ The first pass of the reclaimer is referred to as the pulverization pass
- ❑ For simple FDR with no addition of a stabilizing agent, a single pass is all that is usually necessary prior to shaping and compaction
- ❑ Water is added to the mixing chamber during the pulverization pass to adjust the moisture content of the reclaimed mixture to the optimum water content for compaction
- ❑ If no stabilizing agents are required, this single pulverization pass can be sufficient to reduce the reclaimed materials to the proper gradation
- ❑ The preferred way to start the first pulverization pass of an asphalt roadway is to have the reclaimer make a cross cut from the roadway shoulder perpendicular to the direction of the succeeding passes
- ❑ The cutting drum is lowered into the softer shoulder material, reducing cutting tool wear and providing a vertical butt-joint in the pavement to work from and compact against
- ❑ Where this is not possible, the alternative is to align the reclaimer with one edge of the first segment and slowly pulverize through the asphalt material into the underlying materials
  - This method causes accelerated cutting tool wear
- ❑ Some bouncing of the cutting drum can also be experienced when the asphalt layer is thick
  - Allowing the reclaimer to creep forward very slowly while cutting through the asphalt pavement will reduce bouncing of the cutting drum.
- ❑ **Pulverization passes:**
  - The first pulverization pass of the reclaimer is along the outer edge of the roadway for the segment distance

## Full Depth Reclamation (FDR) AT-TC3MN027-18-T1-JA04

- The second pulverization pass is back to the starting point along the opposite outer edge of the roadway segment
  - The third and subsequent pulverization passes are inside the previous passes until the complete roadway width is pulverized
  - If no mixing passes of the reclaimer are required, it then moves to the next segment to begin the first pulverization pass
- Roadway and reclaimer widths do not normally match, and several passes are required to pulverize the roadway treatment width**
  - This results in a series of longitudinal joints and overlap between passes**
  - Check that longitudinal and transverse joints overlap the minimum specified amount**
  - Typical minimum overlap widths between longitudinal joints are 6 inches, and 2 feet between transverse joints**

### Mixing Pass

- The second pass of the reclaimer in a two-pass operation is the mixing pass**
- Performed after a dry stabilizing agent has been applied to the roadway or while a liquid stabilizing agent is applied by the on-board liquid additive system**

### Depth of Cut

- Depth of cut can be controlled manually or automatically through the reclaimer's on-board sensing system**
- On most reclaimers, depth of cut can also be controlled on either side of the cutting drum**
- To reduce the risk of a thin layer of untreated reclaimed material being left beneath the stabilized layer, the depth of the pulverization pass should be between 1 to 2 inches less than the final mixing pass**