

Types of Hot In-place Recycling (HIR) Checklist

Below is an overview of the types of HIR. The HIR techniques described below provide owner agencies with cost-effective and sustainable methods to repair their aging pavements. HIR is a pavement preservation and corrective maintenance technique that, when combined with an asphalt overlay, can be classified as structural rehabilitation.

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

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General Overview

- Consists of heating and softening the existing asphalt pavement**
- Hot milling/scarifying the existing surface**
- Adding rejuvenating agent**
- Adding additive, if desired**
 - New HMA (admixture)
 - New aggregate
- Mixing**
- Placing and compacting the recycled mixture**

Types of HIR

❑ Surface Recycling

- Heating existing pavement
- Scarifying top 0.75 to 2 inches of existing pavement
- Adding a rejuvenating agent
- Mixing the materials
- Placing and compacting recycled mixture
- Placing surface course

❑ Remixing

- Heating existing pavement
- Scarifying top 0.75 to 2 inches of existing pavement
- Adding a rejuvenating agent
- Adding additive, if desired
- Admixture
- New aggregate
- Mixing the materials in a mixing drum or pugmill
- Placing and compacting recycled mixture
- Placing surface course if desired

❑ Repaving

- Heating existing pavement
- Scarifying top 0.75 to 2 inches of existing pavement
- Adding a rejuvenating agent
- Mixing the materials
- Placing and compacting (simultaneously) an integral asphalt overlay (0.5 to 3 inches thick) on the hot (>200 °F) recycle layer

Uses of HIR

- HIR is a pavement preservation and corrective maintenance technique
- HIR treats distress in the upper surface of the pavement
- Best suited for functional distress and minor structural distress
- Used where one would use mill and fill

Treated Distresses

- Raveling
- Potholes
- Bleeding
- Loss of friction
- Minor rutting
- Corrugations
- Minor shoving
- Cracking
 - Slippage
 - Longitudinal
 - Transverse
 - Reflective
- Poor ride quality
 - Swells
 - Bumps
 - Sags
 - Depressions