IN-PLACE PAVEMENT RECYCLING IMPLEMENTATION

MnDOT is currently implementing in-place recycling techniques as a maintenance and rehabilitation strategy for bituminous pavement structures. The techniques being employed include: Full Depth Reclamation (FDR), Bituminous Stabilized Full Depth Reclamation (SFDR), and Cold In-Place (Partial Depth) Recycling (CIR).

In-place recycling of bituminous pavements has been used in Minnesota for more than ten years at the local level, longer in other parts of the country and the world. MnDOT has constructed 10 state projects since 2010 using a variety of processes and stabilizing additives.

Full Depth Reclamation (FDR) pulverizes the bituminous pavement section and a portion of the underlying base, usually at a 50/50 ratio of pavement-to-base. This results in a base to place a new pavement surface.

Bituminous Stabilized Full Depth Reclamation (SFDR) pulverizes the bituminous pavement section and a portion of the underlying base, but typically at higher ratios of 70/30 to 90/10 of pavement-to-base. This results in an improved base on which to place a new pavement surface, note that a stabilized base generally requires less surfacing than an FDR base.

Cold-In Place (Partial Depth) Recycling (CIR) processes the bituminous pavement only without the underlying base materials. This results in a renewed layer that needs to be covered with a pavement surface.

In-Place Recycling and MnDOT
The Grading and Base Unit of the Pavement Section (located in the MnDOT Office of Materials and Road Research) provides technical support and training for In-place Recycling Projects to both state and local agencies. In addition, current products under development include a manual on the use and construction of in-place recycling, special provisions, test procedures and forms for a successful construction project.

For More Information and for Additional Resources:
www.state.mn.us/materials/gradingandbase

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