

Problem:

Cracked road

Solution:

Cold in-place
recycling

Success Story: Cold In-Place Recycling

Utah State Hwy 191 was severely cracked and funding was limited. These two common factors caused the Utah Department of Transportation (UDOT) to employ a progressive roadway solution.

UDOT looked to a double/double Cold In-Place Recycling (CIR) as the answer. This process includes Cold In-Place Recycling overlaid with a cold central plant recycling mix and sealed with a double chip seal. The costs and required structural coefficients of the cold recycled pavement were comparable to those of conventional paving methods, therefore the state felt comfortable moving forward with this process.

The total Structural Number of the existing section of roadway was 1.68; the proposed redesign would bring it up to 2.48. For Hwy 191 from mileposts 40 to 45, a 4-inch Cold In-Place Recycling and 1.5-inch hot mix asphalt overlay were used. From mileposts 12.8 to 21.3, a 3-inch Cold In-Place Recycling, with a 3-inch cold central plant recycling overlay and a double chip seal wearing surface were used.

The project was completed in 54 days, and total funds expended came to \$3.6 million — a 26% savings over conventional mill and fill.

The improvements in the distress index speak for themselves. The ride quality increased from 46 to 83.19. The environmental cracking index went from 56.2 to 95.41, and the rutting index improved from 70.3 to 74.97. Overall, the condition of this section of Hwy 191 increased from 65.3 to 88.22.

Due to the massive improvement in roadway quality and the impressive cost savings, UDOT is expected to use Cold In-Place Recycling again in the future.

For inquiries, contact:
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