Cape seal was the treatment of choice to extend the service life of a 32 lane mile section of SR-260. By utilizing this treatment over the alternative solution, the agency was able to save $3 million, freeing up funds to treat more miles.

- Saved $3 million over the alternative solution
- Reduced greenhouse gas emissions
- Extended service life for 10-12 years

BACKSTORY:

On weekends and holidays, travelers use SR-260 in the Heber-Overgaard, Arizona, area extensively to access the Arizona high country and mountains. Depending on the day, this road has an average daily traffic count (ADT) between 5,700-11,000.

PROBLEM:

Thirty-two lane miles of SR-260 were experiencing minor block and longitudinal cracking, minor raveling and oxidation.

> “The cape seal project transformed a deteriorating segment of roadway into a very nice roadway, and the project exceeded all the goals and expectations.”
>
> *— Kevin Robertson, PE, Surface Treatment Engineer & Pavement Condition & Evaluation Manager*

SOLUTION:

The agency determined a cape seal would be the best and least costly solution to help prevent moisture intrusion long term and provide a strong wearing course. By utilizing a cape seal, the agency was able to save approximately $3 million when compared to the alternative solution. Prior to the cape seal application, all cracks ¼ inch and greater were sealed, according to best practices to help further ensure longer lasting resistance to return cracks. Additionally, a few small sections, including areas where minor raveling was present, were milled and leveled prior to cape sealing.

The first course of the cape seal was a chip seal using ¾-inch pre-coated aggregate, which was followed by micro surfacing or slurry seal as the final course, depending on access to routes. Micro surfacing was applied in areas where such access could expose the road to distresses caused by consistent braking and turning. Slurry seal was applied in areas less subjected to braking and turning. Both would be applied at 30 pounds per square yard.

The agency plans to evaluate the performance of both systems (micro and slurry) for future reference in similar scenarios. In addition to being evaluated by the agency, this cape seal project was selected as a pilot project for an initiative sponsored by the Federal Highway Administration, which aims to show how the right treatment on the right road at the right time can lead to long-term benefits for road networks across the U.S.

PHOTOS:

First course of the cape seal application in progress on SR-260.

Completed project on SR-260 in Arizona

Crews wrap up this completed project on SR-260 in Arizona.