

NCHRP 20-44(26) Demo Project Virginia DOT Chip Seal

Project Overview

VDOT paved about a mile long single-layer chip seal using a special provision developed based on current AASHTO specs. Application rates (both emulsion and aggregate) at design level coincided with typical VDOT application rates. During the construction, there were issues with the spreader and aggregate application was not uniform, especially transverse direction.

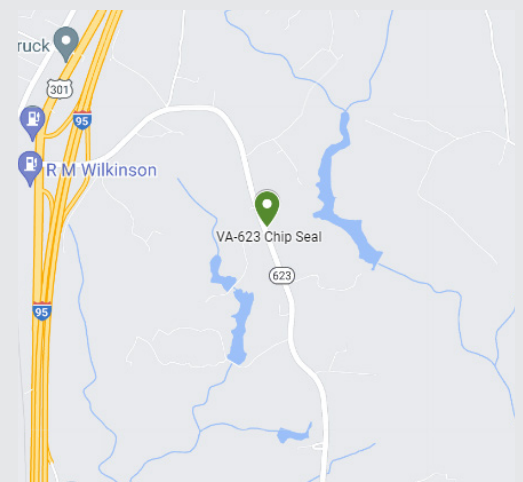
Design methodology on the project was different based on AASHTO specs. VDOT uses prescribed application rates for emulsion and aggregates (calculated at a fixed specific gravity based on Asphalt Institute method), whereas the demo used the board test (AASHTO spec). Number and type of rollers were different. 3 rollers, with one being steel drum and two being rubber rollers, were used whereas VDOT typical practice is two steel drum rollers.

Most of the existing state spec was in-line with the AASHTO standards, but having a test method to determine application rates is much better than relying on prescribed rates. Going forward, the design methodology is anticipated to be incorporated into the spec as a starting point with the application rates. VDOT is having another trial this year due to the issues encountered the the aggregate spreader.



Project Details At-a-Glance

Agency:	Virginia DOT
Route/Location:	VA-623 Prince George County
Area/Length:	Approximately 1 mile
Materials:	CRS-2L (emulsion)
Application Rates:	Emulsion - 0.32 gal/SY Aggregate - 16 lbs/SY





Pre-treatment condition



Pre-treatment condition



Aggregate application



Rolling of the chip seal



Post-application surface



Close-up of the post-application surface