

## WSDOT GSP Pertaining to Reclaimed Asphalt Shingles (RAS)

### Summary

The Washington Department of Transportation (WSDOT) originally published their General Special Provisions (GSP) pertaining to the use of reclaimed asphalt shingles (RAS) in hot mix asphalt (HMA) on August 2012. WSDOT has amended selected subsections of the GSP since then. The most current GSP is posted on the WSDOT web pages.

In order to use RAS-containing HMA mixes on state roads or projects that use state funding, asphalt paving contractors must have a mix design that meets the WSDOT GSP requirements.

This summary, developed by King County LinkUp, highlights the GSP requirements relating to RAS as available via the WSDOT web site on July 14, 2014.<sup>1</sup>

- ◆ RAS shall not exceed 5 percent of the total weight of the HMA.
- ◆ RAS gradation: 100 percent must pass ½-inch sieve.
- ◆ Extraneous materials: shall not exceed 2.0 percent by mass as determined on material retained on the No. 4 sieve.
- ◆ Total binder contribution from RAP+RAS shall not exceed 40 percent of total binder content of the HMA.
- ◆ Testing of recovered RAP and RAS binders to determine the percent of recycling agent and/or grade of new asphalt binder needed to meet the PG grade specified in the contract.
- ◆ The final blend of recycling agent, recovered and new asphalt must meet the performance graded asphalt binder (PGAB) requirements specified in the Contract.
- ◆ Asbestos fiber limits shall be based on testing procedures and frequencies established by the specifying jurisdiction and state/federal regulatory agencies.
- ◆ Use of RAS with warm mix asphalt (WMA) processes prohibited.
- ◆ If a recycling agent is used to rejuvenate the recovered asphalt it must meet the specifications provided in the GSP.
- ◆ Volumetric Properties for: voids in mineral aggregate (VMA), voids filled with asphalt (VFA), air voids (Va), etc. of final product must meet HMA mix design requirements.
- ◆ Other mix design requirements include rutting and moisture susceptibility testing with a Hamburg wheel-track tester and a fatigue cracking susceptibility test using an indirect tensile strength test.

*Find the full detail of the WSDOT Construction General Special Provisions  
(Division 5 - Surface Treatments and Pavements) at  
<http://www.wsdot.wa.gov/Business/Construction/GSPs.html>*

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<sup>1</sup> This summary and index document is provided for information purposes only. Please note that all GSP specifications and testing requirements (whether related to RAS or not) are not included in the above summary. Industry practitioners should consult the actual WSDOT GSP. King County accepts no responsibility or liability for actual use of RAS in a paving project regardless of the use of this document. Contracting agencies and Shingle Recycling Operators are encouraged to contact WSDOT staff directly with any questions or requests for further information.