

Summary of State Specifications on RAP (11/17/06)

State	Maximum Amount of RAP			General Information
Alabama	Type Mix	% RAP	Remarks	<p>The total amount of RAP allowed in SMA is limited to 15% by weight {mass} of aggregate.</p> <p>RAP containing gravel or fine aggregate manufactured from gravel with a bulk specific gravity less than 2.550 is not allowed in SMA.</p> <p>The Contractor may use reclaimed material that was previously milled from another Alabama Department of Transportation project provided the source can be identified in regard to route, mile {kilometer} post, and layers (based on thickness) milled. The reclaimed material must be traceable back to the original job-mix formula.</p>
	PATB	0	Permeable Asphalt Treated Base	
	OGFC	0		
	SMA	15	All layers-No RAP with Chert Gravel	
	SP&IMP	0	Wearing layers- if RAP with Chert Gravel	
	SP&IMP	15	Other layers- if RAP with Chert Gravel	
	SP&IMP	20	All layers- if RAP without Chert Gravel	
		<p>* SP refers to "Superpave"</p> <p>* IMP refers to "Improved bituminous"</p> <p>No recycled asphalt pavement shall be allowed in Polymer Modified Open Graded Friction Course.</p>		
Alaska			-	-
Arizona			-	-
Arkansas	30% RAP Max			<p>This item shall consist of an asphalt concrete base, binder, or surface course mixed at a central plant and constructed on the completed and approved sub-grade, base, or surface course in conformance with the lines, grades, and dimensions shown on the plans, and according to the provisions of these specifications.</p> <p>The mixture shall contain a minimum of 70% virgin material.</p>
California	Cal-Trans allows 15% RAP in new HMA			Reportedly not commonly used (Rita Leahy)

Colorado	The hot bituminous pavement shall not contain more than 15 percent reclaimed asphalt pavement.													
Connecticut	<p>The blend percentage of RAP shall be a maximum of 40% reclaimed material; a maximum of 15% RAP may be routinely used after prior notification and approval by the Director of Research and Materials.</p> <p>RAP may be used in class 1, 2, 3, or 4.</p>													
Delaware	<p style="text-align: center;">Mixtures</p> <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding-right: 20px;">Deep lift</td> <td style="padding-right: 20px;">Type B</td> <td>Type C</td> <td></td> </tr> <tr> <td>Drum</td> <td>20</td> <td>10</td> <td>10</td> </tr> <tr> <td>Batch</td> <td>20</td> <td>10</td> <td>10</td> </tr> </table> <p>Deep lift refers to "Base Course" Type B refers to "Dense graded base and binder course" Type C refers to "Dense graded surface course"</p>	Deep lift	Type B	Type C		Drum	20	10	10	Batch	20	10	10	In all mixture types, the contribution of the RAP asphalt cement shall not exceed 50% of the design asphalt content for the recycled mix.
Deep lift	Type B	Type C												
Drum	20	10	10											
Batch	20	10	10											
Florida	<p>The use of RAP material will not be permitted for asphalt concrete friction course pavement</p> <p>ESAL<10,000,000, limit the amount of RAP material used in the mix to a maximum of 50 percent by weight of total aggregate.</p> <p>ESAL>10,000,000, limit the amount of RAP material used in the mix to a maximum of 30 percent by weight of total aggregate.</p>	<p>When using a PG 76-22 Asphalt Binder, limit the amount of RAP material used in the mix to a maximum of 15 percent by weight of total aggregate; when using PG 64-22, limit the amount of RAP material used in the mix to a maximum of 20-29 percent by weight of total aggregate; use Recycling agent, if RAP ≥ 30.</p> <p>Use RAP from an FDOT approved stockpile or RAP that has an FDOT furnished Pavement Composition Data Sheet.</p> <p>Provide RAP material having a minimum average asphalt content of 4.0 percent by weight of total mix. The Engineer may sample the stockpile to verify that this requirement is met.</p>												
Georgia	The maximum ratio of RAP material to the recycled mixture is 40 percent for continuous mix type plants and 25 percent for batch type plants.	Add lime to recycled mixtures at a minimum rate of 1 percent of the virgin aggregate portion, plus a minimum of 0.5 percent of the aggregate in the reclaimed asphalt pavement (RAP) portion.												

					Do not use RAP materials that contain alluvial gravel or local sand in any mixture placed on interstate projects except for mixtures used in shoulder construction. When used in shoulder construction, limit RAP containing local sand or alluvial gravel so that the sand or gravel contributes no more than 20% of the total aggregate portion of the mix.
Hawaii		-			-
Idaho	Reclaimed asphalt pavement (RAP) shall not be allowed as part of the Job Mix formula unless specified in the contract.				Stockpiles of reclaimed asphalt pavement (RAP) shall be limited to 10 ft (3 m) in height and no equipment will be allowed on top of the stockpile.
Illinois	ESALs (millions)	Ndes	% RAP		<p>If the Contractor is allowed to use more than 15 percent RAP, as specified on the plans, a softer performance graded binder may be required as determined by the Engineer.</p> <p>RAP will not be permitted in mixtures containing polymer modifiers.</p>
			Binder/Leveling	Surface	
	<0.3	30	30	30	
	0.3-3	50	25	15	
	3-10	70	15	10	
	10-30	90	10	10	
	>30	105	0	0	
	RAP containing steel slag will be permitted for use in top-lift surface mixtures only.				
Indiana	Recycled materials shall not be used in ESAL (> 3,000,000) surface mixtures and open graded mixtures.				<p>Mixtures containing 15.0% or less RAP shall use the same grade of binder as specified.</p> <p>The binder for mixtures containing greater than 15.0% and up to 25.0% RAP shall be reduced by one temperature classification, 6°C, for both the upper and lower temperature classifications.</p> <p>When only RAP is used in the mixture (i.e., no shingles), the RAP shall not exceed 25.0% by weight (mass) of the total mixture.</p>

Iowa	<p>Not more than 30% of the asphalt binder in a final surface course mixture shall come from the RAP.</p> <p>Up to 10% of unclassified RAP may be incorporated into intermediate mixes for under 3,000,000 ESALs and all base mixes</p>	<p>Designated RAP : When RAP is taken from a project, or is furnished by the Contracting Authority, the contract documents will indicate quantity of RAP expected to be available.</p> <p>Certified RAP : The RAP shall be from a known source and of the proper quality for the intended use, with no material added from other sources during the time in stockpile. The Contractor shall certify to this before use. RAP from not more than two known sources at a time will be allowed.</p> <p>Certified RAP may be used in the base and intermediate course of mixes for which the RAP aggregate qualifies. RAP may also be used in surface courses when authorized by the Engineer.</p> <p>A certified RAP stockpile shall be sealed or protected.</p> <p>Unclassified RAP shall not be used in surface courses.</p> <p>Unclassified RAP shall not be used in intermediate or base mixtures containing designated or certified RAP.</p> <p>The Engineer will inspect the unclassified RAP stockpile visually for uniformity. Unclassified RAP stockpiles containing concrete chunks, grass, dirt, wood, metal, coal tar, or other foreign or environmentally restricted materials shall not be used, unless approved by the Engineer.</p>
Kansas	-	-
Kentucky	<p>Do not use reclaimed materials in open-graded friction courses.</p> <p>Use reclaimed asphalt pavement (RAP) from Department projects or other approved source in hot asphalt mixtures, provided mixture requirements are satisfied.</p>	<p>When RAP in asphalt mixtures requiring polish-resistant aggregate, provide documentation to the Engineer's satisfaction that the reclaimed material consists of a given portion of polish-resistant aggregate.</p>

	Kentucky Method 64-427 implies over 30% RAP can be used. No maximum value identified.	
Louisiana	<p>Reclaimed asphaltic pavement (RAP) will not be allowed in final wearing courses on roadway travel lanes and airports.</p> <p>Base courses containing 20-30 percent RAP shall use PG 58-28 asphalt cement and shall meet the viscosity limits</p> <p>Up to 20% RAP could be used for Type 3 mixture (1" Nominal, Binder Course).</p> <p>Up to 20% RAP could be used for Type 8 mixture (1" Nominal, Binder Course).</p> <p>Up to 30% RAP could be used for Type 5 mixture (1" Nominal, Base Course)</p> <p>All shoulder wearing courses may include up to 20% Reclaimed Asphaltic Pavement (RAP).</p>	<p>Reclaimed asphaltic pavement shall be stockpiled separate from other materials at the plant and will be subject to approval prior to use.</p> <p>Mixtures containing a maximum of 20 percent RAP will have no viscosity limits.</p>
Maine	<p>The Contractor may use a maximum of 15% reclaimed asphalt pavement (RAP) in any base, binder, surface, or shim course.</p> <p>The Contractor may be allowed to use more than 15% RAP, up to a maximum of 25% RAP, in a base, binder, or shim course provided that PG 58-34 asphalt binder is used in the mixture.</p>	
Maryland	<p>1. 1. When using 15 percent or less of RAP, binder viscosity adjustments are not required.</p>	<p>The Contractor may elect to use crushed, recycled asphalt pavement (RAP) material or a maximum of 5 percent roofing shingles from manufacturing waste.</p> <p>The use of RAP may be considered for applications where higher polish value aggregates are required. Approval for use will be on an individual project basis.</p> <p>Crushed glass shall not be used in surface mixes. RAP and roofing shingles from manufacturing waste shall not be used in gap-graded mixes, surface mixes requiring high polish aggregate, or mixes requiring elastomer type polymer binder.</p>

Massachusetts	The maximum amount of RAP for surface courses shall be 10% except no RAP will be allowed in the open graded friction course (OGFC).	The proportion of RAP to virgin aggregate shall be limited to a maximum of 40% for drum mix plants and 20% for modified batch plants.														
Michigan	0-17 % RAP binder by total binder weight, no adjustment 18-27 % RAP binder by total binder weight, one grade lower for high temperature or using blending chart for high and low temperatures. >28 % RAP binder by total binder weight, the binder grade is selected by using blend chart for high and low temperatures.	In mixtures containing RAP, the required minimum fine aggregate angularity must be met by the virgin material.														
Minnesota	The Contractor may use up to 30 percent recycled asphaltic pavement (RAP) in all wearing layers and High Volume (HV) non wear layers. (HV, >3 millions ESAL) Medium Volume (MV) mixtures may contain a maximum of 30% RAP in the non wear layers above 90 mm (3.5 inch) and a maximum of 40% RAP in layers 90 mm (3.5 inch) and greater in depth from the surface. (MV, 1-3 millions ESAL) Low Volume (LV) mixtures may contain a maximum of 40% RAP in the non wear layers. (<1 millions ESAL)															
Mississippi	<table border="1"> <thead> <tr> <th>HMA mixture</th> <th>Max. RAP %</th> </tr> </thead> <tbody> <tr> <td>4.75mm</td> <td>0</td> </tr> <tr> <td>9.5 mm</td> <td>15</td> </tr> <tr> <td>12.5mm</td> <td>15</td> </tr> <tr> <td>12.5mm</td> <td>30</td> </tr> <tr> <td>19.0mm</td> <td>30</td> </tr> <tr> <td>25.0mm</td> <td>30</td> </tr> </tbody> </table>	HMA mixture	Max. RAP %	4.75mm	0	9.5 mm	15	12.5mm	15	12.5mm	30	19.0mm	30	25.0mm	30	
HMA mixture	Max. RAP %															
4.75mm	0															
9.5 mm	15															
12.5mm	15															
12.5mm	30															
19.0mm	30															
25.0mm	30															
Missouri	Up to 15 percent of RAP may be substituted in lieu of mineral aggregate	All Reclaimed Asphalt Pavement (RAP) material not having a direct verifiable tie to the MoDOT system shall be tested in accordance with AASHTO TP 58, Method for Resistance of Coarse Aggregate Degradation by Abrasion in the Micro-Deval Apparatus. Material with a Micro-Deval percent loss of more than 20 shall not be used.														

Montana	-	-																
Nebraska	<table border="0"> <thead> <tr> <th>Asphalt concrete</th> <th>% RAP</th> </tr> </thead> <tbody> <tr> <td>SPS</td> <td>50</td> </tr> <tr> <td>SP0</td> <td>45</td> </tr> <tr> <td>SP1</td> <td>35</td> </tr> <tr> <td>SP2</td> <td>25</td> </tr> <tr> <td>SP3</td> <td>25</td> </tr> <tr> <td>SP4</td> <td>15</td> </tr> <tr> <td>SP5</td> <td>15</td> </tr> </tbody> </table> <p>* These mix designations essentially confirm to AASHTO traffic levels. SPS and SP0 are low traffic volume; SP1 is equal to 0.3 million ESALs; SP5 is equal to 30 million ESALs.</p>	Asphalt concrete	% RAP	SPS	50	SP0	45	SP1	35	SP2	25	SP3	25	SP4	15	SP5	15	In recycled asphaltic concrete mixtures with a percent of Reclaimed Asphalt Pavement (RAP) of 25 or less, the asphalt cement shall be AC-10. In recycled asphaltic concrete mixtures with a percent of Reclaimed Asphalt Pavement (RAP) of greater than 25 percent, the asphalt cement shall be AC-5.
Asphalt concrete	% RAP																	
SPS	50																	
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SP4	15																	
SP5	15																	
Nevada	-	-																
New Hampshire	<p>RAP incorporated in wearing courses for both a drum mixer and a batch plant shall not exceed 15 percent.</p> <p>The blend percentage or RAP for a drum mixer shall not exceed 50 percent and for a batch plant shall not exceed 35 percent.</p>	If the source of RAP is unknown, but is of acceptable quality as described above, it will be allowed to a maximum of 15% of the total batch weight.																
New Jersey	<p>Up to 15 percent RAP for Superpave HMA surface course.</p> <p>Up to 25 percent of RAP for base or intermediate course</p>																	
New Mexico	<p>Reclaimed Asphalt Pavement (RAP) shall not be used in the production of Superpave asphalt mixtures.</p> <p>Reclaimed asphalt pavement (RAP) shall not be used in the production of SMA.</p> <p>Reclaimed Asphalt Pavement (RAP) will be permitted in all plant-mix bituminous pavement (PMBP) for Dense-Grade A, B, C, D..</p>																	
New York	<p>(Table 703-09A)</p> <table border="0"> <thead> <tr> <th>Plant type</th> <th>% Reclaimed material</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>Drum</td> <td>70</td> <td></td> </tr> <tr> <td>Batch</td> <td>50</td> <td></td> </tr> </tbody> </table>	Plant type	% Reclaimed material	Max	Drum	70		Batch	50		RAP from each pavement source shall be stockpiled on a free draining base separately from other aggregate or RAP sources.							
Plant type	% Reclaimed material	Max																
Drum	70																	
Batch	50																	

<p>North Carolina</p>	<p>For Type S 12.5D mixes, the maximum percentage of reclaimed asphalt material is limited to 15% and must be produced using virgin asphalt binder grade PG 76-22.</p> <p>Reclaimed asphalt shingle (RAS) material may constitute up to six (6) percent by weight of total mixture for any mix.</p>	<p>Use separate stockpiles for reclaimed asphalt pavements with differences in properties.</p> <p>Reclaimed asphalt pavement (RAP) may constitute up to 50 percent of the total material used in recycled mixtures, except for mix Type S 12.5D and mixtures containing reclaimed asphalt shingle material (RAS).</p> <p>When both RAP and RAS are used, do not use a combined percentage of RAS and RAP greater than 15% by weight of total mixture, unless otherwise approved.</p> <p>15-25%, the virgin binder PG grade must be one grade below the specified grade (both high and low temperature grade).</p>																
<p>North Dakota</p>	<p>Section 407.04 F implies that more than 50% RAP can be used</p> <p>Section 407 has separated specification and pay item for Hot Recycled Bituminous Pavement.</p>	<p>Hot recycled bituminous mix shall not be placed on a damp surface, on a frozen roadbed, or when weather conditions prevent the proper handling or finishing of the bituminous mixtures. Presence of frost particles in the roadbed is sufficient evidence of being frozen. Hot recycled bituminous mix shall not be placed when the air or mat surface temperatures are below the following minimums:</p> <table border="1"> <thead> <tr> <th></th> <th>Surface course</th> <th>subsurface</th> <th>Existing Mat</th> </tr> <tr> <th>Thickness</th> <th>Temp.</th> <th>Temp.</th> <th>Temp.</th> </tr> </thead> <tbody> <tr> <td>1-1/2" or less</td> <td>45F</td> <td>40F</td> <td>40F</td> </tr> <tr> <td>More than 1-1/2"</td> <td>40F</td> <td>35F</td> <td>40F</td> </tr> </tbody> </table>		Surface course	subsurface	Existing Mat	Thickness	Temp.	Temp.	Temp.	1-1/2" or less	45F	40F	40F	More than 1-1/2"	40F	35F	40F
	Surface course	subsurface	Existing Mat															
Thickness	Temp.	Temp.	Temp.															
1-1/2" or less	45F	40F	40F															
More than 1-1/2"	40F	35F	40F															
<p>Ohio</p>	<p>For surface courses with polymer modified asphalt binder, the Contractor may use a maximum of 10 percent reclaimed asphalt concrete pavement. For surface courses, the Contractor may use up to a maximum of 20 percent of reclaimed asphalt concrete pavement.</p> <p>For intermediate courses, the Contractor may use up to a maximum of 35 percent of reclaimed asphalt concrete pavement.</p> <p>For Asphalt Concrete Base, the Contractor may use 10 to 50 percent of reclaimed asphalt concrete pavement</p>																	

Oklahoma	<p>Bituminous mixtures containing up to 25 percent reclaimed asphalt concrete pavement will be accepted for bases and surfaces.</p> <p>For roadways with 0.3 million ESALS or more, bituminous mixtures containing reclaimed asphalt concrete pavement will not be accepted in the wearing course.</p>	
Oregon	<p>No more than 30% RAP material will be allowed in the new HMAC pavement.</p> <p>RAP material will not be permitted in open graded HMAC or Level 4 (very heavy traffic volume and truck traffic) dense graded HMAC wearing courses.</p>	<p>When RAP material is used at a rate of less than 15%, no adjustment to the new asphalt will be required.</p> <p>When utilizing RAP at a rate at or above 15%, the combined RAP and new asphalt shall provide blended properties equivalent to the specified grade. Determine the blended properties according to ASTM D 4887.</p> <p>Determine asphalt cement properties for the RAP material from asphalt cement recovered from the RAP according to AASHTO T 170.</p>
Pennsylvania	<p>Unless the source(s) of RAP and/or RAM (Recycled Aggregate Material) is documented, such that the original SRL (Skid Resistance Level) designation of the coarse aggregate in the reclaimed material is known, limit RAP and RAM to a maximum of 15% of the mix composition.</p>	<p>For bituminous ID courses constructed under RPS (Restricted Performance Specifications) specifications, printed ticket acceptance may be elected if RAP in the reviewed job-mix formula does not exceed 15%.</p> <p>Obtain at least 10 samples from the stockpile at different locations and extract them to determine the average RAP mix composition.</p>
Puerto Rico	<p>The maximum percentage of RAP allowed to be incorporated in surface courses (S-1 and S-2) shall be 5% by weight of total mix.</p> <p>The maximum percentage of RAP allowed to be incorporated in base and leveling courses (B-1, B-2, L-1 and L-2) shall be 10% by weight of total mix.</p>	
Rhode Island	-	-

<p>South Carolina</p>	<table border="0"> <tr> <td>Type Mix</td> <td>% RAP</td> </tr> <tr> <td>Base types 1&2</td> <td>10-30</td> </tr> <tr> <td>Binder types 1&2 and</td> <td></td> </tr> <tr> <td>Surface type 3&4</td> <td>10-25</td> </tr> <tr> <td>Surface type 1</td> <td>10-20</td> </tr> </table> <p>Reclaimed asphalt material will not be allowed in Superpave mixes or Surface Types 1B and 1C.</p> <p>RAP is limited to 15% maximum when introduced in the hot elevator.</p>	Type Mix	% RAP	Base types 1&2	10-30	Binder types 1&2 and		Surface type 3&4	10-25	Surface type 1	10-20	<p>The RAP will be milled material from Department projects. Stockpiles of RAP material shall be separated by project and a sign satisfactory to the Engineer shall be erected and maintained by the Contractor on each stockpile to identify the source(s).</p>
Type Mix	% RAP											
Base types 1&2	10-30											
Binder types 1&2 and												
Surface type 3&4	10-25											
Surface type 1	10-20											
<p>South Dakota</p>	<p>No reclaimed asphalt pavements (RAP) are allowed in the asphalt concrete unless specified in the plans.</p>	<p>Materials and additives shall be fed simultaneously into the dryer. Recycled asphalt (RAP) when specified to be used shall be fed at the midpoint of the drum unless the drum mix plant has a manufacturer's design technology made specifically for RAP entry at a different location.</p>										
<p>Tennessee</p>	<p>A maximum of 30 percent of the recycled material may be incorporated into the final mixture of Grading "E" mix on shoulders. (Base)</p> <p>A maximum of 15 percent of the recycled material may be incorporated into 307 "A" mix.</p> <p>A maximum of 20 percent of the recycled material may be incorporated into the final mix for 307 "B", "B-M", "B-M2", "C-W" and "C"; except that if the material is of uniform quality as documented by asphalt content and gradation test, the 20 percent maximum will not apply.</p> <p>In any event, at least 65 percent of the asphalt cement in the final mix shall be new material.</p>											
<p>Texas</p>	<p>Only RAP from designated sources may be used in surface courses.</p> <p>Only RAP from state-owned sources will be allowed in mixes using more than 20 percent RAP</p>	<p>The RAP to be used in the mix shall be crushed or broken to the extent that 100 percent will pass the 2 inch sieve.</p> <p>Unless otherwise shown on the plans, the Engineer will furnish the mix design for mixtures when using 20 percent or less RAP; the Contractor shall furnish the mixture design for all mixtures containing more than 20 percent RAP.</p>										

Utah	May use up to 25 percent RAP by total weight in the hot mix asphalt. RAP may only be used if approved by the Engineer.	<p>Only material rotomilled from 2 inches below the existing surface will be allowed to be recycled into the dense-graded asphalt concrete material.</p> <p>Stockpile will be separated into two piles: (1) passing the 1-1/2 inch sieve and retained on the No. 4 sieve. (2) Material passing the No. 4 sieve. (3) Use separate cold feed bins for each stockpile.</p>																																																																								
Vermont		The RAP from different projects shall be separated in individual stockpiles according to specific pavement source and type of mix by the Contractor, unless otherwise directed by the Engineer.																																																																								
Virginia	<table border="1"> <thead> <tr> <th rowspan="2">Mix</th> <th rowspan="2">ESAL (millions)</th> <th rowspan="2">PG grade</th> <th colspan="2">% RAP</th> </tr> <tr> <th>0-20</th> <th>>20.1</th> </tr> </thead> <tbody> <tr> <td>SM 9.0A</td> <td>0-3</td> <td>64-22</td> <td>64-22</td> <td>58-28</td> </tr> <tr> <td>SM-9.0D</td> <td>3-10</td> <td>70-22</td> <td>70-22</td> <td>64-28</td> </tr> <tr> <td>SM-9.0E</td> <td>>10</td> <td>76-22</td> <td>76-22</td> <td>70-28</td> </tr> <tr> <td>SM-9.5A</td> <td>0-3</td> <td>64-22</td> <td>64-22</td> <td>58-28</td> </tr> <tr> <td>SM-9.5D</td> <td>3-10</td> <td>70-22</td> <td>70-22</td> <td>64-28</td> </tr> <tr> <td>SM-9.5E</td> <td>>10</td> <td>76-22</td> <td>76-22</td> <td>70-28</td> </tr> <tr> <td>SM12.5A</td> <td>0-3</td> <td>64-22</td> <td>64-22</td> <td>58-28</td> </tr> <tr> <td>SM-12.5D</td> <td>3-10</td> <td>70-22</td> <td>70-22</td> <td>64-28</td> </tr> <tr> <td>SM-12.5E</td> <td>>10</td> <td>76-22</td> <td>76-22</td> <td>70-28</td> </tr> <tr> <td>IM-19.0A</td> <td><10</td> <td>64-22</td> <td>64-22</td> <td>58-28</td> </tr> <tr> <td>IM-19.0D</td> <td>>=10</td> <td>70-22</td> <td>70-22</td> <td>64-28</td> </tr> <tr> <td>BM-25.0</td> <td>all ranges</td> <td>64-22</td> <td>64-22</td> <td>64-22</td> </tr> <tr> <td>BM-37.5</td> <td>>=10</td> <td>64-22</td> <td>64-22</td> <td>64-22</td> </tr> </tbody> </table> <p>BM-25.0 and BM-37.5 mixes using more than 25 percent RAP shall use a PG 58-22.</p> <p>* SM=Surface Mix, IM=Intermediate Mix, and BM= Base Mix</p>	Mix	ESAL (millions)	PG grade	% RAP		0-20	>20.1	SM 9.0A	0-3	64-22	64-22	58-28	SM-9.0D	3-10	70-22	70-22	64-28	SM-9.0E	>10	76-22	76-22	70-28	SM-9.5A	0-3	64-22	64-22	58-28	SM-9.5D	3-10	70-22	70-22	64-28	SM-9.5E	>10	76-22	76-22	70-28	SM12.5A	0-3	64-22	64-22	58-28	SM-12.5D	3-10	70-22	70-22	64-28	SM-12.5E	>10	76-22	76-22	70-28	IM-19.0A	<10	64-22	64-22	58-28	IM-19.0D	>=10	70-22	70-22	64-28	BM-25.0	all ranges	64-22	64-22	64-22	BM-37.5	>=10	64-22	64-22	64-22	<p>RAP shall be processed in such a manner as to ensure that the maximum top size introduced into the mix shall be 2 inches.</p> <p>Reclaimed asphalt pavement may not be used as component material unless approved by the Engineer for stabilized open-graded material on a prepared subbase or subgrade.</p>
Mix	ESAL (millions)				PG grade	% RAP																																																																				
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SM12.5A	0-3	64-22	64-22	58-28																																																																						
SM-12.5D	3-10	70-22	70-22	64-28																																																																						
SM-12.5E	>10	76-22	76-22	70-28																																																																						
IM-19.0A	<10	64-22	64-22	58-28																																																																						
IM-19.0D	>=10	70-22	70-22	64-28																																																																						
BM-25.0	all ranges	64-22	64-22	64-22																																																																						
BM-37.5	>=10	64-22	64-22	64-22																																																																						

Washington	<p>The RAP from different projects shall be separated in individual stockpiles according to specific pavement source and type of mix by the Contractor, unless otherwise directed by the Engineer.</p> <p>Recycled materials shall not be used in asphalt concrete Class D. (Open graded mixes)</p>	
West Virginia	-	-
Wisconsin	<p>The contractor may use up to 35 percent RAP material in lower layer and base mixtures and up to 20 percent in upper layer mixtures.</p> <p>The contractor may use up to 25 percent RAP for lower layers and up to 20 percent RAP for upper layers without changing the asphaltic binder grade. If using more than that amount of RAP, furnish binder with a low temperature rating one grade lower than the contract designates, unless testing indicates the resultant binder meets the grade the contract originally specified.</p>	
Wyoming	Only RAP from state-owned sources will be allowed in mixes using more than 35 percent RAP	