

Winter 2024

- ❑ Paving thicker than 4 times NMAS hurts compaction
- ❑ Higher recycled asphalt mix (RAM) cools faster
- ❑ Tack coat can be skipped between multiple lifts.



Tack Coat

Purpose of Each Layer	N5 Control	S5 Higher RAP	S6 RAP+RAS	S13 Recyc Tires
Durable, Rut Resistant Surface	20% RAP ₂₀ 67-22/82-16 DG	25% RAP ₁₁ 67-22/6-22 SMA	5% RAS ₂₁ 67-22/88-16 SMA	VIRGIN 82-22 ₁₁ SMA
Stiff, Strain Reducing Middle	35% RAP ₃₀ 67-22/88-10 DG	50% RAP ₄₁ 67-22/82-16 DG	50% AGED _{26,24} 67-22/94-10 DG	35% RAP ₃₇ 82-22 ₁₂ DG
Fatigue Resistant Base Layer	35% RAP ₂₉ 67-22/88-10 DG	35% RAP ₂₄ 94-28/4-10 DG	25% RAP ₂₄ +76-22/88-16 DG	VIRGIN 88-22 ₂₀ AZ

Green = Evotherm Q1 Additive, Blue = Astec Green Foamer



Spring 2025

- ❑ Intermediate layer mixes can be leaner, stiffer
- ❑ Layer coefficients should be the same for all mixes
- ❑ Pavements must be very thick to be perpetual.



Thin Perpetual Pavements

Conventional Dense HMA	Permeable Surface on Dense HMA	High RAP % HMA	High RAP % Warm Mix	Feamed Warm Mix	Modified Warm Mix	Thinperme Warm Surface	Thinperme Warm Surface Control	Thinperme Warm Surface Control	Thinperme Warm Surface Control	TIA Modified Mix
7 inches 1.0	7 inches 1.0	7 inches 1.0	7 inches 1.0	7 inches 1.0	7 inches 1.0	7 inches 1.0	7 inches 1.0	7 inches 1.0	7 inches 1.0	7 inches 1.0
8 inches DOAB	8 inches DOAB	8 inches DOAB	8 inches DOAB	8 inches DOAB	8 inches DOAB	8 inches DOAB	8 inches DOAB	8 inches DOAB	8 inches DOAB	8 inches DOAB
Self Compacting	Self Compacting	Self Compacting	Self Compacting	Self Compacting	Self Compacting	Self Compacting	Self Compacting	Self Compacting	Self Compacting	Self Compacting



Summer 2025

- ❑ Big rocks are necessary for strong (lower) asphalt
- ❑ Polishing sources should be banned from surface mix
- ❑ RBA implementation requires changing volumetrics
- ❑ Low Va & high VFA always risks rutting & bleeding.



Low Void Mixes

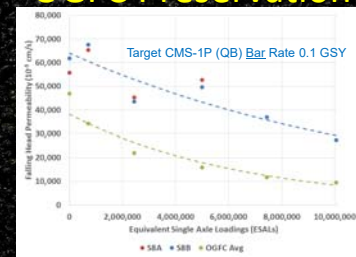


Fall 2025

- Pavements designed thinner than '93 Guide will fail
- More complex specs are needed to improve quality
- Rubber-tired rollers (PTRs) are not worth the cost
- Fogging OGFC surfaces will reduce permeability.



OGFC Preservation



Mix Busters Big Takeaways

- Better tack or elimination via thicklay paving
- Higher layer coefficients from innovation
- Perpetual asphalt at concrete thickness
- BMD for $V_{b_{eff}}$ quantity and quality
- Specify performance with less words
- 1) Protect taxpayers and 2) incentivize innovation
- Cracking, rutting, friction at lowest $\$/C_{BMD+f, LCA}$
- Requests: asphaltmixbuster@gmail.com



#BuzzOnAsphalt

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