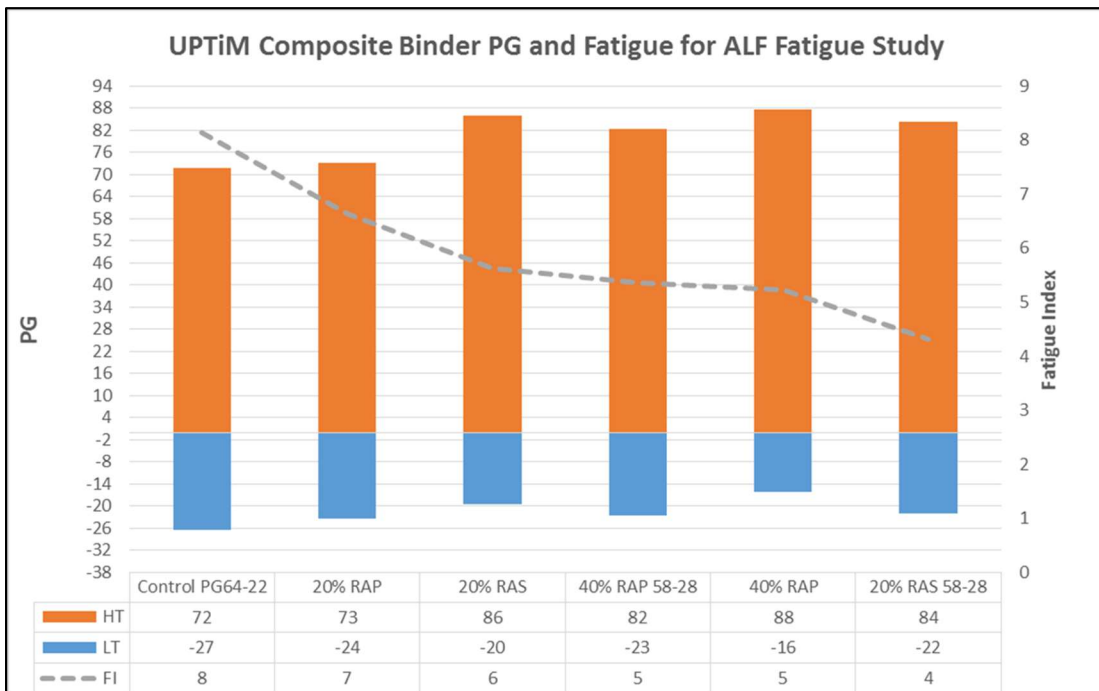


Composite Mastic PG

(Composite Mastic, Sustainable Alternative to Extraction)

- RAP/ RAS and other additives affect properties of original binder; thus, need performance grading of binder in the mix
- Binder extraction is performed to evaluate the change in PG
- Extraction is a lengthy process involving use of chemicals
- There are also uncertainties with the extraction process
- Composite Mastic includes the fine portion of the mixture that is physically separated and includes all the effects of additives



- UPTiM composite mastic tests are reliable, precise, safe, time saving, and cost effective; while more representative of mixture
- UPTiM recovery method has been verified with extraction

Comparisons of UPTiM Recovery and Extraction

Test Variables	Extraction	UPTiM
Extraction Process Time	>2 hours	<30 min.
Chemical Solvents	Yes	None
Equipment	Costly	None
Cleaning	Extensive	Minimal
Verification	Needed	None
High Temp. PG Test, min.	120	15
BBR Test (Low Temp.), min.	120	30
Intermediate Temp. Test	120	15
Quantity of Extracted Binder Needed	> 15 grams	100 mg