

**Request for Research Funding for FY 2023-2024**

**Project Number** (Research Center Use Only): SMO-24-06

<b>Requesting Office</b>	SMO	<b>Priority</b>	6 of 12
<b>Proposed Title</b>	Evaluation of Reclaimed Asphalt Pavement (RAP) in Mixtures Containing High Polymer Binder		
<b>Justification</b>	Department projects generate a significant amount of RAP. Additionally, there have been some aggregate supply issues over the past year. RAP is currently not allowed in mixtures containing high polymer binder. Determining how to effectively use RAP in high polymer binder mixtures would allow the Department to address aggregate supply issues and beneficially use RAP without sacrificing performance.		
<b>Impact</b>	RAP is currently not allowed in mixtures containing high polymer binder. Performing this research would allow the Department to determine the most effective method of utilizing RAP in mixtures containing high polymer binder while minimizing or eliminating any loss in durability. The research should result in more reduced costs for high polymer binder mixtures and reduced virgin aggregate usage would help address aggregate supply issues.		
<b>Affected Offices</b>	State Materials Office, District Materials Offices, State Construction Office, District Construction Offices.		
<b>Existing Work</b>	Yes.		
<b>Keywords Used In Existing Work Search</b> (Cannot leave blank)	Reclaimed asphalt pavement (RAP), high polymer binder		
<b>Related Contracts</b> (Give contract numbers)	BDV31-977-70		
<b>Funding Request</b>	\$240,000	<b>Anticipated Duration</b>	24 months
<b>Project Manager</b>	Howie Moseley or new Bituminous Section Head	<b>Contracting Method</b>	Direct to FSU
<b>Equipment</b>	Estimated equipment cost (or N/A)	N/A	
<b>Urgency</b>	Score 1-5 1= highest, most immediate need	2 The more immediate impact would be to help alleviate an aggregate shortage.	
<b>Implementability</b>	Score 1-5 1= greatest likelihood of and proximity to implementing results	1 The addition of RAP could easily be implemented first by a Materials Bulletin/Construction Memorandum and then followed by a specification change to section 337.	

**Project Benefits (Succinct, complete explanation)**

The project will look at lowering the cost of high polymer binder mixtures and conserving aggregate materials by exploring the most beneficial method of utilizing RAP in mixtures containing high polymer binder. The Department is currently experiencing aggregate supply issues in parts of Florida. The use of RAP in these mixtures would help ease some of the aggregate supply issues.

<b>Project Benefits (Select all that apply and explain)</b>	<b>Quantifiable Benefits</b> (units, dollars, etc...if applicable)	<b>Methodology or Data Sources Used to Determine Quantifiable Benefits. If not applicable, please give justification of project benefits</b>
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○ Materials Enhancement	Use of up to 20% or more of reclaimed asphalt pavement	This research would determine the most effective means of incorporating RAP into high polymer binder mixtures.
○ Materials Savings	Reduced mixture cost, saved resources	The research has the potential to lower the cost of high polymer binder mixtures and also conserve valuable natural resources (asphalt binder and virgin aggregate).
○ Time Savings	N/A	
○ Lives Saved/Injuries Prevented	N/A	
○ Other (Explain)	N/A	

\*Comments should explain and support urgency, financial benefit, and implementability scores