

**Request for Research Funding for FY 2022-2023**

**SPR Subpart B Project: SMO-23-09**

<b>Requesting Office</b>	State Materials Office (SMO)	<b>Priority</b>	9 of 10
<b>Proposed Title</b>	Evaluation of quiet pavement (synthesis & work plan development)		
<b>Justification</b>	As homes and commercial business are developed closer to high-speed roadways, noise generated from the tire-pavement interaction should be considered during design. Feedback from districts has identified noise as a concern to the public. Conduct literature review and assess gaps related to factors related to quiet pavements that can be assessed during design.		
<b>Impact</b>	Understanding the noise reduction mechanisms will enable the department to design the quiet pavement suitable in Florida. Also, the reported benefits and drawbacks of the quiet pavement may help to properly implement and limit the pavement. If future work is warranted, develop a test plan for consideration in a future research effort.		
<b>Affected Offices</b>	Design, Materials, and Maintenance		
<b>Existing Work</b>	Extensive research has been conducted in the past. This effort will summarize the existing work and determine if there are gaps to be addressed.		
<b>Keywords Used in Existing Work Search</b>	Tire-pavement Interaction, Noise, Wayside, On-board Sound Intensity (OBSI), Quiet Pavement		
<b>Related Contracts</b>	N/A		
<b>Funding Request</b>	\$75,000	<b>Anticipated Duration</b>	12 months
<b>Project Manager</b>	Ohhoon Kwon	<b>Contracting Method</b>	RFP to all registered vendors
<b>Equipment</b>	N/A	N/A	
<b>Urgency</b>	4	The focus of this research will enhance the transportation system, but not increase life or reduce cost.	
<b>Implementability</b>	3	Quiet pavements may be challenging to design, given they could be material dependent.	
<b>Project Benefits</b>	Quiet pavement could reduce the need for sound barriers and mitigate public complaints.		
<b>Project Benefits</b>	<b>Quantifiable Benefits</b>	<b>Methodology or Data Sources Used to Determine Quantifiable Benefits. If not applicable, please give justification of project benefits</b>	
○ Materials Enhancement			
○ Materials Savings			
○ Time Savings			
○ Lives Saved/Injuries Prevented			
✓ Other (Explain)	Construction cost and time saving	The research will help to develop and implement the quiet pavement in Florida. The use of quiet pavement may reduce the need for costly sound barriers. Furthermore, it may mitigate public complaints.	

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