Request for Research Funding for FY 2021-2022			
Requesting Office	State Materials Office	**Priority** high	# 7 of # 10 (projects may not have the same ranking – no ties)
Proposed Title	Evaluation of Concrete Permeability Reducing Admixtures.		
Justification	There are multiple products available on the market that claim to reduce permeability and/or seal any cracks that may occur in hardened concrete. Currently the Department does not have a category in our specifications to cover these types of products. Suitable tests need to be identified or possibly developed for the purpose of evaluating these products. In addition, specification limits need to be identified to ascertain products that should be permitted for use on State Highway Structures.		
Impact	Based on results changes to the Standard Specifications may be required to allow the use of products to reduce permeability or seal cracking in hardened concrete. If research is not carried out, the Department may not be able to take advantage of new products to extend the service life of our State Highway Structures		
Affected Offices	State Materials Office: Patrick Upshaw, Ronald Simmons; Product Evaluation; Specifications Office;		
Existing Work	None		
Keywords Used In Existing Work Search **(Cannot leave blank)**	Crack healing concrete admixture; permeability concrete admixture		
Related Contracts (Give contract numbers)	BDV31-977-130 Testing Methods to Assess the Durability of Concrete Permeability Reducing Admixtures		
Funding Request	200,000	**Anticipated Duration**	2 yeas
Project Manager	R. Simmons	**Contracting Method**	Direct Contract with University of Florida, Dr. Riding
Urgency	2	Multiple manufacturers have submitted products to the Department for consideration. We need to identify methods to characterize and rate the performance of these products	
Implementability	1	If these products perform as claimed, the Standard Specifications will be modified to allow the use on FDOT projects to reduce permeability and or provide a mechanism to seal/heal cracks that may develop.	

Project Benefits (Succinct, complete explanation)

With identified test methodologies, the Department will be able to determine the effectiveness of several products claiming to reduce concrete permeability, and/or heal cracking. Determining appropriate limits for any identified methods will allow elimination of products that are not beneficial to Florida Taxpayers.

Project Benefits **(Select all that apply and explain)**	**Quantifiable Benefits (units, dollars, etc…if applicable)**	**Methodology or Data Sources Used to Determine Quantifiable Benefits. If not applicable, please give justification of project benefits**
o Materials Enhancement	Potential increased service life	The use of an admixture that will reduce a concretes' permeability or heal/seal microcracking would increase the service life of Department structures, adding years to the service life.
o Materials Savings	None	
o Time Savings	None	

○ Lives Saved/Injuries Prevented	None	
○ Other (Explain)	None	

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