

Request for Research Funding for FY 2023-2024

Project Number (Research Center Use Only): SMO-24-10

Requesting Office	SMO	Priority	10 of 12
Proposed Title	Evaluation of concrete specimens prepared with corrosion resistant reinforcement after long term, greater than 15 years, outdoor and laboratory exposure.		
Justification	Performing this research will aid the Department in providing a long-lasting safe transportation system by increasing our knowledge of the performance of various corrosion resistant alloys.		
Impact	Long-term testing is often unachievable due to budget and time constraints. We have the opportunity to evaluate concrete specimens that have been exposed for 15 years and longer, however if funding is not secured these samples may be thrown away and the unique opportunity to perform the evaluation lost.		
Affected Offices	Construction (David Wagner), Design (Will Potter), Materials (Dave Cerlanek, Sue Zheng)		
Existing Work	Nothing found for long term exposure		
Keywords Used In Existing Work Search (Cannot leave blank)	Corrosion resistant alloy; long term exposure;		
Related Contracts (Give contract numbers)	BD 228		
Funding Request	\$200k	Anticipated Duration	24 months
Project Manager	Ron Simmons	Contracting Method	RFP to all registered vendors
Equipment	NA	none	
Urgency	3	This research will provide valuable information on the progression of corrosion of corrosion resistant alloy reinforcement in concrete.	
Implementability	2	Results of the research at a minimum will provide the Department with a better understanding of the corrosion propagation of corrosion resistant alloys and may serve as validation data for a stainless-steel service life model currently being developed.	

Project Benefits (Succinct, complete explanation)

The 2 primary benefits will be the enhanced understanding of corrosion propagation of corrosion resistant alloys, such as stainless steel 316 and having data that could be utilized to help validate a stainless steel service life model that is being developed. There is very little data available concerning long term exposure of corrosion resistant reinforcement. It is often accepted as common knowledge that it is better, but there is insufficient data to identify how much better.

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
<input type="checkbox"/> Materials Enhancement		
<input type="checkbox"/> Materials Savings		
<input type="checkbox"/> Time Savings		
<input type="checkbox"/> Lives Saved/Injuries Prevented		
<input type="checkbox"/> Other (Explain)		

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