

AMERICAN ASSOCIATION
OF STATE HIGHWAY AND
TRANSPORTATION OFFICIALS

AASHTO

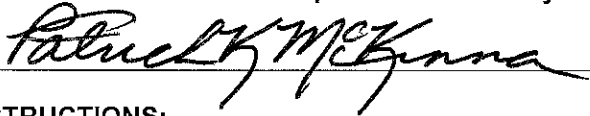
Transportation Vanguard Award Nomination Form

2016

INFORMATION ON NOMINEE:

Last Name: Oesch	First Name: Daniel	Date: July 12, 2016	
Email: Daniel.oesch@modot.mo.gov		Position Title: Field Materials Engineer	
Department: MoDOT, Division of Construction & Materials		Phone: 573-751-8608	
Street Address: P.O Box 270	City: Jefferson City	State: MO	Zipcode: 65102
AASHTO Committee Membership (optional) Click here to enter text.			

NOMINATOR INFORMATION:

Last Name: Ahlvers	First Name: David	Date: July 12, 2016	
Email: david.ahlvers@modot.mo.gov		Position Title: State Construction & Materials Engineer	
Department: MoDOT, Division of Construction & Materials		Phone: 573-751-7455	
Street Address: P.O. Box 270	City: Jefferson City	State: MO	Zipcode: 65102
Endorsement of Member Department Secretary/Director: 			

INSTRUCTIONS:

Using a maximum of 2 additional single-sided pages, please provide reasoning as to why this individual should be selected as the Transportation Vanguard Award recipient. Please include as much specific information about the candidate as possible, including special projects, personal attributes, dedication, etc.

Send nominations by **Monday, July 25, 2016**, via e-mail to mvitale@aaashto.org. Nominations must be submitted as a single file in MS Word format using **TVA2016_Nomination_Nominee_Name.doc** as the file name.

July 12, 2016
2016 AASHTO Vanguard Award
MoDOT Nomination of Daniel Oesch

It takes dedication and desire to improve upon transportation elements that are already working satisfactorily. It takes an even greater desire to push the limits further in order to help a transportation department stretch its funds. At MoDOT, Dan Oesch is a Field Materials Engineer and he exhibits the kind of dedication described above. He is dedicated to improving asphalt pavements and finding ways to stretch existing funds. Dan has been leading the effort of using recycled asphalt pavement and recycled asphalt shingles in new pavement resurfacing. He is also piloting new technologies like thermal imaging and intelligent compaction for asphalt pavements.

The recycling of existing asphalt pavements allows already proven high quality aggregates and asphalt to be reincorporated into new pavement while reducing the need for raw materials like aggregates as well as reducing overall energy for production. This saves money while still producing a safe and similar service as to what would be experienced without using recycled pavements.

MoDOT pavements also allow the use of ground roof shingles to be incorporated into new asphalt pavements. Shingles are composed of high quality oil and aggregates that can lessen the amount of raw materials and stretch the funds available at MoDOT. Dan continually organizes projects in order to further the understanding of recycled material use in asphalt pavement. His efforts have led to refinements in the Missouri Specifications for Highway Construction and have been used as a case study for the development of AASHTO Standard PP78-16, Design Considerations, when using Reclaimed Asphalt Shingles (RAS) in asphalt pavements.

In 2015, MoDOT used 3.8 million tons of asphalt pavement in which 1 million tons (27 percent of each ton) of recycled pavement and shingles have been incorporated. Due to the recycling of existing pavements and the allowed use of shingles, it is estimated MoDOT has saved \$15 million in costs. This savings would be the equivalent of improving more than 350 miles of a two-lane Missouri road with a thin overlay. Over the last several years, MoDOT's average price per ton for asphalt has remained relatively constant, while other states have experienced a steady increase. Recycling efforts are a significant component to this stable cost and Missourians are receiving a great value as well as good pavement performance. The use of recycling pavements and shingles is also good for the environment in that less material is being taken to landfills.

In the area of new technology, Dan is working with contractors and FHWA to pilot thermal scanning and intelligent compaction. Thermal scanning outfits asphalt pavers with sensors to determine if thermal segregation is present in the freshly placed asphalt pavement. The durability of the pavement is improved by managing and reducing the thermal segregation. Intelligent compaction uses sensors to constantly inform the operator what areas of the mat haven't been compacted. A properly compacted overlay lasts longer. Both of these pilot technologies fit well within MoDOT's move to allow more flexibility in how work is performed. MoDOT specifies what is required and contractors are allowed to determine the best way to produce those results.

In order to improve and get better, MoDOT and its employees must be innovative and push limits. Dan has done this and has produced great results. Missourians are seeing their funds stretched while receiving safe, reliable, and long lasting asphalt pavement.