# THE KEY TO PAVEMENT PRESERVATION

NORTH DAKOTA ASPHALT CONFERENCE APRIL 10–11, 2018 • RAMADA BISMARCK HOTEL

## A SPECIAL WELCOME TO FIRST-TIME ATTENDEES

We are pleased you've decided to attend your first ND Asphalt conference. The agenda is full of educational opportunities and you will have plenty of time to network with experts in the asphalt industry.

## A BIG THANK YOU TO OUR SPONSORS

This conference simply could not happen if it weren't for our generous sponsors. If you see one of our sponsors, be sure to thank them for their support of the ND Asphalt Conference.

## **QUESTIONS, COMMENTS AND FEEDBACK**

If you have any questions, please see the registration table and we will do our best to get them answered. Please remember to fill out the conference evaluation form. This is your conference and we want to be sure it is meeting your expectations.



All presentations will be available on the NDLTAP website after the conference, **www.ndltap.org**.



This conference is coordinated and sponsored by the North Dakota Local Technical Assistance Program (a program under Upper Great Plains Transportation Institute, North Dakota State University), North Dakota Department of Transportation, Dakota Asphalt Pavement Association, and Associated General Contractors of North Dakota.



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# **CONFERENCE AGENDA**

## TUESDAY, APRIL 10, 2018

1:00 PM - 5:00 PM CT

## **MODERATOR - GARY BRENNAN, BROSZ ENGINEERING**

- 1:00 1:10 **OPENING REMARKS** Dale Heglund, NDLTAP Director
- 1:10 1:30 NDDOT WELCOME, TOWARD ZERO AND INNOVATION Tom Sorel
- 1:30 2:15 **INTELLIGENT COMPACTION, I-94 PROJECT HIGHLIGHTS** Bernie Southam, NDDOT Bryce Wuori, Northern Improvement Company
- 2:15 2:30 **GEOSYNTHETIC ASPHALT INTERLAYERS** Scott Whaley, Tensar
- 2:30 2:45 **FIBER REINFORCEMENT** Kevin Ageton, Brock White
- 2:45 3:00 NETWORKING BREAK
- 3:00 3:45 MnROAD/NRRA PAVEMENT PRESERVATION RESEARCH EFFORTS Ben Worel, MnDOT
- 3:45 4:00 UND RESEARCH: EFFECT OF RAP ON CRACKING Daba Gedafa, PhD, PE, UND (poster by PhD candidate, Robeam Melakuu)
- 4:00 4:45 MICRO-SURFACING AND MICRO-MILLING STATE AND COUNTY Hwy 34 – Tyler Wollmuth, NDDOT and Tim Schulte, Mayo Construction Bottineau County – Eric Larson, Wold Engineering
- 4:45 5:00 INNOVATION IS LOCAL, PIERRE, SD Ken Swedeen, DAPA

### 5:00 SOCIAL AND 2017 RIDE AWARDS Sponsored by DAPA – Ken Swedeen Parking Lot Demos – Swanston Equipment

# **CONFERENCE AGENDA**

## WEDNESDAY, APRIL 11, 2018

8:00 AM - 12:00 NOON CT

## MODERATOR - MICHAEL RIVINIUS, WOLD ENGINEERING

- 8:00 8:30 **PRIORITY ONE CRACK SEALING** Tom Wood, WSB & Associates
- 8:30 8:45 **PAVEMENT PRESERVATION WITH A STIC** Wendall Meyer, FHWA
- 8:45 9:15 MICRO-SURFACING FOR THE FUTURE Tim O'Connell, Ingevity
- 9:15 9:45 NETWORKING BREAK
- 9:45 10:45 LONG-LIFE PAVEMENT FUNDAMENTALS Dr. David Timm, NCAT
- 10:45 11:15 **BINDER BASICS** Jeff Shoger, Flint Hills Resources
- 11:15 12:00 LOCAL INNOVATION CROSBY SCRUB SEAL Troy Kelsey, Interstate Engineering Mo Henmen, Western Emulsions

# 2017 ND RIDE QUALITY AWARDS

COMPANY	PROJECT	AWARD	CATEGORY
Anderson Western, Inc.	ND-5-012(045)034	1 <sup>st</sup> Place	Two Opportunity
Border States Paving, Inc.	SIOB-7-052(029)007	1 <sup>st</sup> Place	One Opportunity
Border States Paving, Inc.	IM-8-029(151)000	2 <sup>nd</sup> Place	Three Opportunity
Mayo Construction	IM-5-094(119)035	2 <sup>nd</sup> Place	Two Opportunity

# **CONFERENCE STEERING COMMITTEE**

Magdy Abdelrahman, NDSU, Transportation Engineering Denise Brown, ND Local Technical Assistance Program Mark Dougherty, AGC Curt Dunn, NDDOT, Grand Forks District David Ferrell, FHWA Bryon Fuchs, NDDOT, Local Government Daba Gedafa, UND, Civil Engineering Dale Heglund, ND Local Technical Assistance Program Mark Hendrickson, Northern Improvement Company Jeremy Holt, Anderson Western Tim Horner, Upper Great Plains Transportation Institute, NDSU Ryan Lynch, Flint Hills Resources Michael Mart, City of Bismarck Chris Padilla, ND Local Technical Assistance Program Justin Ramsey, NDDOT, Transportation Services Mike Rivinius, Wold Engineering Clayton Schumaker, NDDOT, Lab Joe Snustad, NDDOT, Maintenance Jongchul Song, NDSU, Construction Management & Engineering Nabil Suleiman, UND, Civil Engineering Ken Swedeen, Dakota Asphalt Pavement Association Ron Tessier, Dakota Asphalt Pavement Association Stephanie Weigel, NDDOT, Planning

# **SPEAKER BIOS**

#### **Kevin Ageton**

Kevin is the pavement preservation products manager with Brock White Construction Materials in Sioux Falls. He has been with the company for more than 27 years. He holds a bachelor's degree from South Dakota State University.

#### **Gary Brennan**

Gary is a registered engineer. He earned a bachelor's degree in civil engineering from North Dakota State University in 1995. He has been with Brosz Engineering since graduation and has had the pleasure of serving the transportation industry for more than 20 years. He currently serves as the branch manager for Brosz Engineering in Bowman and oversees operation of the Brosz's North Dakota Offices.

#### Daba Gedafa

Daba is an associate professor of civil engineering at the University of North Dakota. He received his doctorate in civil engineering from Kansas State University in Dec. 2008. His area of specialty is in pavement and materials engineering. He is a registered professional engineer in the states of North Dakota and Connecticut. He is also registered as Envision Sustainability Professional. He is president-elect of the North Dakota Section of the American Society of Civil Engineers.

#### Dale C. Heglund

Dale is director of the North Dakota Local Technical Assistance Program, a part of the Upper Great Plains Transportation Institute at North Dakota State University. Heglund says he is grateful for the opportunity to share experiences from the past 40 or more years to help North Dakota's transportation leaders transcend their normal high-water mark of learning.

#### Mo Henman

Mo is a sales and technical service representative with Western Emulsions Inc. Before joining Western Emulsions in 2013, he was with the Yellowstone County, MT, Road and Bridge Department for 30 years. He began his career with the Burlington Northern Railroad.

#### **Troy Kelsey**

Troy earned his bachelor's degree in civil engineering from Montana State University and since then his engineering career has concentrated on transportation, aviation and construction. With more than 15 years in the engineering field, Kelsey has worked on many major DOT highway projects, airports, county roads and city streets projects, where he was heavily involved with design and construction.

#### **Eric Larson**

Eric graduated from North Dakota State University in 2013 with a bachelor's degree in civil engineering. He is employed with Wold Engineering and has provided project management/inspection on various road and bridge projects on the county, state, and federal levels.

#### Robeam Melaku

Robeam is a doctoral student in civil engineering at the University of North Dakota. He received his master's in transportation and road engineering in 2014, and bachelor's in civil engineering in 2011 from Addis Ababa University, Ethiopia. His research focus is in pavement and material engineering. Currently he is working on research related to sustainable pavement materials.

#### Wendall Meyer

Wendall became the division administrator for the North Dakota Division Office of the Federal Highway Administration in 2007. He leads and implements national strategic transportation initiatives and federal-aid program delivery in North Dakota. Meyer joined the FHWA in 1989 as a highway engineer trainee. He has held key positions in various FHWA Division Offices including serving as the Mobility and Safety Team leader in Illinois, and the assistant division administrator in Kansas. Meyer received his bachelor's degree in civil engineering from the University of Nebraska-Lincoln.

#### Tim O'Connell

Tim is currently responsible for pavement preservation technical support with Ingevity inTulsa, OK. He has been involved in the operational and technical aspects of the asphalt business beginning in 1979 with Koch Refining and worked in the Koch Materials Saint Paul, MN, lab from 1983 to 1992 and then in the Salt Lake City, UT, laboratory from 1992 to 2007. He joined MeadWestvaco in 2011.

#### **Tim Schulte**

Tim is a project manager with Mayo Construction Company of Cavalier, ND. Prior to joining Mayo Construction about 4 ½ years ago, he was a county engineer in Richland County, ND, for 15 years and a county engineer in Mahnomen County, MN, for 5 years. Schulte is a graduate of North Dakota State University.

#### Jeff Shoger

Jeff is an asphalt technical representative with the asphalt technical team at Flint Hills Resources. Before joining Flint Hills, he held laboratory and technical roles with SemMaterials, ArrMaz, and Ingevity. He holds a bachelor's degree from the University of Kansas.

#### Thomas Sorel

Tom was appointed director of the Dakota Department of Transportation in August 2017 and previously served as Minnesota Department of Transportation commissioner from 2008-2012. In Minnesota, he oversaw a workforce of 5,000 employees with a \$4.3 billion annual budget and a \$1.4 billion annual transportation program. Prior to that, he had a 30-year career with the U.S. Department of Transportation's Federal Highway Administration, serving as administrator of its St. Paul Division from 2005 to 2008 and receiving a presidential honor for his leadership related to the I-35W bridge collapse response, recovery and rebuilding.

#### **Bernie Southam**

Bernie is a transportation engineer for the ND Department of Transportation. After earning a bachelor's degree in civil engineering from NDSU in 1991, Southam began working for the NDDOT Bismarck District doing project inspection. He became a project engineer in 1991 where he oversaw numerous construction projects including the reconstruction of Main Street in Mandan, reconstruction of State Street in Bismarck and the reconstruction of the Bismarck Expressway.

#### Ken Swedeen

Ken became the Executive Director of the Dakota Asphalt Pavement Association in 2001. Prior to earning his bachelor's degree in civil engineer from South Dakota State University he worked on various highway construction projects in Montana and Wyoming. He began his engineering career with Texaco, Inc., as a project engineer in Houston, TX. He then worked for the Wyoming Department of Transportation for 20 years as a materials engineer, a resident engineer in Jackson, WY, and a district maintenance engineer is Casper, WY. He then became the city engineer for the city of Sioux Falls, SD, for two years. Swedeen also holds a master's degree in business administration from the University of Wyoming.

#### **David Timm**

David is the Brasfield & Gorrie Professor of Civil Engineering at Auburn University where he has been a faculty member since 2001. Timm is originally from southern Wisconsin and attended the University of Minnesota where he earned his bachelor's, master's and doctoral degrees in civil engineering. While there, he worked on research at the MnROAD test site and helped develop mechanistic-empirical design procedures for use in Minnesota. He currently works extensively with the National Center for Asphalt Technology Pavement Test Track, conducting full-scale accelerated pavement research. Dave chairs the TRB Committee on Design and Rehabilitation of Asphalt Pavements and was recently elected to the Association of Asphalt Paving Technologists board of directors. He is a registered professional engineer in Alabama.

#### Scott Whaley

Scott has been involved in design and construction of Tensar geogrid applications throughout North Dakota, including paved roads; unpaved roads and laydown areas; mainline and spur rail; general subgrade stabilization; and airport pavement overlays. Whaley earned a bachelor's in civil engineering from the University of Florida and is a registered civil engineer in Georgia. He joined Tensar in 2008 as a staff engineer and has served in design, project management and sales roles for the roadway and grade separation applications. Whaley currently manages sales and marketing efforts of Tensar's North Dakota roadway applications business. He is vice president for the central Dacotah Section of the American Society of Highway Engineers and the North Dakota Society of Professional Engineers.

#### Tyler Wollmuth

Tyler graduated from NDSU with a bachelor's in civil engineering. He has worked for the NDDOT since 2003 and is currently a engineering manager/team leader in the Bismarck District. Wollmuth has been registered as a professional engineer in North Dakota since 2008. He has worked as a Project Engineer on numerous asphalt paving and asphalt seal projects over the last 15 years.

#### Tom Wood

Tom is a pavement specialist with WSB & Associates, Inc. at the company's Minneapolis office. He has worked for the Minnesota Department of Transportation on pavement preventative maintenance methods with the Office of Materials. He also worked for Koch Materials Company and the SemMaterials Group as a technical representative specializing in surface treatments for hot-mix asphalt pavements.

#### **Ben Worel**

Ben is the MnROAD operations engineer with the Minnesota Department of Transportation. Day-to-day activities including conducting research and facilitating partnerships including National Road Research Alliance. He is a registered professional engineer in the state of Minnesota and his work experience has focused primarily on pavement research and pavement management. He has been with MnDOT for 22 years. Before that, he worked for seven years with Braun Intertec as a Minnesota-based consultant and worked on the long-term pavement performance Project. He is chair of TRB's AFD40 Committee on full scale accelerated pavement testing and is a member and friend to a number of other TRB committees.

#### **Bryce Wuori**

Bryce studied civil engineering and construction management at North Dakota State University and also holds a masters in project management form the University of Mary. He is a project manager and technology manager with Northern Improvement Company where he has been implementing management and technology tools to increase efficiency and accuracy within project scopes. He believes that technology is an imperative key to success in the construction industry and plans to continue to develop these concepts throughout his professional career.

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# **CONFERENCE ATTENDEES**

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Richard Hall, MHA Department of Transportations Charles Hankins, Interstate Engineering Chad Hanson, Husky Asphalt Kevin Hanson, NDDOT Brent Hardy, Interstate Engineering, Inc. Josh Hart, Knife River Corp. Steve Haugen, Northern Improvement Company Bryan Haugenoe, Divide County Jennifer Heck, RDO Equipment Company Dale Heglund, NDLTAP Levi Heller, Apex Engineering Group, Inc Stuart Hemm, Knife River Corp. Mo Henman, Western Emulsions Inc Jana Hennessy, Mountrail County Dennis Hermanson, NDDOT Stephanie Hickman, FHWA Kirk Hoff, NDDOT Vaughn Hoffman, Interstate Engineering Tim Horner, NDLTAP Jason Hunter, NDDOT Justin Hyndman, KLJ Kent Indvik, Wold Engineering Jason Irey, Northern Improvement Company Tim Isaacson, RDO Equipment Company Megan Isenhower, NDDOT Williston Jeff Iverson, Billings County Jim Jackson, Moore Engineering Inc Tim Jacobs, Burleigh County Highway Department Tom Jirik, UGPTI Cash Johnson, Central Specialties Inc. Jared Johnson, Ward County Highway Department Matt Johnson, Wold Engineering Scott Johnson, Interstate Engineering Jim Kadrmas, Interstate Engineering, Inc. Thomas Kary, City of Bismarck Tv Kelsch, Terracon Troy Kelsey, Interstate Engineering Brad Kerzman, NDDOT Monte Kerzman, L G Everist Inc. Jackson Knudson, McKenzie County Melissa Korby, Interstate Engineering Inc. Jennie Krause, KLJ Engineering Nate Krikorian, Morton County Highway Department Kurt Kuechle, Braun Intertec Corporation Kyle Kuhn, Highlands Engineering Joseph Lagasse, Burleigh County Highway Dept. Matt Lange, KLJ Engineering Eric Larson, Wold Engineering Loren Lee, NDDOT John Levin, Strata Corporation Matt Linneman, NDDOT Mike Lipp, Northern Improvement Company Sharon Lipsh, Walsh County Highway Department Matthew Luger, NDDOT Ryan Lynch, Flint Hills Resources, LP

## **CONFERENCE ATTENDEES** continued

Daren Malard, City of Bismarck Gabe Maliscke, Ulteig Jason Manlove, KLJ Engineering Michael Mart, City of Bismarck Jon Martin, Wold Engineering Phil Martin, NDDOT Mike May, Interstate Engineering Thomas McCabe, McKenzie County, ND Steve McCormick Jr, Northern Improvement Company Scott McGirr, Husky Asphalt Robeam Melaku, Universiity of North Dakota Wendall Meyer, FHWA Tyler Michel, Stutsman County Highway Department Travis Miller, NDDOT Omar Mohamed, Mckenzie County Corey Mohl, Northern Improvement Company Don Moors, Ingevity Mike Mullen, Swanston Equipment Phil Murdoff, NDDOT Thomas Murphy, NDDOT Mackenzie Nauman, CHS Inc. Jordan Nehls, NDDOT Jesse Nelson, NDDOT Mickey Nenow, Stutsman County Highway Dept. Kay Nerlien, NDDOT Rodney Ness, Swanston Equipment Mike Njos, Highlands Engineering Tim O'Connell, Ingevity Reed Oien, Steele County Highway Department Del Olson, Dunn County Highway Department Greg Olson, NDDOT Julie Olson, NDDOT Denis Oyugi, NDDOT Harley Pace, MHA Department of Transportation Cavin Patch, Bartlett & West Jason Pearson, RDO Equipment Company Isaiah Pedro, Highlands Engineering Laura Peebles, NDDOT Mike Pike, NDDOT Kevin Ralphs, NDDOT Williston Rob Rayhorn, NDDOT Jr Red Tomahawk, Standing Rock Sioux Tribal Transportation Dave Renner, City of Bismarck Nate Renner, Houston Engineering, Inc. Gary Richter, Northern Improvement Company Mike Rivinius, Wold Engineering Dan Roberson, City of Bismarck

Justin Rogstad, NDDOT Matthew Damon Ross, City of Belfield John Sauber, Sauber Engineering Dean Schloss, NDDOT Kevin Schmidt, City of Bismarck Mark Schrader, FHWA Andrew Schrank, Highlands Engineering Dan Schriock, Burleigh County Highway Department Tim Schulte, Mayo Construction David Schwartz, Stutsman County Derek Shaffer, RDO Equipment Company Paul Sharp, Interstate Engineering, Inc. Karl Shoberg, UNIQUE Paving Materials Jeff Shoger, Flint Hills Resources, LP Beth Skabo, NDDOT Tom Sorel, NDDOT Bernard Southam, NDDOT Steven Strack, Houston Engineering, Inc. Jeffrey Swank, NDDOT Materials & Research Ken Swedeen, Dakota Asphalt Pavement Association Ron Tessier, Dakota Asphalt Pavement Association David Timm, NCAT Gary Trottier, NDDOT Cole Ude, Ward County Highway Department Eric Urness, Interstate Engineering Bobby Usher, NDDOT Holiday Van Sciver, USDA Rural Dev., Native American Outreach Mark Verke, ND Insurance Reserve Fund Victoria Vieru, Ecotehlider SRL Tim Volk, NDDOT Brian Walter, Ward County Highway Department Stephanie Weigel, NDDOT Tom Weigel, NDDOT Scott Whaley, Tensar Corp. Dave Wiebe, NDDOT Joel Wilt. NDDOT Williston Steve Windish, Ulteig Tyler Wollmuth, NDDOT Tom Wood, WSB & Associates Ben Worel, MnDOT Brad Wright, City of Bismarck Andrew Wrucke, NDLTAP/UGPTI Bryce Wuori, Northern Improvement Company Carey Yoder, Braun Intertec Corporation Marty Zempel, Northern Improvement Company Mike Zimmerman, Dunn County Highway Department Brian Zuroff, Mountain Plains, LLC















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