MnDOT’s Automated Bus Pilot Project

Michael Kronzer | MnDOT

In each issue, the INCITER features an article coordinated by one of NCITE’s technical committees. This article is a contribution from the ITS Committee.

Autonomous vehicles have significant potential to improve safety, operations, and quality of life. As this technology grows, these vehicles must be able to work in a variety of weather climates.

Many tests conducted around the world have been conducted in warm weather climates. Without the technology working effectively in winter weather conditions, the implementation and acceptance of autonomous technology will be delayed. As regulations begin to develop at local, regional, and national levels, the operation of vehicles in adverse weather conditions must be considered.

To ensure the state of Minnesota is prepared for the testing, implementation and operation of automated vehicles in our environment and on our system, the Minnesota Department of Transportation (MnDOT) conducted winter weather testing of an autonomous bus from December 2017 through February 2018. Weather testing occurred in both a rural and an urban environment. For the rural setting, tests in fair weather conditions documented baseline performance. The same scenarios were tested on snow covered roads, blowing snow conditions, ice covered roadways, and roads that were treated with salt for de-icing. In the urban environment, the vehicle was subject to changing roadside conditions. The test monitored the vehicle performance related to changing roadside conditions and monitored the vehicle performance related to changing snow bank conditions.
## EXECUTIVE COMMITTEE

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## STANDING COMMITTEES

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<th>Name</th>
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<tbody>
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## STUDENT CHAPTERS

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## MIDWESTERN ITE

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www.nc-ite.org
Scott Poska, 2018 NCITE President

We are finally able to enjoy spring with the last late-season blast of snow melting away revealing lawns we should have seen several weeks ago! Unfortunately, this also resulted in the demise of the Wild and Timberwolves’s post-season runs. NCITE has had a busy five months! In January, we successfully transitioned in a new executive board as well as welcomed new committee chairs and co-chairs. We have planned four successful and well attended section and professional development meetings. Our technical committees continue to meet and engage our membership. Student members and leaders at the University of Minnesota have been busy planning their first Student Leadership Summit. And finally, many of our Section members are in the thick of preparing for the 2018 MWITE/GLITE/ITE Annual Meeting. Both of these events are a short three months away, so it is an exciting time to be a member of our section!

At the March executive board meeting, we brainstormed and developed nine initiatives that we plan to focus on for the remainder of the year. I believe these items will elevate our Section to new heights and increase the value of membership to our organization. The nine initiatives are in the following subject areas: outreach at Civil Engineer day, section meeting “Road Show” (outside Twin Cities metro), future traffic engineering symposium, PE Exam preparation program, expanded social media presence, mentoring program, new member welcome and membership drive, board duties documentation, and expansion of section awards. I encourage any member interested in participating in these initiatives to contact a Board member about getting involved.

NCITE recently partnered with other local civil engineering organizations to promote the Year of the Engineer at the Science Museum of Minnesota on Saturday April 28th. NCITE had a booth with interactive transportation engineering activities for kids interested in exploring our world in transportation and had an excellent turnout. A big thank you to past president Mike Martinez for coordinating NCITE’s involvement in this event and Benjamin Nault-Maurer, Katie Schmidt, Jeremy Melquist, Joe Gustafson, Caitlin Wotruba, Andrew Hengel, and Phil Kulis who joined Mike and I as booth volunteers.

Due to the popularity of our section meeting last year at Gasthof Zur Gemutlichkeit, we will be back this May. However, the twist this year is that we have adjusted the schedule to accommodate a happy hour following the technical presentation! I can already taste the German Hefeweisen in my stein! NCITE will be using this section meeting to promote membership in the organization. Once again we are offering free registration for the meeting to individuals who are interested in learning more about ITE, but are not yet members. Are you unsure if your coworkers and colleagues can find a benefit to joining our organization? Encourage them to attend to find out what NCITE and ITE is all about. The May section meeting will also feature our homegrown game “Lake Name or Fake Name”, which was created by Cortney Falero to promote the upcoming 2018 ITE Annual Meeting. The game is making its way around the country at various ITE District and Section meetings. Let’s not get beat at our own game!

I invite each of you to help make 2018 a memorable year in NCITE by attending Section meetings, participating in committees, volunteer at the Student Leadership Summit, and network at the MWITE/GLITE/ITE Annual Meeting!

Scott Poska - 2018 NCITE President
UPCOMING EVENTS

2018 ITE Student Leadership Summit
August 17-19, 2018
University of Minnesota | Minneapolis, MN

Minneapolis 18
Annual Meeting and Exhibit
August 20 – 23

2018 ITE Annual & Midwestern District Meeting
August 20-23, 2018
Hilton | Minneapolis, MN

For professional development opportunities:
http://nc-ite.org/content.php?page=Professional_Development_Meetings

NCITE Calendar:
http://nc-ite.org/calendar.php
The September Section Meeting was held on January 24, 2018 at Grumpy’s in Roseville, MN.

The meeting topics included general items and the 2017 NCITE awards. 2017 NCITE Intern Scholarships winners: **Anna Corman** of Iowa State University and **Cameron Valuch** of the University of Minnesota.

2017 NCITE Past Presidents Award was presented to **Scott McBride** of MnDOT.

The presenter was **Sue Porter** of MnDOT, presenting on MnDOT’s TSMO Implementation Plan and upcoming projects. Highlights of the presentation included:

**What is TSMO?**
- Transportation System Management and Operation is defined in MAP 21 and the FAST Act as “integrated strategies to optimize the performance of existing infrastructure through the implementation of multimodal and intermodal, cross-jurisdictional systems, services, and projects”.

**Example TSMO Strategies and Solutions:**
- Work Zone Management
- Traffic Incident Management
- Traveler Information
- Managed Lanes
- Integrated Corridor Management
- Connected and Autonomous Vehicles

**MnDOT has developed a TSMO Leadership Team. Sue is the TSMO Lead and has performed or is performing the following activities:**
- Serving as the point of contract for MnDOT TSMO
- Established a high-level agency team to oversee TSMO
- Determined the current state of MnDOT TSMO operations
- Determining if a formal TSMO plan should be developed
- Preparing MnDOT for connected and autonomous vehicle growth

**MnDOT put in a request for the following TSMO-related items:**
- Statewide ITS System Integrator
- Purchase probe data
- Additional RTMC operators/dispatchers
- Additional signal operations staff
- New FIRST route and vehicle
- Streaming video to public
- Autonomous bus
- CV/AV project manager
- SPaT Challenge
- RTMC programmer
- Connected Corridors funding
The September Section Meeting was held on February 20, 2018 at Jax Café in Minneapolis, MN.

The presenter was Derek Leuer of MnDOT, presenting on Safety Performance of Roundabouts and Other Intersections in Minnesota. Highlights of the presentation included:

**Conversion to Single Lane Roundabouts:**
- 27% reduction in total crashes
- 89% reduction in fatal crashes
- 83% reduction in serious injury crashes
- 68% reduction in right angle crashes
- 83% reduction in left turn into traffic crashes
- 51% reduction in multi-vehicle crashes

**Conversion to Unbalanced Roundabouts:**
- 44% increase in total crashes
- No fatal crashes reported during study period
- 78% reduction in serious injury crashes
- 25% reduction in right angle crashes
- 83% reduction in left turn into traffic crashes
- 22% increase in multi-vehicle crashes

**Conversion to Dual Lane Roundabouts:**
- 146% increase in total crashes
- No fatal crashes reported during study period
- 100% reduction in serious injury crashes
- 133% increase in right angle crashes
- 25% reduction in left turn into traffic crashes
- 148% increase in multi-vehicle crashes

**Conversion to Roundabouts (average across all types):**
- 16% increase in total crashes
- 87% reduction in fatal crashes
- 83% reduction in serious injury crashes
- 39% reduction in right angle crashes
- 71% reduction in left turn into traffic crashes
- 5% reduction in multi-vehicle crashes

**Roundabout Capacity for Events:**
Roundabout traffic recorded and analyzed for WE Fest country music festival. In summary:
- Roundabouts acceptably accommodated volumes 60% higher than typical weekday volumes
- Event traffic remained below NCHRP Report 672 thresholds for single lane roundabouts
- Queues generally dissipated quickly with no sustained congestion
- From the back of the maximum queue the time to enter the intersection was comparable or less than the expected wait time at a signal with a 120-second cycle length

**Reduced Conflict Intersections:**
- Significant reduction in fatal and serious injury crashes
- Significant reduction in right angle crashes
- Significant reduction in crash severity
- Insignificant increase in other crash types

**Towards Zero Deaths**
- 358 fatalities in Minnesota in 2017 (lowest number in 74 years)
- Rest of the county is up 10%
The Younger Member Committee presented at a lunch & learn for University of Minnesota students in February, hosted a poker night in March, and had a meet & greet with ITSO officers in April.

Our next event will be a bike tour on Thursday, June 7th. See below for more details on that event:

**Event Details**

Thursday, June 7th, 2018  
Meet at: Pryes Brewing Company at 5:00 PM (leave by 5:30PM)  
1401 West River Road North, Minneapolis, MN 55411

The stops along the tour include:  
Leave Pryes at 5:30PM  
Alliant Engineering  
Burrito Loco  
Back to Pryes Brewing Company by sunset (9:00pm)

The planned bike route is shown below (8.2 miles / 50 min of biking).

If you would like to attend the bike tour or be added to the YMC email list for future events, please email Jeremy Melquist (jeremy.melquist@kljeng.com).
UMN ITSO will be hosting the UMN 2018 ITE Student Leadership Summit. It is open to any students internationally and will be held immediately prior to the ITE Annual Meeting in Minneapolis from August 17th to 19th. Discounted pricing is being offered from now until June 1st.
During spring 2018, ITE-NDSU started with a balance leadership team from both graduate and undergraduate level. The new committee has carefully planned different events based on the requirements of the members and students enrolled in different transportation classes. In February, it organized the first ever ‘Class Event’ where 15 students have joined the Civil 3D demonstration and learned to prepare a plan and profile of a transportation project. In the monthly ‘Meet and greet’ series, students learned about Transportation Operation, Geometric Roadway Design, and the current state of Transportation.
This year ITE-NDSU is one of the 10 nationwide schools who is participating in the Transportation Technology Tournament arranged by National Operations Center of Excellence (NOCoE). They are working with City of Moorhead on an ITS project to promote informed traveler on road. They also have finalized their team for Midwestern District Traffic Bowl for August 17, 2018.

Team for Transportation Technology Tournament;
From Top Left:
Sharjad Hasan,
Zachary Holweger;
Middle:
Miranda Simon;
Bottom Left:
Niloy Saha,
Naqib Hossain

Chapter members also volunteered in several events like ND Science Olympiad, and Distressed Children and Infants International (DCI) North Dakota chapter Fundraising.
increased pedestrian traffic, and GPS interference due to the canyon effect of high rise buildings.

The State of Minnesota offers a unique climate to test extreme winter weather conditions. In addition to snow and ice, Minnesota’s low temperatures test sensor durability and battery performance. MnDOT recently lead this winter weather testing to help both transportation owners and autonomous vehicle manufacturers advance this technology in extreme climates. This testing was also an opportunity to engage the public, by allowing them to ride an autonomous vehicle in winter weather conditions.

The winter weather testing was performed with EasyMile’s automated shuttle, the EZ10. EasyMile, a French based company with an office in Denver, Colorado, specializes in automated vehicle technology. Their EZ10 is an electric, low speed, level 4 automated shuttle. The vehicle itself carries up to 12 passengers and its level 4 autonomy designation means that the vehicle operates completely on its own on pre-mapped, pre-programmed routes. There is no steering wheel, no brake or accelerator pedals, and no one operating the vehicle when it is in autonomous mode. During the MnDOT’s testing and demonstrations an operator was required to be on board the vehicle, ready to takeover control in case an emergency situation was to occur. A summary report of the testing results is currently in the draft process and will be published before the end of the fiscal year (June 30, 2018).

Public engagement is another important mission in regards to automated vehicle technology. Increasing public and stakeholder awareness about the current state of the technology, potential applications, and the benefits to safety, mobility and transportation efficiency is crucial to achieving acceptance of the technology on a broad scale. MnDOT advanced this effort through stakeholder tours and public demonstrations of the EasyMile EZ10 autonomous shuttle. These demonstrations included a 3 day operation in downtown Minneapolis on Nicollet Mall in conjunction with the events taking place in the 10 days leading up to the 2018 Super Bowl hosted in Minneapolis. The automated shuttle demonstration was highly visible and well received, with nearly 1300 members of the public taking a ride over the 3 days. A few dozen members of the disabled community were also able to come experience the technology. Many members of this community expressed how excited they are for the mobility freedom automated vehicle technology could bring them.

Another demonstration took place at the Minnesota State Capitol grounds on March 7th, 2018 in coordination with Transportation Day at the State Capitol. This was an opportunity for additional members of the public and state legislators to ride the automated shuttle and learn more about the technology. The vehicle operated in a loop on the upper mall of the Capitol and provided rides to over 200 people. This was also an important demonstration because Governor Dayton announced an executive order to form a Connected and Automated Vehicle Advisory Council that very morning.

Next steps for MnDOT and the state of Minnesota include addressing the tasks laid out in the Connected & Automated Vehicle (CAV) executive order. The most immediate task being the development of a CAV report which will recommend changes to state statutes, rules, and policies as they relate to transportation infrastructure, cybersecurity, registration & licensing, economic development & opportunities, and ensuring the technology is accessible for all Minnesotans. This report will help guide state statues and policy as they relate to CAV and will set a direction for Minnesota and the advancement of this technology moving into the future.
**Geometric Design Technical Committee**
Committee Chair: Thomas Jantscher - tjantscher@hrgreen.com
Recent Agenda Items: Jim Rosenow, MnDOT – Performance-Based Practical Design and follow up discussion.
Future Agenda Items: TBD
Next Meeting: TBD

**Intersection Traffic Control Technical Committee**
Committee Chair: Tyler Krage - tkrage@alliant-inc.com
Recent Agenda Items: MnDOT’s installation of the Utah DOT Signal Performance Measures (SPM) Software.
Future Agenda Items: Super Bowl Traffic Operation in Downtown Minneapolis.
Next Meeting: Thursday, May 24th, time and location TBD

**ITS Technical Committee**
Committee Chair: Todd Olson - toolson@alliant-inc.com
Recent Agenda Items: Dan Rowe and Terry Hauk, MnDOT – Truck Parking Availability for Rest Stops.
Future Agenda Items: TBD
Next Meeting: Tuesday June 5th, 1:00pm – 3:00pm, MnDOT Water’s Edge, Conference Room A.

**Pedestrian and Traffic Safety Technical Committee**
Committee Chair: Caitlin Wotruba - caitlin.wotruba@kimley-horn.com
Recent Agenda Items: Jackson Street protected bikeway tour.
Future Agenda Items: Bde Maka Ska/Harriet Trail improvements.
Next Meeting: TBD

**Planning Methods and Applications Technical Committee**
Committee Chair: Steven Ruegg - ruegg@pbworld.com
Recent Agendas Items: ABM best practices, discussion and writing responsibilities, and Committee website discussion.
Future Agendas Items: Draft chapter write-ups for research project – best practices for the use of the Twin Cities ABM model.
Next Meeting: TBD in July

**Traffic Operation and Maintenance Discussion Group**
Committee Chair: Adam Bruening - adam.bruening@co.washington.mn.us
Recent Agenda Items: Switching from U-channel to all break-away posts, Leveling shims and concrete bolts, sandblast, paint, and clean traffic signal options.
Future Agenda Items: TBD
Next Meeting: Wednesday June 6th, Location TBD (First Wednesday of each month).

**Simulation and Capacity Analysis Technical Committee**
Committee Chair: Joe DeVore - joseph.devore@kljeng.com
Future Agenda Items: TBD
Next Meeting: Wednesday June 20th, 1:00pm – 3:30pm, Waters Edge room 176.
Since 2000, the number of West Fargo households have more than doubled. Almost two-thirds of these new households have been built around the Sheyenne Street corridor. This primarily residential growth along Sheyenne Street creates unique transportation constraints: people leave the neighborhoods in the morning to go to work and return in the evening. This travel pattern results in around 30 percent of the daily traffic occurring during the two peak hours, twice the North Dakota statewide average for similar roadways. Additionally, during these peak hours, around 75 percent of traffic travels in the peak direction, leading to a high demand over short periods of the day.

**Context Sensitive Approach**
Sheyenne Street is more than an arterial roadway, it begins in downtown, crosses Interstate 94, and extends through the heart of the city’s residential neighborhoods. The dynamic character of Sheyenne Street required a dynamic approach to the planning process to respond to the distinct needs of each area. Various modeling tools provided detailed analysis of a wide-range of alternatives along the five-mile corridor. Travel demand models evaluated development timing and intensity scenarios, including 50-year growth scenarios. Microsimulation models more precisely estimated queues and delay at the oversaturated interchange. Multimodal quality of service models were used to develop alternatives for all modes. Crash prediction models maximized safety investments across the corridor. Travel demand models and microsimulation models minimized the two-year construction impacts.

**Innovative Solution**
A value engineering process brought together 15 transportation experts from the City, County, Metropolitan Council of Governments, and North Dakota Department of Transportation. Based on technical analysis and the priorities of the stakeholders, the innovative, first-of-its kind, Modified Single Point Urban Interchange (MSPUI) design was identified as the preferred alternative.
Like a traditional SPUI, the MSPUI combines the ramp intersections into one intersection. However, the MSPUI allows northbound and northbound to eastbound I-94 traffic to travel without stopping through the interchange area. This design resulted in nearly 40 percent less delay than the next best alternative and reduces total crash potential by 60 percent. Combining the two interchange ramps into one intersection also increased spacing to the adjacent intersections, meeting traffic signal spacing requirements and improving flow across three densely spaced intersections. This will prevent queues from blocking adjacent intersections and extending back onto the interstate.
Multi-Faceted Public Involvement Approach
To gain consensus among the various stakeholders and constituencies, KLJ used a multi-faceted public involvement approach.

- In downtown, a virtual reality tour included a proposed mixed-use development and multimodal transportation improvements allowing the community to walk through the corridor, stop at specific locations, and zoom and pan to understand the scale, scope, and impacts the changes would bring.

- At the interchange, an educational video was developed to demonstrate the unique configuration, signal phasing, and operations from a driver’s perspective.

- In the neighborhoods, a recorded bike audit helped bring attention to the needs of multimodal facilities along the corridor.

- The significant investments needed required a marketing video that identified the challenges, solutions, and benefits.

Summary
In all, nearly $70 million of improvements will be constructed through 2019. The improvements include multimodal improvements in downtown, the MSPUI at the interchange, and additional roadway capacity, shared-use paths on both sides of the road with pedestrian underpasses major intersections, and traffic calming features through the neighborhoods. Providing a safe and efficient transportation system for all users is important to build strong and resilient communities. It will make traveling the corridor by car, bike, and foot easier, safer, and more desirable.
The American’s with Disabilities Act was signed into law by President George H.W. Bush on July 26, 1990. This important law was passed by an overwhelming majority of lawmakers in both the Senate (91-6) and the House of Representatives (377-27). The bipartisan support of the ADA demonstrated elected officials’ commitment to the importance of ensuring equality, independence and freedom along with full participation in and access to all aspects of society. The following timeline shows a brief history of the ADA.

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<th>Year</th>
<th>Event</th>
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<tr>
<td>1968</td>
<td>The Architectural Barriers Act (ABA) Becomes Law - the first federal law to address accessibility and to make federal facilities accessible to people with disabilities. Also in 1968: Martin Luther King, Jr. and Robert Kennedy were assassinated. Gas cost $0.34 per gallon.</td>
</tr>
<tr>
<td>1973</td>
<td>The Access Board is Created - ensuring federal agency compliance with the ABA. Also in this year the 1973 Rehabilitation Act was enacted, which prohibits discrimination against people with disabilities. Also in 1973: Nixon was president, our country was still in the Vietnam War, and the Watergate scandal occurred. Gas cost $0.40 per gallon.</td>
</tr>
<tr>
<td>1982</td>
<td>Access Board publishes Minimum Guidelines for Accessible Design - the first comprehensive set of accessibility guidelines established by the federal government. Also in 1982: Michael Jackson released “Thriller” album and “The computer” was New York Time's Man of the Year. Gas cost $0.91 per gallon.</td>
</tr>
<tr>
<td>1990</td>
<td>The Americans with Disabilities Act (ADA) Expands the Board's Mission - including developing accessibility guidelines and required ADA Transition Plans by 1992. Also in 1990: The Berlin Wall fell, a hole in the ozone layer was first discovered, and The Simpsons debuted on television. Gas cost $1.34 per gallon.</td>
</tr>
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</table>

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Over the years, the implementation of the provisions in the ADA for accessible pedestrian facilities and services has occurred at varying rates across the country. Some communities see the development and implementation of ADA Transition Plans as an opportunity to deliver quality of life benefits for not only disabled persons but also parents with young children and the aging population. Other communities may see ADA transition Plan as another mandate from the federal government. Regardless of your community’s perspective, your community will not receive Federal Transportation funding without an ADA Transition Plan in place.
Flagging operations are a critical part of construction and maintenance activities on our highways. Flagging personnel are trained to effectively and safely communicate the location of construction or maintenance activities to the traveling public. Due to the nature of the work, flagging personnel are located on the roadway near the work zone, which can result in dangerous vehicle and flagger interactions. With the increasing levels of distracted drivers, safety of flaggers and workers in work zones is an increasing concern. Unfortunately, flagging personnel deaths and near misses continue to occur on our highways during each construction season.

Moving operations involve work zones that are continuously moving, such as pavement crack sealing operations. The use of traditional automated flagger assistance devices (AFADs) in a moving operation is difficult due to the towing requirements of the devices. To capture the benefits of AFADs in a moving work zone, the Minnesota Department of Transportation (MnDOT) determined the stationary AFAD needed to be modified to allow for self-propelled motion to follow the moving operation.

To address this issue, Wenck and MnDOT completed a research project that included the following tasks:

- Determination of the need for the device
- Review of similar devices already on the market
- Design of the prototype device
- Fabrication of the final device
- Documentation of device operations

**Development of the Device**

The stationary AFAD that MnDOT uses is the AutoFlagger, which is manufactured by Safety Technologies, Inc. An initial meeting was held with Safety Technologies, Inc. to discuss the possibility of developing a moving AFAD device. Discussion at the meeting included developing requirements for the device, including moving speed, device controls, and range of motion. It was concluded that a review of existing devices already on the market would be conducted to determine if any devices were worth pursuing further.
Field Testing
The device was used for flagging on a roadway crack sealing project on TH 71 south of Sauk Centre, MN. The device operated as expected and was used for about an hour on the project. Due to the type of crack sealing being performed, the crew was required to move at a faster rate than the device could accommodate. The required speed resulted in some drivability issues with oversteer while moving against traffic. After one hour of use, the device was removed from the project.

Next Steps
The moving AFAD device is still being tested by MnDOT. Further modifications are being investigated, including enhancement of the battery pack to allow for longer operating times. Steering and controller design will likely also be modified. Currently, the moving AFAD must be steered from its rear traffic-facing axle, forcing the remote operator to guide it in a manner similar to backing up a boat trailer. Redesigning the device to be steerable from the traffic-leading end of the vehicle would allow for more intuitive control. MnDOT personnel would also like to see the device’s controller integrated with the sign controller, eliminating the need for two remote controls.

The full study report and background information can be found at

http://dotapp7.dot.state.mn.us/projectPages/pages/projectDetails.jsf?id=39357&type=DOCUMENT
ITE LOL

The app says our self-driving car's in Arizona now, and that it's changed its device name from "The Joneses' New Volvo" to "Easy Rider."

Maybe we should call support.

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MEMBERSHIP UPDATE

New Members

Ajibola M. Ayanwale - SRF Consulting Group
Kevin A. Chan. - Minnesota DOT
Linda M. Heath - Minnesota DOT
Benjamin Hobert - SRF Consulting Group, Inc.
Caitlin J. Johnson - Minnesota DOT
Benjamin Nault-Maurer - SRF Consulting Group
John D. Peters - Minnesota DOT
Kelsey Retherford - Bolton & Menk, Inc.
Erik Seiberlich - WSB & Associates
Donovan M. Slag - North Dakota DOT
Steven L. Strack - Houston Engineering, Inc.
Austin Stroming - Hennepin County, Pub. Works
Alicia Lorig - North Dakota State University
Leo Johnson - University of Minnesota- Twin Cities
Makala Simon - North Dakota State University
Keshab Thapa - North Dakota State University

Moves

Daniel Haake – HDR, formerly with SRF Consulting
Michael J. Iacono - Minnesota DOT, formerly with University of Minnesota
Jeremy M. Melquist – KLJ, formerly with Bolton & Menk
Ted W. Schoenecker – Ramsey County, formerly with Minnesota DOT
Stephen H. Smith – HNTB, formerly with Alliant Engineering

If you or a friend has changed jobs or moved, we would like to stay in touch. Members, please update your information by visiting http://www.ite.org/membership/index.asp. To access this area, you will need to know your membership number. Your “username” is your membership number, and your “password” is the first 6 letters of your last name (e.g. Johnson=Johnso). Non-members please contact Morgan Hoxsie via phone (612.294.9726) or email (Morgan.Hoxsie@kimley-horn.com) for assistance. Please provide you name, title, employer, complete street address (including mailstop, if applicable), telephone number, fax number, and email address.

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