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Before

After

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Minnesota's Transportation Conference
Working Together—Connecting Minnesota

March 3–4, 2020
Saint Paul RiverCentre
Saint Paul, Minnesota

ccaps.umn.edu/mtc

University of Minnesota
Driven to Discover®
Welcome to the 2020 Minnesota’s Transportation Conference! We have worked hard to provide an information-packed program that will inspire you and raise awareness of important issues in transportation. Our keynote speakers will challenge you to think about how transportation fits into a world with changing demographics and political landscapes, and challenges in getting people from point A to point B. Together we will explore advances in technology, and safety and security issues facing the transportation industry.

Thank you to our conference sponsors! Sponsors make the conference more valuable for everyone with displays and information on important new products and services. Please be sure to visit each booth and check out the latest innovations in transportation. Don’t miss the big reception from 4:30 to 6:30 on Tuesday evening, March 3! It’s a great opportunity to network and make new connections.

Your feedback on the conference is critical. Check your email for an evaluation after the event to share your thoughts.

Thank you to the member organizations of the Principal Planning Committee: The American Council of Engineering Companies of Minnesota, Associated General Contractors, Center for Transportation Studies, City Engineers Association of Minnesota, the College of Continuing and Professional Studies, Federal Highway Administration, the Metropolitan Council, Minnesota County Engineers Association, Minnesota Department of Transportation, and the Transportation Alliance.

Minnesota’s Transportation Conference Reaching Out

American Traffic Safety Services Association (ATSSA) represents the road, traffic, and highway safety industry with effective legislative advocacy, traffic control safety training, and a far-reaching member partnership.

The ATSSA Foundation offers educational scholarships to families and loved ones impacted by work zone crashes. Minnesota’s Transportation Conference is pleased to support these scholarships with a contribution from the proceeds of the 2020 conference.

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Minnesota’s Transportation Conference Committee

Twitter
Use hashtag #mntc2020 to continue this year’s conference conversation.
# Program at a Glance

## Tuesday, March 3, 2020

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<td>Lunch and Plenary Session: Dr. Patricia Hendren</td>
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<td>2:30–3:15 p.m.</td>
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<tr>
<td>4:30–6:30 p.m.</td>
<td>Reception</td>
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# Program at a Glance

## Wednesday, March 4, 2020

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<td><strong>Session 22:</strong> LRRB: National Award Project, Highlights, and Sneak Preview</td>
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<td><strong>Session 24:</strong> Electric and Solar Solutions in Transportation</td>
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<td><strong>Session 25:</strong> How to Move A Bridge: Successful Slide of the Existing I-494/694 Bridge</td>
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<td><strong>Session 26:</strong> Utilizing Big Data to Understand Freight Patterns</td>
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<td><strong>Session 27:</strong> Design Flexibility: The Future of Inclusive Road Design</td>
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<td><strong>Session 28:</strong> Project Delivery—MnDOT’s Scope, Schedule, and Resource Planning Process</td>
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<td><strong>Session 41:</strong> Blowing Snow Control Measures to Improve Winter Driving Conditions</td>
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<td><strong>Session 42:</strong> How Dashboards Can Help Tell the Story for You</td>
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Program Schedule

Tuesday, March 3, 2020

Exhibitor Setup 7:00 a.m.

Participant Registration, Continental Breakfast, and Exhibits 8:30–9:30 a.m.

Welcome and Federal Transportation Update 9:30–10:30 a.m.

Grand Ballroom

Nicole Nason (FHWA Administrator)

Collaborations across the transportation sector are vital to ensuring the safety, durability, and efficiency of our roadways. Administrator Nason will address the importance of collaboration while speaking about the condition, performance, and future of our transportation system and the need for a continued focus on safety.

In addition, Administrator Nason will address the administration’s proposals for transportation funding and the happenings with Congress on the transportation reauthorization, and engage everyone in addressing the challenge we face with human trafficking and the role transportation plays in this criminal activity.

Breaks and Exhibits 10:30–11:00 a.m.

Twitter Use hashtag #mntc2020 to continue this year’s conference conversation.

Concurrent Sessions 11:00 a.m.–noon

Session 1: TH 169 TIGER Grant – Implementing a Shared Vision
Meeting rooms 2–3

Lisa Freese (Scott County), Jon Chiglo (WSB), Jack Corkle (WSB), Earth Evans (WSB)

Moderator: Sheila Kauppi (MnDOT)

A significant component of the vision for TH169 included the section through Louisville and Jackson Townships, where the TH 41 Minnesota River Crossing connects into TH 169. Scott County led the efforts to fund construction an interchange, frontage roads, an overpass, trail improvements, access closures, and improvements to address flooding. Come hear how it all came together: it’s a great story, led by a great group of people in the public and private sectors.

Session 2: Connecting with the Women in Minnesota Transportation
Meeting rooms 4–5

Margaret Anderson-Kelliher (MnDOT), Shannon Evans Engstrom (University of Minnesota), Sara Sargent (VSI Labs), Jody Martinson (WSB)

Moderator: Tammy Meehan Russell (The Plum Catalyst LLC)

New vehicle and roadway technologies are not the only revolution occurring in the transportation industry. Women, now more than ever, also have the ability to make an impact on helping move the industry forward. This panel will bring forward impactful examples of Women in Transportation showing what each are doing to promote a diverse, equitable, and inclusive industry while bringing our Minnesota roads into the next generation.
Session 3: Preparing and Engaging Minnesota for Connected and Automated Vehicles (CAV)
Ballroom D
Tim Burkhardt (Alliant Engineering, Inc.), Kristin White (MnDOT), Katie Caskey (HDR Engineering, Inc.), Keith Mensah (MnDOT), Dan Pfeiffer (WSB)
Moderator: Ashley Hudson (Bolton & Menk, Inc.)
CAV is coming. CAV is here. In Minnesota, MnDOT and its partners are focused on building trust in how the state is planning and preparing for safe CAV through strategic communications and engagement to allow Minnesotans opportunities to learn about CAV, share ideas, provide feedback, and collaborate in shaping a responsive policy for everyone. This presentation will provide and illustrate a variety of CAV storytelling tactics that are aimed at creating a strong foundation for CAV by building relationships, identifying and addressing concerns, and recognizing and integrating diverse ideas. Exciting implementation updates on the Minnesota CAV Strategic Plan priorities will also be shared along with information about the Governor’s CAV Advisory Council.

Session 4: CM/GC Approach for the Rehabilitation of the Historic 3rd Avenue Bridge
Meeting room 6
Tyler Schulke (Ames Construction), Daniel Enser (HNTB), Jerry Pfuntner (FINLEY Engineering Group), Chris Hoberg (MnDOT)
Moderator: Keith Molnau (MnDOT)
MnDOT selected to use Construction Management General Contractor (CM/GC) project delivery for collaboration on the design and construction of the Historic 3rd Avenue Bridge over the Mississippi River in Minneapolis. In this session you will learn about the history of the bridge, why MnDOT chose this method, how Bridge Integration Modeling (BrIM) and Construction Sequence Visualizations were used, and lessons learned.

Session 5: Is a Planning and Environmental Linkage (PEL) Study Right for Your Project?
Meeting room 7
Jon Haukaas (City of Blaine), Phil Forst (FHWA), Brandi Popenhagen (HDR Engineering, Inc.), Melissa Barnes (MnDOT)
Moderator: Dave Scott (FHWA)
This panel-based session will explain a new federal process for conducting corridor studies to begin the planning of transportation improvements. This new process uses planning study methodology in a way that can be incorporated more easily into future NEPA documents and future project development activities without conflicting with those processes. The products of a PEL study are then made available as a visioning roadmap as communities begin advancing improvements on the corridor.

Session 6: Vision Zero Traffic Safety Approach with Lessons From Minneapolis and MnDOT
Meeting room 9
Ethan Fawley (City of Minneapolis), Derek Leuer (MnDOT)
Moderator: Jeff Rhoda (AECOM)
How can we get to zero traffic deaths? Vision Zero and Toward Zero Deaths are both initiatives that have been started with this goal in mind. This session will give you an overview of Vision Zero work in Minneapolis, including around changing speed limits, focused street safety investments, and the potential use of automated traffic enforcement. The session will also include the latest from MnDOT’s Toward Zero Deaths work to support informed and strategic decisions on what type of projects to invest traffic safety funding in, including findings from rigorous research that provide clarity on what countermeasures reduce crashes and by how much.
Session 7: Working Together, Advocating for Increased Funding
Meeting room 8

Laura Ziegler (Associated General Contractors of Minnesota),
Katy Sen (Messerli Kramer),
Margaret Donahoe (Minnesota Transportation Alliance)
Moderator: Heather Lukes (MnDOT)

Whatever area of transportation you work in or care about, funding has to be there or projects and services don’t happen. Get the latest outlook on transportation funding statewide and what the political landscape looks like while learning about a new campaign: Reconnecting For a Safer Minnesota is pushing for a long-term, multimodal funding package. This panel of women in transportation will give you tools and insight into how you can make a difference in increasing transportation funding.

Lunch and Plenary Session  
Noon–1:30 p.m.

Transportation We Need for the Future We Want
Grand Ballroom

Patricia Hendren, PhD (The Eastern Transportation Coalition)

Transportation is big piece of America’s identity. We are rugged individuals cruising down the open road. But is that our future? How do we fund expanding needs and demand for choices while embracing alternative fuels? How do we handle the building technology tsunami as an industry that traditionally changes slowly? Dr. Patricia Hendren, executive director of the Eastern Transportation Coalition, has wrestled with these questions alongside the group’s 18-member states. Her presentation will look at the trends that the Coalition sees on the horizon, discussions about a new approach to funding, examples of how solutions are found by working together, and reflections on what will be required to move transportation forward in new and exciting ways.

Session 8: Working with Minnesota Tribal Governments on Transportation Projects
Meeting rooms 2–3

Michael Petesch (MnDOT), Adrien Carretero (MnDOT),
Levi Brown (MnDOT)
Moderator: Jody Martinson (WSB)

Minnesota is home to 11 Tribal Governments. MnDOT Tribal Affairs will speak about Tribal sovereignty, jurisdiction, and how to work effectively with Tribal Nations on a government-to-government basis. Also, MnDOT will discuss recent outreach and training efforts to foster tribal employment in transportation careers and contracting in small businesses. Additionally, only 17% of enrolled reservation members in Minnesota own a car. Therefore, tribal members often walk and use bicycles to move through their communities, which means traveling along and crossing state highways. Since 2016, MnDOT has partnered with four tribal nations to observe pedestrian and bicyclist behavior on their reservations and work with local and state partners to identify potential countermeasures to address observed risks.

Session 9: Planning for Complete Streets in Glencoe and Pelican Rapids
Meeting rooms 4–5

Lindsey Bruer (MnDOT), Mandi Lighthizer (MnDOT),
Mary Safgren (MnDOT), Patrick Hollister (PartnerSHIP 4 Health),
Leif Garnass (SRF Consulting Group)
Moderator: Ronda Allis (MnDOT)

More people desire to get out into their communities to walk and bike, making it important to plan for facilities to accommodate their needs and improve safety. Engaging a wide range of the community is critical when presenting study recommendations and educating them on how transportation projects come to fruition. Learn how MnDOT engaged with the community of stakeholders in Glencoe and how they worked with West Central Initiative and Partnership 4 Health collaboratively in Pelican Rapids to develop a vision for this community.
**Session 10: Connecting Minnesota: How Government-Industry Partnerships are Driving Connected and Automated Vehicles (CAV) Forward**

Ballroom D

*Daryl Taavola (AECOM), Ia Xiong (City of Rochester), Cory Johnson (MnDOT), Michael Kronzer (MnDOT)*  
*Moderator: Matt Gjersvik (WSP USA, Inc.)*  

Join us for a highlight reel of the innovative and exciting projects that MnDOT is driving forward in partnership with industry. The projects to be discussed are testing- and demonstration-centric and include diverse CAV initiatives from self-driving full-size transit buses, automated semi-trucks, first/last mile shuttles, and automated work zone technologies, to cutting-edge connected vehicle and infrastructure technologies that allow government and industry to innovate and create new and exciting transportation applications. Collaboration and strategic partnerships between government and industry are on full display in this session as we look to a safer, more efficient, and equitable transportation future. Come learn how to get involved.

**Session 11: BIM for Bridges and Structures**  
*Pooled-Fund Initiative*  

Meeting room 6

*Connor Christian (HDR Engineering, Inc.), Annette Jeffers (Iowa DOT)*  
*Moderator: Nicki Bartelt (MnDOT)*  

The BIM for Bridges and Structures initiative, also known as TPF-5(372), is a transportation-pooled fund project that is a collaborative effort of 18 states, FHWA, and the AASHTO Committee on Bridges and Structures. The pooled-fund objective is to develop an open, national standard for exchanging information necessary for the design, fabrication, and construction of bridges and structures in the United States. The presentation will provide an overview of the project and explain ways in which various stakeholders and industry partners can get involved.

**Session 12: Highway 252/I-94 Environmental Review**  

Meeting room 7

*Doran Cote (City of Brooklyn Center), Jason Staebell (Hennepin County), April Crockett (MnDOT), Justin Sebens (SRF Consulting Group), Jerome Adams (MnDOT)*  
*Moderator: Jim Grube (Hennepin County)*

Highway 252 has five intersections in the top 100 Statewide Crash Cost Ranking. Removing the six existing signalized intersections and converting it to a freeway is being considered for Highway 252 as well as the addition of MnPASS lanes for Highway 252 and I-94, from Highway 610 to downtown Minneapolis. In addition to safety issues, the existing signals on Highway 252 create extensive delays during the morning and afternoon peak periods, causing traffic diversions to local streets.

**Session 13: Safety Design in a Urban Context**  

Meeting room 9

*Scott Poska (Alliant Engineering, Inc.), Fay Simer (City of Saint Paul), Brad Estochen (Ramsey County), Kate Miner (Stonebrooke Engineering)*  
*Moderator: Kevin Peterson (Washington County)*

As active transportation increases, communities desire more livable spaces with pedestrian and bicycle facilities and transit options. Four-lane undivided highways have a history of relatively high crash rates for pedestrians and vehicles. Pedestrians are particularly vulnerable in four-lane undivided environments due to the double lane crossing threat. Ramsey County is actively reviewing the overall feasibility of reconfiguring many County four lane facilities and has completed several before and after conversion performance studies and community engagement efforts. In addition, the City of Saint Paul will present their recently adopted policy for pedestrian crossings and describe how this policy promotes effective, transparent, and consistent treatment for pedestrians. This presentation will cover new guidance for pedestrian treatments, including the FHWA’s 2018 Guide for Improving Pedestrian Safety and Uncontrolled Crossing Locations and 2019 research funded by the Local Road Research Board on pedestrian crossings.
Session 14: Funding Through the Metropolitan Council and the St. Cloud APO
Meeting room 8

Joe Barbeau (Metropolitan Council), Steve Peterson (Metropolitan Council), Brian Gibson (Saint Cloud Area Planning Organization), Paul Morris (SRF Consulting Group)
Moderator: Margaret Donahoe (Transportation Alliance)

Every two years, the Regional Solicitation process allocates around $200 million of federal transportation funds. As the region’s federally designated Metropolitan Planning Organization, the Metropolitan Council works with the Transportation Advisory Board (TAB) to allocate these funds, using an objective, data-driven, transparent process. This session is timely since the application period will be open for the 2020 round of funding. The session will discuss major changes to the application including a new roadways Spot Mobility and Safety application category, a new Bus Rapid Transit Program, and changes to how projects are scored based on equity.

This presentation will also provide an update on Saint Cloud APO’s efforts to help prioritize investments that will provide an economic return leading to a more sustainable system. This effort started through trying to understand the mechanisms for revenue generation and how these are affected by transportation investment.

Breaks and Exhibits 2:30–3:15 p.m.

Session 15: Working Together for the Benefit of Bicyclists
Meeting rooms 2–3

Liz Heyman (City of Minneapolis), Jack Broz (City of Richfield), Josh Potter (Hennepin County), Michael Petesch (MnDOT), Jessica Schoner (Toole Design)
Moderator: Caroline Miller (HDR Engineering, Inc.)

Hennepin County worked with Richfield and Minneapolis to team up and build a high-quality bikeway connection that will close a large gap in the region’s bicycle transportation network between the City of Richfield and City of Minneapolis. This presentation will also cover MnDOT’s Pedestrian and Bicyclist Data Program. MnDOT and local agencies collect large amounts of data from a variety of automated and manual sources. In collaboration with public and nonprofit agency stakeholders from across the state, MnDOT developed a strategic plan to foster more widespread nonmotorized traffic counts and institutionalize the pedestrian and bicyclist counting program at MnDOT.

Session 16: Community Conversations: Advancing Transportation Equity Through In-Depth Interviews
Meeting rooms 4–5

Mandi Lighthizer (MnDOT), Heather Lukes (MnDOT), Hally Turner (MnDOT)
Moderator: Brad Hamilton (MnDOT)

MnDOT is completing a series of one-on-one, in-depth conversations with people who work with or represent underserved communities in Minnesota. This presentation is a follow-up to the 2019 MTC presentation highlighting the process and preliminary results from the pilot completed in one MnDOT district. Two MnDOT districts—southeast and southwest Minnesota—will share their experiences with and highlights from the community conversations and how they are incorporating the results in their work.
Session 17: Using Intelligent Work Zones to Solve Safety Challenges
Ballroom D

Rashmi Brewer (MnDOT), Jon Jackels (SRF Consulting Group)
Moderator: Charles Cadenhead (Braun Intertec)

Intelligent Transportation Systems/Intelligent Work Zones (ITS/IWZ) are being successfully used in work zones to promote worker and traveler safety and improve mobility through construction areas. Information will be shared to aid in the selection, design, deployment, and evaluation of ITS/IWZ systems and how to realize the full potential of these systems while monitoring the ever-changing technologies, including connected and automated vehicle systems.

Session 18: Using Three-Dimensional Models to Save Two Historic Bridges
Meeting room 6

Jamison Beisswenger (SRF Consulting Group), Rick Snyder (SRF Consulting Group)
Moderator: JT Anderson (MnDOT)

To rehabilitate two historic truss bridges—Old Cedar Avenue and Kennedy bridges—two unique shoring systems were required to support each bridge during repairs. SRF created 3D models of the trusses and shoring systems to develop an innovative scheme to install both temporary and permanent piling through the truss spans while avoiding conflicts with in-place elements and the required shoring systems. 3D PDFs were provided as reference documents to allow the construction contractors to evaluate their means and methods.

Session 19: Transit Opportunities in Greater Minnesota
Meeting room 7

Debra Brisk (DRB Consulting LLC), Jake Schutt (MnDOT), Tom Cruikshank (WSB)
Moderator: Victoria Nill (MnDOT)

MnDOT administers Greater Minnesota transit services outside the Twin Cities metropolitan area. This includes 30 transit providers classified as rural or small urban areas (population less than 50,000) that are tasked with providing transportation services to dispersed populations with growing mobility demands outside of Minnesota’s primary population centers. In order to meet these challenges, all 30 providers developed five-year plans to understand strengths and weaknesses, identify unmet needs and future service modifications, and develop a financial plan adaptable to economic change. This presentation will also look at the unique perspective of planning a transit development plan for the Leech Lake Band of Ojibwe by discussing the challenges and opportunities that face a tribal transit program to create a vision for improving service within the reservation and surrounding communities.

Session 20: Improving Practices and Safety with Policy-Level Decisions
Meeting room 9

Jacob Bongard (Bolton & Menk), Dan McCormick (Carver County)
Moderator: Angela Murphy (MnDOT)

Project and policy choices affect every aspect of daily life, including the safety of pedestrians and motorists on city, county, and MnDOT roadways. This presentation will review the research, analysis, and final deliverables leading to policies focused on identifying system-wide practices for pedestrian crossing treatments, pavement marking program options, and rural intersection lighting categories.

Twitter
Use hashtag #mntc2020 to continue this year’s conference conversation.
System interchanges—connecting two or more freeways—are critical components of the system, and are often the source of breakdowns in mobility and safety performance. This presentation will highlight Minnesota Department of Transportation (MnDOT) and Metropolitan Council’s joint effort to map out the next phase of investment in this component of the highway network. The final outcome is a categorization of right-sized interchange investment opportunities that considers upcoming pavement and bridge preservation needs.
Concurrent Sessions 10:00–11:00 a.m.

Session 22: LRRB: National Award Project, Highlights, and Sneak Preview
Meeting rooms 2–3

Mark Ray (City of Crystal), Steve Bot (City of St. Michael), Renae Kuehl (SRF Consulting Group), Chris Troyeutsch (SRF Consulting Group), Mike Marti (SRF Consulting Group)

Moderator: Kaye Bieniek (Olmsted County)

The LRRB is the envy of many states. Having dedicated funding that specifically focuses on research and innovation for city streets and county roads truly sets Minnesota apart. In this session you will hear about:
— a project that recently won a National award from APWA on how to positively addressing citizens’ common requests for traffic safety concerns without just saying “no.”
— a paradigm shift from traditional roadway design to 3D and 4D modeling, including Civil Integrated Management (CIM).
— a sneak preview of an online tool to help cities and counties “Raise the Grade” via asset management.

Session 23: Equity Beyond Engagement: Seeking Inclusive Transportation Investments and Outcomes
Meeting rooms 4–5

Tim Burkhardt (Alliant Engineering, Inc.), Gloria Jeff (MnDOT), Kent Abrenbolsz (Kaskaskia Engineering Group, LLC), Keith Baker (ReConnect Rondo, Inc.)

Moderator: Brenda Thomas (KLJ)

As the conversation around achieving equity in transportation continues, there is a growing call for transportation professionals to do more than just seek greater public involvement and avoid adverse impacts. This session explores the idea that transportation projects represent opportunities—and responsibilities—beyond just solving traditional transportation problems. This session will also discuss the advocacy efforts to provide social unification and restoration of the neighborhood’s assets in the Rondo Community. Most recently, ReConnectRondo, Inc., in partnership with MnDOT and the City of Saint Paul, has completed a Rondo Land Bridge feasibility study to address the equity this neighborhood seeks.

Session 24: Electric and Solar Solutions in Transportation
Ballroom D

Kevin Schwain (Xcel Energy), Tim Sexton (MnDOT), Lisa Austin (MnDOT)

Moderator: Katie Caskey (HDR Engineering Inc.)

Electrification and solar innovations can provide long-term sustainable solutions for the transportation industry. Electrification of transportation infrastructure creates a variety of challenges for government agencies, freight haulers, and electric utilities. Communities are asking leaders to encourage adoption of electric vehicles. This session will leverage individuals in the transportation and electric industries to discuss lessons learned in e-mobility. Solar energy can also be used to help meet energy demand, reduce long-term operational costs, and reduce GHG emissions. This session will explore three different approaches to solar energy procurement and how each process worked.

Session 25: How to Move a Bridge: Successful Slide of the Existing I-494/694 Bridge
Meeting room 6

Matt Huber (Kraemer North America), Ryan Coddington (MnDOT)

Moderator: Mike Leegard (MnDOT)

As part of the I-94 East Metro Interchange project, Kraemer North America used accelerated bridge construction technologies to slide the SB I-494/694 bridge into a temporary, central position. This allowed traffic to flow in both directions while constructing the new southbound bridge in place. This presentation will walk through the decision-making process for why a bridge slide was viewed as the best option by MnDOT and their project partners, along with a step-by-step process for constructing this bridge. The interstate closure started on a Friday evening and was reopened the following Monday morning.
Session 26: Utilizing Big Data to Understand Freight Patterns
Meeting room 7

Andrew Andrusko (MnDOT), Catherine Manzo (StreetLight Data),
Chris Ryan (HDR Engineering, Inc.)
Moderator: Todd Polum (SRF Consulting Group, Inc.)

The efficient movement of freight is critical to many communities’ quality of life. With the rise of e-commerce and urban freight activities, answering freight questions is becoming increasingly important. This presentation will explain how mobility analytics derived from GPS-enabled commercial fleet management systems can help engineers analyze commercial travel. We will also look at the data sources used in this analysis, including INRIX GPS data, InfoUSA business data, Zip Code Census Business Pattern Data, and MnDOT’s Heavy Commercial Annualized Average Daily Traffic (HCAADT) counts.

Session 27: Design Flexibility: The Future of Inclusive Road Design
Meeting room 9

Sonja Piper (MnDOT), Hannah Pritchard (MnDOT),
James Rosenow (MnDOT)
Moderator: Amber Dallman (MnDOT)

Vehicle-centric planning and design have fundamentally molded our transportation system over the past 100 years. Recently, there has been an industry-wide shift toward performance-based practical design and the consideration of the safety for all users. This presentation will cover the recently adopted vision statement and chapter outline of the next edition of the AASHTO Green Book, MnDOT’s new Bicycle Facility Design Manual, and FHWA’s guidance on the Safe Transportation for Every Pedestrian. It will shed light on design flexibility and multimodal design, while providing an educated prediction of what the design process and its accompanying guidance will look like in coming years, decades, and beyond.

Session 28: Project Delivery—MnDOT’s Scope, Schedule, and Resource Planning Process
Meeting room 8

Amber Blanchard (MnDOT), Peter Harff (MnDOT),
Jennie Read (MnDOT), Paul Merchlewicz (Alliant Engineering, Inc.)
Moderator: Mark Gieseke (MnDOT)

Transportation professionals recognize that projects that have been scoped well have a much higher likelihood of success. Historically, scoping has often focused on technical needs. Later consideration of environmental factors and public input at times leads to public and agency dissatisfaction with the project development process. This presentation focuses on MnDOT’s newly revised scoping process and how it tries to integrate engineering, environmental, and public engagement considerations to collaboratively identify and get support for performance-based, practical designs. This presentation will also provide insight into how to identify and schedule the resources needed to complete the work. Through better planning, we can reach achievable goals without compromising time, effort, or people.

Concurrent Sessions 11:10 a.m.–12:10 p.m.

Session 29: Minnesota Institute of Asset Management Chapter: Overview and Value
Meeting rooms 2–3

Ros Bintner (City of Edina), Brett Anderson (City of Minneapolis),
Shannon Foss (MnDOT)
Moderator: Brad Henry (MN2050)

A Mn IAM (Institute of Asset Management) Chapter was created in January 2017 to encourage professional management of Minnesota’s $0.25T public infrastructure. For three years, Minnesota asset management (AM) professionals have met quarterly to hear AM presentations, exchange AM best practices, and set a systematic AM direction. Mn IAM includes a cross-section of government (local, regional, state and federal), academic, public utility, and private company asset managers. In August 2019, 75 asset managers met at a two-day workshop, which included national speakers and discussion of the six foundational elements of AM. The result was two-fold: The workshop reaffirmed the value of the past three years’ effort, and it helped to set a new statewide direction for Mn IAM.
Session 30: Advancing Transportation Goals Through MnDOT’s Artist-in-Residence Program
Meeting rooms 4–5

Jessica Oh (MnDOT), Marcus Young (MnDOT/Smart Growth America), Ben Stone (Smart Growth America: Transportation for America)
Moderator: Angela Popenhagen (Stevens Engineers)

Minnesota Department Of Transportation (MnDOT) is one of two state DOTs participating in a first-in-the-nation artist-in-residence pilot program in partnership with Smart Growth America and ArtPlace America. Recognized as a tool for pioneering innovative and creative solutions, artist-in-residence programs have been piloted across the nation in municipal governmental agencies, but never before at a statewide transportation agency. MnDOT’s Community Vitality Fellow, artist Marcus Young, will bring a creative approach to advancing the agency’s goals of promoting economic vitality, improving safety, supporting multimodal transportation systems, and creating healthier communities. Come hear an update on the program’s outcomes so far, the origins and goals of the pilot program, and successful examples of art and creative placemaking in transportation.

Session 31: Implementation of New Facilities for MetroTransit
Ballroom D

Ryan Bauman (HDR Engineering, Inc.), Aaron Kelly (LHB, Inc.), Robert Rimstad (Metro Transit), Shawn Walding (Metro Transit)
Moderator: Patrick Watz (HNTB)

Minnesota welcomed the METRO C Line, a new nine-mile-long electric transit service, to the communities of Brooklyn Center and Minneapolis. Success was achieved through an adaptive design that encompassed Hennepin County and the cities of Minneapolis and Brooklyn Center. This presentation will also include the story of how the new maintenance facility became a reality for the 220 buses in operation. Learn about the concept development for this challenging site, creative use of virtual reality, innovative value engineering, and enhanced energy design assistance.

Session 32: Visualization Tools for Public Communication and Design Review
Meeting room 6

Kristin Petersen (SEH), Richard Lovel (SRF Consulting Group)
Moderator: Tom Jensen (Alliant Engineering Inc)

Have you ever needed to help a wide range of stakeholders visualize a complex project or idea? Come see how we are using innovative technologies like 3D printing and laser cutting on the proposed Twin Ports Interchange in Duluth. Also, learn how near-simultaneous advances in design software and graphics processing units (GPUs) now provide transportation agencies new opportunities to leverage visualization in an affordable, accessible tool for enhanced communication and transparency with stakeholders.

Session 33: Breaking Old Habits with New Traffic Models
Meeting room 7

Mike Bittner (KLJ), Ken Hansen (MnDOT), Jonathan Atkins (Moorhead Traffic Engineer)
Moderator: Scott Thompson (MnDOT)

Traffic modeling has advanced exponentially over the past decade. This presentation is designed to showcasing five case studies involving projects around the state, where simulation traffic modeling was used to challenge traditional traffic engineering methodologies to provide more informed decisions and better public engagement.
Session 34: Safety Design in a Rural Context
Meeting room 9

Doug Carter (MnDOT), Forrest Hasty (MnDOT), Andrew Plowman (WSB), Dan Pfeiffer (WSB)

Moderator: Mark Panek (MnDOT)

To reach the ultimate goal of Zero Deaths on Minnesota’s roads, MnDOT and their partners need an informed and strategic decision making process on what type of projects to invest traffic safety funding. Findings from rigorous research provide clarity on what countermeasures reduce crashes and by how much. The presentation will share the evaluation results of the sinusoidal rumble strips, the rural intersection conflict warning system, the use of a flashing yellow arrow at signalized intersections, and the increased speed limits from 55 mph to 60 mph on rural two-lane state highways. The project team will also identify some lessons learned with the design of RCUTs. This technical presentation will focus on what design elements were considered when designing these RCUTs and what lessons have been learned on different projects. Engagement with the public on these rural projects requires an understanding of the equipment that will be used for these types of improvements. Specialized group meetings have included freight and agriculture operators and school transportation providers and emergency services personnel as part of the engagement efforts.

Session 35: Using Design-Build Innovation Methods on a Traditional Design-Bid-Build Project
Meeting room 8

Mathew Thibert (MnDOT), Ben Lodin (Sambatek), Peter Muehlbach (WSB)

Moderator: Peter Harff (MnDOT)

Minnesota Department of Transportation (MnDOT) is doing a test pilot project using many design-build processes to deliver TH 5 in a traditional design-bid-build project. MnDOT performed over-the-shoulder reviews on two design phase plan sets to minimize the review times on the associated plan set submittals. These over-the-shoulder reviews provided valuable insight into plan production that reduced the number of comments with the corresponding plan sets. Hear from MnDOT and a consultant on how this allowed the consultant to deliver a more efficient plan set.

Session 36: Brick by Brick: Redesigning Historic Streets in a Rapidly Growing City
Meeting rooms 2–3

Adam Hayow (City of Minneapolis), Trey Joiner (City of Minneapolis), Tyler McLeete (Stantec Consulting)

Moderator: Peter Muehlbach (WSB)

This presentation will examine lessons learned in rebuilding historic streets in the rapidly densifying North Loop Neighborhood of downtown Minneapolis. This city project maintained the character of these streets through reuse of original paver materials, historical interpretation of defunct rail corridors, and preservation of historic warehouse loading docks within the right-of-way. The project also balanced this preservation focus with the best and latest in 21st century urban street design: multimodal safety treatments, street trees and greening, enhanced street lighting, and a pedestrian-oriented environment that accommodates street cafés and shared mobility.
Session 37: The Secret to Building Employee Engagement from Public and Private Sector Perspectives
Meeting rooms 4–5

Rachel Dungca (Metro Transit), Carol Hennekens (MnDOT), Erin Miles (People Spark Consulting)
Moderator: Stephanie Malinoff (Center for Transportation Studies)

Regardless of where you work, culture is an important factor in providing a place that not only attracts great talent but retains employees as well. Learn how this is provided in a consulting setting through the experiences of People Spark Consulting and how MnDOT and Metro Transit are building a culture from an agency perspective.

Session 38: Climate Resilience
Ballroom D

Stephanie Johnson (City of Minneapolis), Beth Neuendorf (MnDOT), Sarah Schweiger (City of Minnetonka), Drew McGovern (Hennepin County), Jeff Meek (MnDOT)
Moderator: Eric Roerish (SRF Consulting Group)

Minnesota has just closed out its wettest water year on record. We are experiencing increased rainfall depths, intensities, and frequencies. These changes are having direct impacts on our transportation systems at local and regional levels.

Staff from Minnesota Department of Transportation (MnDOT), Hennepin County, City of Minneapolis, and City of Minnetonka will participate in a panel discussion format. Each will briefly share how climate change is impacting their daily work and decisions, and the efforts underway within their respective agencies to adapt to climate change. Some specific topics will include discussion of the MnDOT Resilience Report, MnDOT’s Extreme Flood Vulnerability Project, Hennepin County’s Transportation Infrastructure Resilience Report, and city-specific perspectives. There is no uniform approach to addressing the ever-changing climate challenges that we all face. Open dialogue at all levels is required for effective and affordable change and adaptation within our industry.

Session 39: Realignment of Blue Earth County CSAH 1 with the Largest Geogrid Reinforced Slopes
Meeting room 6

Stefan Gantert (Blue Earth County), Ryan Thilges (Blue Earth County Highway Department), Nathan Lichty (Gale-Tec Engineering, Inc.)
Moderator: Jon Curry (ACEC MN)

This presentation will review the evaluation, design, bid document preparation, and construction for one of the largest geosynthetic reinforced slope projects in Minnesota, involving a 70-degree and two unusual 45-degree Reinforced Soil Slopes (RSS) on a turnback project adjacent to the Le Sueur River in a suburban area just outside Mankato. Learn how the design was promulgated to address unique site conditions such as bedrock outcroppings with the RSS reinforcement zone and large volumes of groundwater seepage within the hillside.

Session 40: Planning in Aeronautics: The Value of Minnesota Airports
Meeting room 7

Jake Schutt (MnDOT), Rylan Juran (MnDOT), Rick Braunig (MnDOT)
Moderator: Jon Solberg (MnDOT)

Minnesota Department of Transportation (MnDOT) is in the middle of updating the State Aviation System Plan. As part of the plan, the Minnesota Aviation System Environmental Justice Review, a first-of-its-kind analysis to address traditionally underserved communities and improve outreach, was completed. Participants will learn about the analysis and results as they relate to the statewide aviation system.

Another piece of the SASP is to calculate the economic impact of public airports on the communities they serve. It is estimated that the 133 public airports have an annual economic impact of more than $18 billion. This presentation will acquaint participants with the methodology behind the study, the local stories, and the economic impact calculator developed as part of the project.

While roads have a modest right-of-way, airports have imaginary surfaces that can stretch out for miles, and temporary structures like cranes or road pavers and permanent structures like buildings or bridges or even surface roads can have negative effects on the usefulness of an airport. Participants will learn about how airport surfaces are protected and what can happen when those surfaces are ignored.
Session 41: Blowing Snow Control Measures to Improve Winter Driving Conditions
Meeting room 9

Capt. Brian Cheney (Minnesota State Patrol), Dave Keranen (MnDOT), Kohl Skalin (MnDOT), Matt Greenslit (WSB)
Moderator: Dan Gullickson (MnDOT)

Blowing snow can be a problem for roadways in a climate like Minnesota. This presentation will cover preventative blowing snow control strategies to improve winter driving safety through maintenance operations and program delivery. From a maintenance operation standpoint, the presentation will focus on the use of social media, collaborating with Clay County, State Patrol, and property owners near Moorhead. The program delivery will focus on achievements using the highway development process in Ortonville using snow drift modeling software.

Session 42: How Dashboards Can Help Tell the Story for You
Meeting room 8

Ryan Loos (SRF Consulting Group), Sharvari Sangle (SRF Consulting Group)
Moderator: Tracey Von Bargen (Grant County)

Dashboards are an effective tool to interactively explore data, combine multivariate data sets, and compartmentalize information for documentation purposes. This presentation will feature live demonstrations of dashboards that have been used. Sample dashboards will include example uses for traffic model calibration, roadway capacity on the metro system, freight and transit travel patterns and demographics, and project management.

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### Exhibitor Floor Plan

#### Upper Level

![Exhibitor Floor Plan Image]

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<td>WSP USA, Inc.</td>
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General Information

Conference Mobile App

Enhance your conference experience by downloading the conference app on your iPhone or Android device. Search for MTC 2020 in your app marketplace. View the 2020 conference agenda and schedule; create a personalized schedule listing your chosen sessions; view detailed session, location, speaker, and attendee information; engage in MTC 2020 conversation on social media; upload conference photos.

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Wireless Access

Wi-Fi is available throughout the building. Connect to RC_FreeWifi. No password is needed.

Reception

An evening reception will be held in the exhibit area. Attendees are invited to view exhibits, speak with colleagues, and enjoy hors d’oeuvres. Tuesday, March 3, 4:30-6:30 p.m.

AICP Maintenance Credits

A complete list of approved sessions will be available on the conference website.

Professional Development Hours

Attendees at this conference may receive up to 10 professional development hours. A PDH form is available on the conference website and at the conference registration desk.

Attendee List

A conference attendee list is available upon request at the registration desk.

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