# Program at a Glance

**Thursday, November 7, 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>7:30–8:30 a.m.</td>
<td><strong>Registration and Buffet Breakfast</strong></td>
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<tr>
<td>8:30–10:15 a.m.</td>
<td><strong>Welcome</strong>&lt;br&gt;<strong>Laurie McGinnis</strong>, Director, Center for Transportation Studies, University of Minnesota&lt;br&gt;<strong>Opening Comments</strong>&lt;br&gt;<strong>Commissioner Margaret Anderson Kelliher</strong>, MnDOT&lt;br&gt;<strong>Keynote Presentation: Transport and Urban Governance in a Platform-Driven World</strong>&lt;br&gt;<strong>Speaker Kevin Webb</strong>, Codirector, SharedStreets&lt;br&gt;Panel discussion to follow keynote presentation</td>
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<tr>
<td>10:15–10:30 a.m.</td>
<td><strong>Break</strong></td>
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<tr>
<td>10:30–11:45 a.m.</td>
<td><strong>Concurrent Sessions</strong>&lt;br&gt;1. <strong>Keeping Traffic Moving:</strong> Monitoring and Managing Roads for Mobility and Safety&lt;br&gt;2. <strong>Advanced Data Applications for Transportation Planning and System Management</strong>&lt;br&gt;3. <strong>Connected and Automated Vehicle Policy, Planning, and Traffic Impacts</strong>&lt;br&gt;4. <strong>From Local Perspective to National Public Opinion Data: Public Engagement Fits into your Project</strong></td>
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<td>11:45 a.m.–1:30 p.m.</td>
<td><strong>Luncheon and Presentation</strong>&lt;br&gt;<strong>Opening Comments</strong> <strong>Chris Cramer</strong>, Vice President for Research, University of Minnesota&lt;br&gt;<strong>Keynote Presentation: Aerotropolis: Shaping Transportation and Regional Development into the Future</strong>&lt;br&gt;<strong>Speaker Dr. John Kasarda</strong>, Director, Center for Air Commerce, University of North Carolina Kenan-Flagler Business School; CEO, Aerotropolis Business Concepts LLC; and President, Aerotropolis Institute</td>
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<td>1:30–1:45 p.m.</td>
<td><strong>Break</strong></td>
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<td>1:45–3:00 p.m.</td>
<td><strong>Concurrent Sessions</strong>&lt;br&gt;5. <strong>New Innovation and Practices in Minnesota Freight Transportation</strong>&lt;br&gt;6. <strong>How Follows Why: Planning and Building Better Bike Infrastructure</strong>&lt;br&gt;7. <strong>Safety Issues</strong>&lt;br&gt;8. <strong>Transportation Finance &amp; Economics</strong></td>
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<tr>
<td>3:00–3:15 p.m.</td>
<td><strong>Break</strong></td>
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<tr>
<td>4:30–5:30 p.m.</td>
<td><strong>Reception with Hors d’Oeuvres and Cash Bar</strong></td>
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# Draft Program Schedule

**Thursday, November 7, 2019**

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<td><em>Commissioner Margaret Anderson Kelliher, MnDOT</em></td>
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|               | **Keynote Presentation: Transport and Urban Governance in a Platform-Driven World** | **Speaker**: Kevin Webb, Codirector, SharedStreets  
Many of the challenges governments and transport authorities grapple with today stem from a broader restructuring of our economy and governance systems driven by private-platform technologies. And these challenges are not entirely new: long before the emergence of digital communication technologies, cities faced questions about how to regulate private-sector innovation in providing public services. In this presentation, Kevin Webb will explore what we can learn from the history of airline and utilities regulation—as well as retail and consumer finance platforms—and how these lessons can help us manage emerging digital layers of the public realm.  
Kevin Webb co-directs SharedStreets, a non-profit organization that builds tools for public-private collaboration around transport data. Blending technology and policy, SharedStreets is building standards, digital infrastructure, and governance models to support new ways of managing and sharing data about transport systems.  
Following Webb’s presentation, a panel of Minnesota leaders and experts will share perspectives on managing digital data in today’s complex transportation industry. |
| 10:15–10:30 a.m.| Break                                                                |                                                                                                                                       |
| 10:30–11:45 a.m.| **Concurrent Sessions**                                               | **Keeping Traffic Moving: Monitoring and Managing Roads for Mobility and Safety**  
**Moderator**: Paul Morris, SRF Consulting Group  
**Operation Sign Harvest**  
*Mark Ray, City of Crystal*  
**Assessing the Safety Impacts of Stop Lines at Stop-Controlled Intersections**  
*Peter Dirks, Minnesota Traffic Observatory, University of Minnesota*  
**Work Zone Mapping and Tag Deployment System**  
*Andrew Loutfi, Minnesota Traffic Observatory, University of Minnesota*  
**Evolution and Utility of MnDOT Detector Data**  
*Michael Johnson, SRF Consulting Group* |
|               | **Advanced Data Applications for Transportation Planning and System Management** | **Moderator**: Jim Henricksen, MnDOT  
**Extracting Trip Destinations from GPS Trajectories with Irregular Sampling Frequency**  
*Ying Song, Department of Geography, Environment and Society, University of Minnesota*  
**Highway Network Congestion Measurement in the Twin Cities**  
*Michael Iacono, MnDOT*  
**Congestion Management Through Region-Wide/Data-Driven Screening Analysis**  
*Paul Morris, SRF Consulting Group* |
Concurrent Sessions

10:30−11:45 a.m.

Connected and Automated Vehicle Policy, Planning, and Traffic Impacts

Moderator: Kristin White, MnDOT

Planning for Disruption: Visualizing the future of Autonomous Vehicles Through Policy Narratives
Fernando Burga, Humphrey School of Public Affairs, University of Minnesota

Scenarios and Justification for Automated Vehicle Demonstration in Nonurban Minnesota
Frank Douma, Humphrey School of Public Affairs, University of Minnesota

Traffic Flow Impacts Partially Autonomous Vehicles
Raphael Stern, Department of Civil, Environmental, and Ge-Engineering, University of Minnesota

How Locals Need to Prepare for the Future of V2V/V2I-Connected Vehicles
Melissa Duhn, Minnesota Traffic Observatory, University of Minnesota

From Local Perspective to National Public Opinion Data: Public Engagement Fits into your Project

Moderator: Sophia Ginis, Metro Transit

Roadway Safety in American Indian Reservations: Perspectives from Tribal Governments in Minnesota
Kathryn Quick, Humphrey School of Public Affairs, University of Minnesota

Next Generation Public Engagement: Guess What? It’s Still About Relationships
Adele Hall, SRF Consulting Group

Public Opinion on Values and Policy Preferences for Transportation Infrastructure and Finance
Guillermo Narvaez, Proxemic Insights

11:45 a.m.−1:30 p.m.

Luncheon and Presentation

Aerotropolis: Shaping Transportation and Regional Development into the Future

Opening Comments: Chris Cramer, Vice President for Research, University of Minnesota

Speaker: Dr. John Kasarda, Director, Center for Air Commerce, University of North Carolina Kenan-Flagler Business School; CEO, Aerotropolis Business Concepts LLC; and President, Aerotropolis Institute

Major airports have become key nodes in global production and enterprise systems offering them speed, agility, and connectivity. They are also powerful engines of local and greater metropolitan region development, attracting aviation-linked businesses to their environs and beyond. The "aerotropolis" is an urban form where cities are built around airports speedily connecting time-sensitive suppliers, manufacturers, distributors, and businesspeople to distant customers, clients, and marketplaces.

This presentation will feature the aerotropolis model, its economic rationale, and how it can bring competitive advantages to firms and municipalities in the Minneapolis-Saint Paul region and to the entire state. Illustrations of successful aerotropolis development elsewhere in the world will also be detailed. Concluding the presentation will be a unique video on what a future Minneapolis-Saint Paul Aerotropolis might look like in terms of transportation infrastructure and coordinated commercial development.

John Kasarda is an academic and airport business consultant focused on aviation-driven economic development. He is director for the Center for Air Commerce at the University of North Carolina’s Kenan-Flagler Business School, the CEO of Aerotropolis Business Concepts LLC, an airport-economy consulting firm, and the president of the Aerotropolis Institute in China.

The University of Minnesota’s Vice President for Research Chris Cramer will offer opening remarks.

1:30−1:45 p.m. Break
1:45–3:00 p.m. Concurrent Sessions

5 New Innovation and Practices in Minnesota Freight Transportation

**Moderator** Andrew Andrusko, MnDOT

- Moving Freight That Last Mile—and Then the First One!
  Frank Douma, Humphrey School of Public Affairs, University of Minnesota
- Minnesota's Medical Device Industry Cluster and the Transportation Implications
  Joanne Cho, College of Science and Engineering, University of Minnesota
- High Turnover in US Long-Distance Truck Load (TL) Motor Freight: Is It a Driver Shortage and Will Teenage Drivers Fix It?
  Stephen Burks, Department of Social Sciences, University of Minnesota
- Commerce in the I-94 Corridor between the Twin Cities and St. Cloud
  Ben Zietlow, Quetica

6 How Follows Why: Planning and Building Better Bike Infrastructure

**Moderator** Sandra Cullen, Parking and Transportation Services, University of Minnesota

- Using Data to Prioritize Bicycle Facility Investments Across Minnesota
  Jake Rueter, MnDOT
- National Bicycle Accessibility Evaluation: Results, Challenges, and Opportunities
  Brendan Murphy, Accessibility Observatory, Center for Transportation Studies, University of Minnesota
- Producing Guidance for the Design and Maintenance of Separated Bicycle Lanes in Minnesota
  Peter Dirks, Minnesota Traffic Observatory, University of Minnesota

7 Safety Issues

**Moderator** Brian Davis, Department of Mechanical Engineering, University of Minnesota

- Sight Distances at Rural Intersections and their Impact on Decision Making
  Nichole Morris, HumanFIRST Laboratory, University of Minnesota
- Higher-than-Usual Monthly Temperatures are Associated with Pedestrian Crashes
  Curtis Craig, HumanFIRST Laboratory, University of Minnesota
- Transferability of Crash Modification Factors Via Graphical Causal Models: An Exploration
  Jingru Gao, College of Science and Engineering, University of Minnesota
- Effects of Autonomous Vehicle Car-Sharing System on Road Congestion
  Rongsheng Chen, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota

8 Transportation Finance & Economics

**Moderator** Jerry Zhao, Humphrey School of Public Affairs, University of Minnesota

- The Use of Performance Measures in Transit Funding Allocation: Experiences Across States
  Camila Fonseca, Humphrey School of Public Affairs, University of Minnesota
- Taxing Shared Mobility: Pricing Schemes, Rationales, and Media Discussions
  Raihana Zeerak, Humphrey School of Public Affairs, University of Minnesota
- Optimizing Transportation Funding Decisions: Evaluating Project Alternative Life-Cycle and User Costs to Maximize Agency Return on Investment
  Nick Semeja, SRF Consulting Group

3:00–3:15 p.m. Break
### Concurrent Sessions

#### 3:15−4:30 p.m. Concurrent Sessions

#### Healthy Roads, Roadsides, and Waterways

**Moderator** Marni Karnowski, MnDOT

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<tr>
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<tr>
<td>Optimizing the Nutrition of Roadside Plants for Pollinators</td>
<td>Emilie Snell-Rood, College of Biological Sciences, University of Minnesota</td>
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<tr>
<td>Minnesota Guide for Stream Connectivity and Aquatic Organism Passage Through Culverts</td>
<td>Matt Hernick, St. Anthony Falls Laboratory, University of Minnesota</td>
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<tr>
<td>Urban Stormwater Management: Planning Across Jurisdictional Lines</td>
<td>Erin Hunker, SRF Consulting Group</td>
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<td>Development of a Rapid Screening Tool for Siting Infiltration Stormwater Control Measures</td>
<td>Nicholas Tecca, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota</td>
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#### Asset Management

**Moderator** Mark Maloney, City of Shoreview

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<tr>
<td>Characterization of Structural Fibers for Thin Concrete Overlays</td>
<td>Manik Barman, Department of Civil Engineering, University of Minnesota Duluth</td>
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<tr>
<td>Evaluation of High-Density Asphalt Mix Designs for Sustainable Pavements Infrastructure</td>
<td>Tianhao Yan, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota</td>
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<td>Remaining Service Life Asset Measure</td>
<td>Jhenyffer Lorrany Matias de Oliveira, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota</td>
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#### Planning for Transit: Estimating User Behavior and Service Quality Measures

**Moderator** Eric Lind, Metro Transit

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<tr>
<td>Toward a Twin Cities Transit Route Choice Model</td>
<td>Benjamin Tomhave, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota</td>
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<tr>
<td>Statistical Quantification of Speed and Reliability Advantages from Transit Signal Priority (TSP) Using High-Frequency Bus GPS Records</td>
<td>Eric Lind, Metro Transit</td>
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<tr>
<td>Targeting and Evaluating Speed and Reliability Improvements With Detailed Bus Time Budgets</td>
<td>Joseph Reid, Metro Transit</td>
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<tr>
<td>Park and Ride User Behavior in the Twin Cities</td>
<td>Alex Webb, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota</td>
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3:15–4:30 p.m. Concurrent Sessions

Transportation Equity and Access: A Lightning Round

**Moderator** Gina Baas, Center for Transportation Studies, University of Minnesota

**Advancing Transportation Equity**
Hally Turner, MnDOT

**Choosing Fairness: Promoting Service Equity Analysis in Transit Planning**
Travis Ormsby, Department of Geography, Environment and Society, University of Minnesota

**Bringing a Gender-Based Lens to CAV Planning and Development**
Heidi Corcoran, Humphrey School of Public Affairs, University of Minnesota

**How Does Built Environment Affect Activity Space of People Living in Different Income Level Areas?**
Tao Tao, Humphrey School of Public Affairs, University of Minnesota

**Using Accessibility as a Planning and Evaluation Tool for Metro BRT Lines**
Shannon Evans Engstrom, Humphrey School of Public Affairs, University of Minnesota

**Travel-Cost-Based Accessibility in the Twin Cities**
Kristin Carlson, Accessibility Observatory, Center for Transportation Studies, University of Minnesota

**Those Who Need It Most: Maximizing Transit Accessibility and Removing Barriers to Employment in Areas of Concentrated Poverty**
Yingling Fan, Humphrey School of Public Affairs, University of Minnesota

4:30–5:30 p.m. Reception—Hors d’Oeuvres and Cash Bar

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