5th International Conference on Roundabouts

May 8-10, 2017
Green Bay, Wisconsin

Organized by
Transportation Research Board

Sponsored by
Standing Committee on Roundabouts (ANB75)

Hosted by
Wisconsin State Department of Transportation
University of Wisconsin - Madison

Supported by
Federal Highway Administration

The National Academies of
SCiences • Engineering • Medicine
TRANSPORTATION RESEARCH BOARD
Welcome to the fifth successful international roundabout conference by TRB’s Roundabouts Committee, ANB75. On behalf of the Committee, we welcome to Green Bay attendees from a range of public and private organizations throughout the United States as well as many international delegates from several countries.

It has been very gratifying as Co-Chairs to see the strong interest shown in this conference, which has continually grown from an initial idea and efforts in 2002 to successful roundabout conferences in Vail (2005), Kansas City (2008), Carmel, IN (2011), and Seattle, WA (2014). The call for abstracts for this 2017 roundabout conference easily produced over 130 presentations on a range of topics and is another indication of the strong interest in all phases of roundabouts, both in the United States and worldwide. It is especially notable and indicative of the strong interest in roundabout issues in these tough economic times with travel budget restrictions. Many thanks to the hosts, planning members, and local logistics team for their hard work. And thanks to the TRB staff for their constant input and liaison efforts.

Thanks to the Federal Highway Administration our patrons for supporting this event, and the roughly 120 presenters and moderators who will make the conference one of the best ever, covering a wide variety of current roundabout intersection topics. To you all, a most warm welcome!

Finally, Wisconsin DOT staff and the local logistics team have made great efforts to enhance the program with a terrific bus tour program. We hope you take advantage of this unique opportunity.

May your conference experience be pleasant and rewarding.

Eugene R. (Gene) Russell, Sr.,
TRB Roundabouts Committee Co-Chair
Professor Emeritus of Civil Engineering
Kansas State University

Brian Walsh
TRB Roundabouts Committee Co-Chair
Washington State Department of Transportation

TRANSPORTATION RESEARCH BOARD

The Transportation Research Board is one of seven major programs of the National Academies of Sciences, Engineering, and Medicine. The mission of the Transportation Research Board is to increase the benefits that transportation contributes to society by providing leadership in transportation innovation and progress through research and information exchange, conducted within a setting that is objective, interdisciplinary, and multimodal. The Board’s varied committees, task forces, and panels annually engage about 7,000 engineers, scientists, and other transportation researchers and practitioners from the public and private sectors and academia, all of whom contribute their expertise in the public interest. The program is supported by state transportation departments, federal agencies including the component administrations of the U.S. Department of Transportation, and other organizations and individuals interested in the development of transportation.

www.TRB.org
Thank You Patrons

TRB sincerely appreciates the following organizations for their generous support of the Roundabout Conference

GOLD

SIDRA SOLUTIONS

SILVER

omni·means
A GHD Company

MSA
Professional Services

PTV GROUP
the mind of movement

Rodel
Roundabout Analysis Software

TRANSOFT SOLUTIONS

TSS TRANSPORT SIMULATION SYSTEMS

BRONZE

Mead & Hunt

MTJ
Roundabout Engineering

jt ENGINEERING, INC
Consultant Services
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sunday, May 7</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:00 p.m. – 6:00 p.m.</td>
<td>Registration</td>
<td>KI Lobby South Counter</td>
</tr>
<tr>
<td><strong>Monday, May 8</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:00 a.m. – 5:00 p.m.</td>
<td>Registration</td>
<td>KI Lobby South Counter</td>
</tr>
<tr>
<td>7:15 a.m. – 8:00 a.m.</td>
<td><strong>Continental Breakfast</strong></td>
<td>KI Lobby</td>
</tr>
<tr>
<td>8:00 a.m. – 9:00 a.m.</td>
<td>Opening Plenary Session</td>
<td>Meeting Room B</td>
</tr>
<tr>
<td>9:00 a.m. – 9:45 a.m.</td>
<td><strong>Break</strong></td>
<td>KI Lobby</td>
</tr>
<tr>
<td>9:45 a.m. – 11:30 a.m.</td>
<td><strong>Poster Session 1 Opens</strong></td>
<td>KI Lobby West</td>
</tr>
<tr>
<td>11:30 a.m. – 1:00 p.m.</td>
<td><strong>Lunch with Speakers</strong></td>
<td>Meeting Room B</td>
</tr>
<tr>
<td>12:30 p.m. – 1:00 p.m.</td>
<td><strong>Poster Session 1 Continues - Presenters Available</strong></td>
<td>KI Lobby West</td>
</tr>
<tr>
<td>1:00 p.m. – 2:45 p.m.</td>
<td><strong>Breakout Sessions 3A, 3B, 3C</strong></td>
<td></td>
</tr>
<tr>
<td>2:45 p.m. – 3:15 p.m.</td>
<td><strong>Break</strong></td>
<td>KI Lobby</td>
</tr>
<tr>
<td>3:15 p.m. – 4:45 p.m.</td>
<td><strong>Breakout Sessions 4A, 4B, 4C</strong></td>
<td></td>
</tr>
<tr>
<td>5:00 p.m. – 7:00 p.m.</td>
<td><strong>Reception with Patrons</strong></td>
<td>Meeting Room B</td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
<td>Location</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>7:30 a.m. – 4:00 p.m.</td>
<td>Registration</td>
<td>KI Lobby South Counter</td>
</tr>
<tr>
<td>7:15 a.m. – 8:00 a.m.</td>
<td><strong>Continental Breakfast</strong></td>
<td>KI Lobby</td>
</tr>
<tr>
<td>8:00 a.m. – 9:45 a.m.</td>
<td>Breakout Sessions 5A, 5B, 5C</td>
<td>Ballroom A1</td>
</tr>
<tr>
<td></td>
<td>5A - Pedestrians and Bicycles</td>
<td>Ballroom A2</td>
</tr>
<tr>
<td></td>
<td>5B - Mini-Roundabouts</td>
<td>Ballroom A3</td>
</tr>
<tr>
<td></td>
<td>5C - Capacity</td>
<td></td>
</tr>
<tr>
<td>9:45 a.m. – 10:15 a.m.</td>
<td><strong>Break</strong></td>
<td>KI Lobby</td>
</tr>
<tr>
<td></td>
<td><strong>Poster Session 2 Opens</strong></td>
<td>KI Lobby West</td>
</tr>
<tr>
<td>10:15 a.m. – 11:45 a.m.</td>
<td>Breakout Sessions 6A, 6B, 6C</td>
<td>Ballroom A1</td>
</tr>
<tr>
<td></td>
<td>6A - State of the Agencies</td>
<td>Ballroom A2</td>
</tr>
<tr>
<td></td>
<td>6B - Construction</td>
<td>Ballroom A3</td>
</tr>
<tr>
<td></td>
<td>6C - Human Factors</td>
<td></td>
</tr>
<tr>
<td>11:45 a.m. – 1:00 p.m.</td>
<td><strong>Lunch</strong></td>
<td>Meeting Room B</td>
</tr>
<tr>
<td>12:30 p.m. – 1:00 p.m.</td>
<td><strong>Poster Session 2 Continues - Presenters Available</strong></td>
<td>KI Lobby West</td>
</tr>
<tr>
<td>1:00 p.m. – 2:45 p.m.</td>
<td>Breakout Sessions 7A, 7B, 7C</td>
<td>Ballroom A1</td>
</tr>
<tr>
<td></td>
<td>7A - Mini-Roundabouts</td>
<td>Ballroom A2</td>
</tr>
<tr>
<td></td>
<td>7B - Modeling- Design Visualization</td>
<td>Ballroom A3</td>
</tr>
<tr>
<td></td>
<td>7C - Intersection Control Evaluation (ICE) and Roundabouts</td>
<td></td>
</tr>
<tr>
<td>2:45 p.m. – 3:15 p.m.</td>
<td><strong>Break</strong></td>
<td>KI Lobby</td>
</tr>
<tr>
<td></td>
<td><strong>Poster Session 2 Continues – Presenters Available</strong></td>
<td>KI Lobby West</td>
</tr>
<tr>
<td>3:15 p.m. – 4:45 p.m.</td>
<td><strong>Guided Roundabout Tour [Preregistration Required] Sessions 8A, 8B, 8C, 8D</strong></td>
<td>N Adams Street</td>
</tr>
<tr>
<td></td>
<td>8A - Roundabouts for Trucks (includes general roundabouts tour plus stops at several sites where truck drivers are waiting)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8B - Roundabouts for Pedestrians (includes general roundabouts tour plus stops at several sites to observe/experience walking pedestrian traffic)</td>
<td>N Adams Street</td>
</tr>
<tr>
<td></td>
<td>8C - Roundabouts for Bicyclists (includes general roundabouts tour plus stops at several sites to observe/experience bicycle traffic)</td>
<td>Elm Street</td>
</tr>
<tr>
<td></td>
<td>8D - Roundabouts-only tour, no stops, to see as many as possible.</td>
<td>Elm Street</td>
</tr>
<tr>
<td>5:00 p.m. – 7:30 p.m.</td>
<td><strong>Lambeau Field Networking Reception</strong></td>
<td>N Adams Street</td>
</tr>
<tr>
<td></td>
<td>(Transportation provided)</td>
<td></td>
</tr>
</tbody>
</table>
Wednesday, May 10

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 a.m. – 10:00 a.m.</td>
<td>Registration</td>
<td>KI Lobby South Counter</td>
</tr>
<tr>
<td>7:15 a.m. – 8:00 a.m.</td>
<td>Continental Breakfast</td>
<td>KI Lobby</td>
</tr>
<tr>
<td>8:00 a.m. – 9:30 a.m.</td>
<td>Breakout Sessions 9A, 9B, 9C</td>
<td>Ballroom A1</td>
</tr>
<tr>
<td></td>
<td>9A - Law Enforcement Perspectives</td>
<td>Ballroom A1</td>
</tr>
<tr>
<td></td>
<td>9B - International Perspectives</td>
<td>Ballroom A2</td>
</tr>
<tr>
<td></td>
<td>9C - Data Collection and Analysis</td>
<td>Ballroom A3</td>
</tr>
<tr>
<td>9:30 a.m. – 9:45 a.m.</td>
<td>Break</td>
<td>KI Lobby</td>
</tr>
<tr>
<td>9:45 a.m. – 11:00 a.m.</td>
<td>Breakout Sessions 10A, 10B, 10C</td>
<td>Ballroom A1</td>
</tr>
<tr>
<td></td>
<td>10B - Safety</td>
<td>Ballroom A2</td>
</tr>
<tr>
<td></td>
<td>10C - Hot Topics - Hybrid</td>
<td>Ballroom A3</td>
</tr>
<tr>
<td>11:00 a.m. – 12:15 p.m.</td>
<td>Closing Plenary Session – Town Hall Roundabout Forum</td>
<td>Meeting Room B</td>
</tr>
</tbody>
</table>

Guided Roundabout Tour
Tuesday, May 9
3:15 p.m. - 4:45 p.m.
(Preregistration Required)

Taking advantage of the great work done on roundabouts in Green Bay, during the afternoon of Tuesday May 9, four concurrent guided roundabout tours will take participants by bus to observe and experience local roundabouts. No additional registration fee is required, however, you must have registered in advance for the tour of your choice. Tickets will be issued with registration materials corresponding to the selected tour. No ticket transfer between tours will be permitted unless seats remain available after all ticketed participants have boarded. All options will include a general roundabout tour, with three of the four options including additional stops to sites for trucks, pedestrians, and bicycles.
The Roundabout Committee

Co-Chairs
Dr. Eugene Russell,
Kansas State University

Mr. Brian Walsh
Washington State Department of Transportation

Secretary
Dr. Hillary Isebrands
Federal Highway Administration

Members
Ms. Melissa Anderson
Cole Engineering

Ms. Janet Barlow
Accessible Design for the Blind

Mr. Thomas Blust
Road Commission for Oakland County

Mr. Keith Boddy
NS Dept of Transportation and Infrastructure Renewal

Mr. James Brewer
Prof. Werner Brilon
Ruhr University, Bochum

Mr. William Britnell
Connecticut Department of Transportation

Mr. Jerome Champa
California Department of Transportation

Mr. Richard Crossler-Laird
Oregon Department of Transportation

Mr. Philip Demosthenes
Philip B. Demosthenes, LLC

Mr. Lambertus G.H. Fortuijn
Delft University of Technology

Mr. James Foster
Mobile County Engineering Department

Mr. Fred Hanscom

Mr. Mark Johnson
MTJ Engineering, LLC

Mr. Mark Lenters
Ourston - MSA

Mr. Michael Mastaglio
Urban Engineers, Inc.

Dr. Kazunori Munehiro
Civil Engineering Research Institute for Cold Region

Mr. Wade Odell
Texas Department of Transportation

Mr. Craig Parks
Boone County, Indiana

Ms. Rachel Price
Reid Middleton, Inc.

Mr. Colin Ridding
Hatch Mott MacDonald

Mr. Cornell Robertson
Franklin County Engineer

Mr. Lee Rodegerdts
Kittelson & Associates, Inc.

Dr. Bastian Schroeder
Kittelson & Associates, Inc.

Mr. Jeffrey Shaw
Federal Highway Administration

Mr. Kenneth Sides
Sam Schwartz Engineering

Mr. Daniel Spann
Barge Waggoner Sumner & Cannon, Inc

Mr. Scott Zehngraaff
Georgia Department of Transportation

Mr. Nathan Belz
University of Alaska, Fairbanks

Mr. Alek Pochowski
Kittelson & Associates, Inc.

Dr. Robert Rescot

Dr. Katy Salamati
SAS Institute

TRB Staff
Bernardo Kliener
Megan Burns
Mary Kissi
Freda Morgan
Ted Jamela

5th International Conference on Roundabouts
Sunday, May 7

3:00 p.m. - 6:00 p.m., KI Lobby South Counter
Registration

Monday, May 8

7:00 a.m. - 5:00 p.m., KI Lobby South Counter
Registration

7:15 a.m. - 8:00 a.m., KI Lobby
Continental Breakfast

8:00 a.m. - 9:00 a.m., Meeting Room B
Welcome and Opening Remarks

Welcome and Remarks from the TRB Roundabout Committee

- Gene Russell, Emeritus Professor, Kansas State University, & Brian Walsh, Washington State DOT
- Jeffrey Shaw, Federal Highway Administration
- Bob Seitz, Deputy Secretary, Wisconsin DOT

9:00 a.m. - 9:45 a.m., KI Lobby
Break

9:00 a.m. - 9:45 a.m., KI Lobby West
Poster Session 1 Opens – Presenters Available: See Page 15 for Full List of Poster Presenters

9:45 a.m. - 11:130 a.m.
Breakout Sessions

Session 2A, Ballroom A1
FHWA TOPR Research Updates
Moderator: Jeff Shaw, Federal Highway Administration

Evaluation of Rectangular Rapid Flashing Beacons at Multilane Roundabouts, Crosswalk Placement, and Environmental Characteristics
Bastian Schroeder, Kittelson & Associates, Inc.

Review of Fatal and Severe Injury Crashes and Evaluation of Geometric Parameters that Affect Truck Stability
Hermanus Steyn, Kittelson & Associates, Inc.

Update of Highway Capacity Manual Capacity Models and Evaluation of Traffic Control Device Effectiveness
Lee Rodegerdts, Kittelson & Associates, Inc.

Session 2B, Ballroom A2
Trucks
Moderator: Bill Wondrachek, Wisconsin DOT

Trucking Industry Perspective of Roundabouts - Case 1, Case 2, and Case 3 Discovery
Jay VonAhsen, MSA/Ourston
Analysis of Capacity of a Roundabout Based on Observation Data regarding Traffic of Large Vehicles
Shusei Yasui, National Institute for Land and Infrastructure Management, MLIT, Japan

Driving behavior of large vehicles in the roundabout of snow conditions
Kazunori Munehiro, CERI

Session 2C, Ballroom A3
Gap Analysis
Moderator: Mark Lenters, MSA/Ourston

Effects of Presence of Vehicles in Adjacent Entry Lane on Gap Acceptance Behavior at Roundabouts with Two-Lane Entry
Chris Lee, University of Windsor

Critical Gaps and Follow-up Headways at Congested Roundabouts
Beau Burdett, UW-Madison TOPS Lab

University Avenue Roundabout Corridor - San Diego
Phil Rust, City of San Diego

11:30 a.m. - 1:00 p.m., Meeting Room B
Lunch with Speakers

• Randy Asman and Paul Vraney, Wisconsin DOT
• David Noyce, University of Wisconsin - Madison
• Conference Gold Patrons

12:30 p.m. - 1:00 p.m., KI Lobby West
Poster Session 1 (page15) Continues – Presenters Available

1:00 p.m. - 2:45 p.m.
Breakout Sessions

Session 3A, Ballroom A1
Synthesis and NCHRP Study SPF’s
Moderator: David Henkel, CHA Consulting, Inc.

NCHRP Project 17-70 Development of Roundabout Crash Prediction Models and Method
Nick Foster, Kittelson & Associates, Inc.

NCHRP Synthesis Report 488: Roundabout Practices
Alek Pochowski, Kittelson & Associates, Inc.

Session 3B, Ballroom A2
Environmental/Road Diets
Moderator: Mark Lenters, MSA/Ourston

Complete Streets + Complete Intersections = Complete Networks
Ken Sides, Sam Schwartz Engineering

Roundabout Selected For Intersection? – Halfway to Road Diet Decision
Brian Walsh, Washington State DOT
**Session 3C, Ballroom A3**

**Operations**
*Moderator:* Rebecca Szymkowski, Wisconsin DOT

- **Comparing Ramp Terminal Roundabouts with Diverging Diamond Interchanges**  
  Gilbert Chlewicki, Advanced Transportation Solutions

- **Survive The Guide, SR 539 - The Tale of Two Case Studies**  
  Dina Swires, Washington State Department of Transportation

- **A Deterministic Method of Evaluating Speeds for the Fastest Path Analysis at Roundabouts**  
  Hannah Khosravi, Transoft Solutions

2:45 p.m. - 3:15 p.m., KI Lobby

**Break**

2:45 p.m. - 3:15 p.m., KI Lobby West

**Poster Session 1 (page 15) Continues – Presenters Available**

3:15 p.m. - 4:45 p.m.

**Breakout Sessions**

**Session 4A, Ballroom A1**

**Safety**
*Moderator:* Brian Porter, Wisconsin DOT

- **Crash Modification Factors Based on Crash Histories of 151 Modern Roundabouts in Five States**  
  Wei Zhang, Federal Highway Administration

- **Statewide Roundabout Safety Analysis**  
  Andrea Bill, UW-Madison TOPS Lab

- **Comparisons of Changes in Melbourne of Pedestrian and Cyclist Crashes at Roundabouts and Signals Over Time**  
  Andrew O’Brien, O’Brien Traffic

**Session 4B, Ballroom A2**

**Design**
*Moderator:* Rodney Taylor, Wisconsin DOT

- **Design Principles for Safety and Operations of Multi-Lane Roundabouts**  
  Mark Johnson, MTJ Roundabout Engineering

- **Reed Market/15th Street Roundabout Project**  
  Bradley Shea, HDR

- **Modular Mini-Roundabouts from Recycled Plastic**  
  Jerry Fanucci, ZKxKZ LLC

**Session 4C, Ballroom A3**

**Landscape/Artwork - Compare and Contrast**
*Moderator:* Michael Mastaglio, Urban Engineers, Inc.

- Bill McNary, Wisconsin DOT
- Ken Sides, Sam Schwartz Engineering

5:00 p.m. - 7:00 p.m., Meeting Room B

**Reception with Patrons**
Tuesday, May 9

7:00 a.m. - 4:00 p.m., KI Lobby South Counter
Registration

7:30 a.m. - 8:00 a.m., KI Lobby
Continental Breakfast

8:00 a.m. - 9:45 a.m.,
Breakout Sessions

Session 5A, Ballroom A1
Pedestrians and Bicycles
Moderator: Paul Vraney, Wisconsin DOT

- Analysis on traffic safety for pedestrian and cyclists at roundabouts in Japan
  Koji Suzuki, Nagoya Institute of Technology

- Belmont University: A Case Study of Roundabout Operational Recovery following acute Pedestrian (Student) Saturation
  Brandon Taylor, RPM Transportation Consultants, LLC.

- Operations and Safety of Separated Bicycle Facilities at Single Lane Roundabouts
  David Stanek, Fehr & Peers

Session 5B, Ballroom A2
Mini-Roundabouts
Moderator: Dina Swires, Washington State DOT

- Mini-Roundabouts in Washington State
  Dan Dovey, King County Department of Transportation, Road Services Division

- Mini-Roundabouts in Delaware: Designing to Context
  Shilpa Mallem, T.Y. Lin International

- Mini-Roundabouts Before and After Successful Case Studies
  Ahmed Amer, VHB

Session 5C, Ballroom A3
Capacity
Moderator: Josh Straka, Strand Associates

- An assessment of the updated Highway Capacity Manual roundabout capacity model
  Rahmi Akcelik, Akcelik & Associates (SIDRA SOLUTIONS)

- A Comparison of two roundabout capacity models
  Elżbieta Macioszek, Silesian University of Technology

- Roundabout Capacity Analysis Based on Conflict Technique
  Werner Brilon, Ruhr-University Bochum

9:45 a.m. - 10:15 a.m., KI Lobby
Break

9:45 a.m. - 10:15 a.m., KI Lobby West
Poster Session 2 Opens – Presenters Available: See Page 16 for Full List of Poster Presenters

5th International Conference on Roundabouts
10:15 a.m. - 11:45 a.m.,
Breakout Sessions

Session 6A, Ballroom A1
State of the Agencies
Moderator: Jerry Zogg, Wisconsin DOT

The Evolution of Roundabout Implementation in Georgia
Scott Zehnraff, Georgia DOT

Washington State DOT Roundabout Implementation Over Two Decades
Brian Walsh, Washington State DOT

Road Commission for Oakland County, Michigan – Challenges, Experience and Lessons Learned
Tom Blust, Road Commission for Oakland County

Session 6B, Ballroom A2
Construction
Moderator: Eric Gwidt, Wisconsin DOT

Reconstructing a Six-Leg Intersection into Mohave County’s First Roundabout
Steven Latoski, Mohave County (Arizona) Public Works

Construction of Diamond I-5/La Center Interchange with Multilane Roundabout Ramp Terminals
Jeff Whitman, Kittelson & Associates, Inc.

Alum Creek Drive at Groveport Road – Flyover Bridge with Double Roundabouts
William Crosier, Franklin County Engineer’s Office

Session 6C, Ballroom A3
Human Factors
Moderator: Mark Johnson, MTJ Roundabout Engineering

Analysis of drivers’ eye movement on snow-covered roundabouts
Kazunori Munehiro, Civil Engineering Research Institute for Cold Region, PWRI, Japan

Non-Geometric Solutions to Driver Errors and Multi-Lane Roundabouts
Phil Weber, GHD

Development of the Crossover Roundabout
Ryan Hale, Missouri Department of Transportation

11:45 a.m. - 1:00 p.m., Meeting Room B
Lunch

12:30 p.m. - 1:00 p.m., KI Lobby West
Poster Session 2 (page 16) Continues – Presenters Available

1:00 p.m. - 2:45 p.m.,
Breakout Sessions

Session 7A, Ballroom A1
Mini-Roundabouts
Moderator: Ahmed Amir, VHB

- Wei Zheng, Federal Highway Administration
- Dina Swires, Washington State Department of Transportation
- Mark McCullough, Washtenaw County Road Commission
Session 7B, Ballroom A2
Modeling- Design Visualization
Moderator: Randy Johnson, DKS Associates

The Visualization of Roundabouts from Concept to Creation
Kurt Stiles, Washington State DOT

Design Visualization Techniques, Methods and Case Studies
Steven Theisen, Wisconsin DOT and Nathan Cook, MSA/Ourston

Session 7C, Ballroom A3
Intersection Control Evaluation (ICE) and Roundabouts
Moderator: Steve Pyburn, Federal Highway Administration

Caltrans Intersection Control Evaluation Policy
Richard Stone, California DOT

ICE Age
Kamesh Vadula, Omni-Means, Inc and Jerry Champa, California DOT

Wisconsin DOT Intersection Control Evaluation Policy
Kevin Scopoline, Wisconsin Department of Transportation

2:45 p.m. - 3:15 p.m., KI Lobby
Break

2:45 p.m. - 3:15 p.m., KI Lobby West
Poster Session 2 (page 16) Continues – Presenters Available

3:15 p.m. - 4:45 p.m.,
Guided Roundabout Tour – Ticket Required (Buses will depart promptly at 3:15 p.m.)

8A - Roundabouts for Trucks (includes general roundabouts tour plus stops at several sites where truck drivers are waiting) - N Adams Street

8B - Roundabouts for Pedestrians (includes general roundabouts tour plus stops at several sites to observe/experience walking pedestrian traffic) - N Adams Street

8C - Roundabouts for Bicyclists (includes general roundabouts tour plus stops at several sites to observe/experience bicycle traffic) - Elm Street

8D - Roundabouts-only tour, no stops, to see as many as possible. - Elm Street

5:00 p.m. - 7:30 p.m., N Adams Street
Lambeau Field Networking Reception (Transportation provided)
**Wednesday, May 10**

**Registration**

7:00 a.m. - 10:00 a.m., *KI Lobby South Counter*

**Continental Breakfast**

7:15 a.m. - 8:00 a.m., *KI Lobby*

**Breakout Sessions**

**Session 9A, Ballroom A1**

**Law Enforcement Perspectives**

*Moderator: Rick Olig, Olig Consulting, LLC.*

- Chief Derek Beiderwieden, De Pere Police Department
- Sergeant Daniel S. Diedrich, Motor Carrier Enforcement, Wisconsin State Patrol- Northeast Region
- Lieutenant Karl D. Ackermann, Police Operations, Green Bay Police Department

**Session 9B, Ballroom A2**

**International Perspectives**

*Moderator: Victor Salemann, Transportation Solutions, Inc.*

- **Roundabouts in Germany and Switzerland 2017**
  Werner Brilon, Ruhr University, Bochum

- **Canada**
  Steve van De Keere, Region of Waterloo Transportation and Environmental Services Department

- **Sustainable Safety as the Theoretical Basis of Roundabouts in Netherlands**
  Bertus Fortuijn, Delft University of Technology

**Session 9C, Ballroom A3**

**Data Collection and Analysis**

*Moderator: Rachel Price, Reid Middleton*

- **Monitoring Driver Adaptation to Multilane Roundabouts with Drones: A Case Study**
  Eric Hildebrand, University of New Brunswick

- **Modeling capacity of roundabout system from an innovative perspective**
  Yuzhou Duan, Henan University of Technology

- **Conducting Sensitivity Analyses for Confident Roundabout Lane Configurations**
  Christina Barry, Georgia Department of Transportation

**Break**

9:30 a.m. - 9:45 a.m., *KI Lobby*

**Breakout Sessions**
Session 10A, *Ballroom A1*
**Outreach: Is Your Strategy Far-reaching?**
*Moderator: William Britnell, Connecticut DOT*
- Randy Asman, Wisconsin DOT
- Mark Cantola, Wisconsin DOT
- Doug Wiersig, City of Fort Worth
- Mark McCulloch, Washtenaw County Road Commission

Session 10B, *Ballroom A2*
**Safety**
*Moderator: Phil Demosthenes, Philip B. Demosthenes, LLC*
- **Reducing Crashes through Low Cost Improvements at an Urban Multi-Lane Roundabout**
  Samuel Bobko, Hatch Mott MacDonald
- **Statistical Analysis of Roundabout Safety Based Upon Crash and Geometric Properties in the States of New Jersey and Pennsylvania**
  Sean Coffey, Villanova University
- **Roundabout Crash Trends in Victoria, Australia: A Review and Comparison to International Experience**
  Toby Cooper, Australian Institute of Traffic Planning and Management

Session 10C, *Ballroom A3*
**Hot Topics - Hybrid**
*Moderator: Andrea Bill, Traffic Operations and Safety (TOPS) Laboratory University of Wisconsin-Madison*
- **Implementation of Roundabouts in our National Parks and Federal Lands**
  Hillary Isebrands, Federal Highway Administration
- **Roundabout Innovation for Oversized Loads**
  Robert Jack, Strand Associates
- **Guidelines for Accessibility of Modern Roundabouts to Assist Pedestrians with Vision Disabilities**
  Bastian Schroeder, Kittelson and Associates, Inc.
- **Where is Your Speed Control?**
  Amanda DeAmico, MSA/Ourston
- **Adaptive Roundabout Projects**
  Rachel Price, Reid Middleton Inc.

11:00 a.m. - 12:15 p.m., *Meeting Room B*
**Closing Plenary Session**
- **Town Hall Roundabout Forum**
  Attendee Input on Where We Go From Here: Research, Outreach, and Committee Direction
• Unique Use Of Roundabout Under A Highway Structure, Joshua Straka, Strand Associates

• The Northwestern Connector Triangle Project: Modeling and Right-Sizing a High-Capacity Roundabout in Oakland County, Michigan, John Katers, OHM Advisors

• North America’s Largest Roundabout Project - 47 Multilane Roundabouts, Mark Lenters, MSA/Ourston

• Automated Analysis of Undesirable Driver Behaviors in Two-Lane Roundabouts, Gordon Parikh, University of Minnesota - Minnesota Traffic Observatory

• GPCID Traffic Circle, Jonathan DiGioia, AECOM

• 3D Design Modeling Software Comparison for Roundabouts, Matthew Hamel, DLZ National, Inc.

• Flanders Avenue Interchange Planning and Procurement (Calgary Alberta’s First Multi-Lane Roundabout Interchange), David Breu, ISL Engineering and Land Services Ltd.

• Smythe Street Roundabout - Fredericton, NB, Canada, Jon Lewis, City of Fredericton, New Brunswick

• Mini-Roundabout Replacement of Signalized Intersections: Planning, Design, Public Involvement, and Lessons Learned, Bryan Nemeth, Bolton & Menk

• First Mini-Roundabout in Rhode Island, Amphone Soupharath, VHB

• A comparison of Operational Characteristics of Roundabout, Traditional Diamond and Diverging Diamond Freeway Interchange Treatments, Rahmi Akcelik, Akcelik & Associates (SIDRA SOLUTIONS)

• Maine’s Statewide Experience in Using Roundabouts to Improve Intersection Safety, Edward Hanscom, Maine Department of Transportation

• Capacity Modeling and TOPR34 HCM 2016 Update, Mark Johnson, MTJ Roundabout Engineering

• An Analysis of the Efficacy and Special Structural Features of Roundabouts in the Itoman Pilot Experiment, Nobuto Kanbe, oriental consultants co., ltd.

• Roundabout Delay Estimation by Using a Capacity Model Considering the Impact of Pedestrians, Nan Kang, Tokyo University of Science

• Comparison of Roundabout Capacity through Analytical, Empirical and Microsimulation Models: Spanish Case Study, Marilo Martin-Gasulla, Universitat Politècnica de Valencia

• Calibrating Roundabout Microsimulation Models to Deterministic Capacity Relationships, Soheil Sajjadi, PTV Group

• Capacity Evaluation of Urban Signalized Roundabouts in Turkey, Ege Saltik, Middle East Technical University

• Hebron Avenue Roundabout Corridor - A First in Connecticut, Joseph Balskus, CDM Smith

• Roundabouts with Rail Crossings: Evolving Design Guidelines in the USA, Bill Baranowski, RoundaboutsUSA

• Case Study: Retrofit Design Measures to Improve Traffic Operations; STH 57/STH 32 Roundabout Intersection; De Pere, Wisconsin, Wes Butch, DLZ National, Inc.

• A Unique Application of Railroad Preemption with Queue Mitigation at a Roundabout Interchange, Jeremy Grenard, American Structurepoint

• Roundabouts vs. Signals: What difference Does it Make?, Norman Hogue, Dunaway Associates, LP

• M-72 Twin Roundabout Design and Construction; Challenges, Successes, and Lessons Learned, Matt Hunter, ITE and TRB

• Using Innovative Construction Management Methods for Roundabout Projects, Hillary Isbrands, USDOT, FHWA

• Solving Complex Traffic Issues with Unique Roundabout Applications, Mark Johnson, MTJ Roundabout Engineering

• A Lesson in Retrofits: Weatherford’s First Modern Roundabout, Caleb Milligan, Dunaway Associates, LP

• "Outside the Box" Public Involvement, Brian Moore, Burgess & Niple, Inc.
• Pedestrian/Vulnerable User Safety and Design Implementation, Mark Johnson, MTJ Roundabout Engineering
• Fort Worth, TX - Temporary Roundabouts at Highway 287 & Harmony Road Interchange, Lissette Acevedo, City of Fort Worth Transportation and Public Works
• Metered Mini For Construction, Phil Rust, City of San Diego
• Roundabouts - Construction Zone Traffic Control, Lindsey VanParys, Omni-Means, Ltd.
• Roundabout Design, Construction Plans and Specifications - Development and Application of Best Practices, Paul Vraney, Wisconsin Department of Transportation
• Evaluation of Pavement Markings at Roundabout Approaches on Driver Behavior Using a Driving Simulator, Ibrahim Al-sghan, University of Wisconsin - Madison
• Utilization Distribution of Usable Gaps at Single-Lane Roundabouts, Nathan Belz, University of Alaska Fairbanks
• Traffic Operational Modeling of Connecticut Roundabouts, Clara Fang, University of Hartford
• Vehicle Behavior Analysis and Safety Evaluation for Roundabouts in Japan, Keisuke Yoshioka, College of Science and Technology, Nihon University
• Emission Impact of Pedestrians at Roundabouts, Farnoush Khalighi, University of Massachusetts, Amherst
• Intersection Control Evaluation: The Case for a Modern ICE AGE, Kamesh Vedula, Omni-Means, Ltd.
• Utilizing the Wide Node - Narrow Road Aspect of Roundabouts at Interchanges, Kamesh Vedula, Omni-Means, Ltd.
• The Signal Optimization Method Based on Bottleneck Control Strategy Under Saturation State at Roundabouts, Yuzhou Duan, Henan University of Technology
• Synthesis of Costs and Effectiveness of Roundabout Accessibility Treatments, Peter Jenior, Kittelson & Associates, Inc.
• Signalizing Existing Roundabouts in Africa - Dakar, Senegal, Joseph Perrin, A-trans Engineering
• Geometric Solutions to Driver Errors at Multi-Lane Roundabouts, Andrea Bill, Traffic Operations and Safety (TOPS) Laboratory University of Wisconsin-Madison
• Roundabout Safety Performance Functions of Wisconsin and Comparison with National Models, Li-Hong Chiu, University of Wisconsin-Madison
• Roundabouts: An Opportunity to Create a Sense of Place, Shannon Lambert, Reid Middleton, Inc.
• Status of Roundabouts in North America, Lee Rodegerdts, Kittelson & Associates, Inc.
• How do we create more roundabout champions?, Frank Broen, Teach America
• Safety Measure Considerations Regarding the Roundabout in Susaka City, Katsunori Fujioka, Oriental Consultants Co., Ltd.
• Social Experiment and Advanced Precedent of Roundabouts at Yaizu City, Katsunori Fujioka, Oriental Consultants Co., Ltd.
• Accelerated Roundabout Design: The Critical Role of Communication, Katie Handel, Reid Middleton, Inc.
• Advancing Roundabout Implementation with Intersection Control Evaluation, Hillary Isebrands, USDOT, FHWA
• Traffic Planning Implications of the Operational Characteristics of Roundabouts, Mark Johnson, MTJ Roundabout Engineering
• Planning & Design of Zipper Merges & Diverges at Roundabouts, Clayton Rudy, Stantec Consulting Ltd.