Creating a Bicycle Friendly Community in Madison, WI

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The City of Madison is enjoying rapid growth, but the growth has comes with challenges for a community with limited capacity to expand roadways. Constrained by our unique geography and by an early, and correct, decision to reject a freeway connection through our downtown, Madison innovated and built a robust multi-modal transportation system. Madison is designated as a walkable community; Madison has an award-winning Metro bus system; and recently Madison was upgraded from the gold to the platinum status of Bicycle Friendly Community.

The Bicycle Friendly Community designation is a program of the League of American Bicyclists (LAB). They have an application process for communities wishing to be designated as a Bicycle Friendly Community. Communities can be awarded one of 5 levels of bicycle friendliness - Bronze, Silver, Gold, Platinum or Diamond. No community has yet been designated at the Diamond level. Only five communities have been awarded the Platinum level - Davis, California, Portland, Oregon, Boulder and Fort Collins, Colorado, and Madison, Wisconsin. The League of American Bicyclists application covers 5 basic areas of programming, Engineering, Education, Enforcement, Encouragement and Evaluation. These are known as the 5-E’s. There is no clear path to achieving specific levels of recognition. The closest thing LAB has published on what is needed in each of these areas to reach a particular designation is their Building Blocks of a Bicycle Friendly Community infographic (http://bikeleague.org/sites/default/files/BFC%20infographic.pdf).

Madison generally ranks in the top 10 of any evaluation of bicycle friendliness. We often are asked by other communities what we have done to be a great city for bicycling, and what they can do to work towards becoming bicycle friendly themselves. Here is a brief description of Madison’s engineering policies and
programs that have led to our being one of the best communities in the country for bicyclists.

From an engineering perspective, Madison has always taken a multi-faceted approach to bicycling infrastructure. To have a truly bicycle (and pedestrian) friendly community, all of the following are needed:

- **Complete Neighborhoods.** It has to be possible and easy to move about within and between neighborhoods by foot and by bike. This means having a strong local street grid. If the local street grid is planned to be broken (e.g. cul-de-sacs), then these breaks need to be connected for walkers and bikers with paths. Bicycle Boulevards are a part of complete neighborhoods.
- **Complete Streets.** All streets need to be designed to accommodate pedestrians and bicyclists. This means sidewalks for pedestrians and space for bicyclists on busier streets, typically in the form of bike lanes. Many destinations (shopping, work sites, doctor’s and other offices, etc.) tend to be accessible only from arterial streets.
- **Shared use paths in separate rights of way where these exist, for example, lake, river, creek shores, railroad corridors, freeway corridors, greenways, parks, etc.**
- **Barriers that divide neighborhoods (e.g. highways, rivers, etc.) need to be bridged. Grade separations (overpasses and underpasses) are needed to ensure connectivity exists across these barriers other than just the major (arterial) streets that typically cross these barriers.**
- **Other facilities such as bicycle parking at destinations, bikes on buses and other mass transit vehicles, etc.**
- **Making sure the small details are taken care of.** For example, all storm sewer inlets are designed with bicycle safety in mind. All traffic signals that are actuated are sensitive to detect bicycles.

None of the above are mutually exclusive. That is, having a bike path in a neighborhood does not preclude the need for bike lanes along the nearby arterial street or vice versa.

Madison has policies in place to support these concepts, and implements them on a routine basis. In addition, our MPO, the Madison Area Transportation Planning Board, supports these goals by using a ranking scheme for the disbursement of federal funds that is heavily weighted towards projects that include multi-modal designs.

Incidental projects, such as including bike lanes on an arterial street at the time of reconstruction or when new streets are being constructed, have been easier to accomplish since budget wise they are a small part of a larger project. These projects occur routinely since these designs have been institutionalized in our planning and design processes. Independent projects, such as bike paths in separate rights of way from roadways and pedestrian/bicycle grade separations of highways, have been more difficult to acquire funding for. Over the years we have allocated more funding for independent projects. We have also been successful in acquiring funding through Transportation Enhancements, now Transportation Alternatives Program (TAP), and other grant programs, for the independent projects.

Madison has always been willing to experiment with new design concepts. We look at each project from the perspective of what would be best for this situation. When opportunities arise to do work at a location again, we look for ways to improve upon what we have. Conditions are never static. We need to be constantly improving upon our systems and networks. We have used designs such as protected bike lanes, buffered bike lanes, bike boxes, left turn boxes, diagonal crossings, bicycle signal heads, pedestrian & bicycle hybrid beacons,
colored pavement through conflict zones, contra-flow lanes, bicycle boulevards, and others. If you are unfamiliar with any of these designs, check out NACTO’s Urban Bikeway Design Guide (http://nacto.org/publication/urban-bikeway-design-guide/).

A typical project planning process would start by evaluating the corridor. What type of bicycle facility would be best suited to this corridor? Next we need to look at crossings. Intersections are where most crashes occur. What are the current and planned intersection conditions (turn lanes, signal cycles, etc)? What designs do we need to make sure it is clear and safe for bicyclists to get through the intersections? We will also consider other interactions with motorists (for example are there a lot of driveways, on-street parking), other bicyclists (will this be a high bicycle use corridor now or in the future), and pedestrians (crossing locations, transit stops, etc.). What are the land use patterns along this corridor? In particular, how will bicyclists be able to access destinations along the corridor? Planning for the operation and maintenance of the facilities is important as well. Will we need any special equipment to do routine maintenance such as sweeping and snow plowing? What agency will be doing the maintenance? Our overall goal is to provide facilities that are safe and convenient to use, that provide access to destinations, that are aesthetic and enjoyable to use, and that are usable in all seasons.

Finally, evaluation is another important component of continuous improvement. We need to constantly ask ourselves questions such as: What have we done that works? What do people want to see? Do we have specific problem locations? We track bicycle crashes separately from all crashes. This allows us to easily identify high bicycle crash locations, determine whether there is a specific problem, and take corrective actions. We count bicyclists in a variety of ways. We have automatic count stations on many paths and in some bike lanes. Overall there are about 20 locations where we are collecting bicycle traffic data in the city, including two visual count stations. In addition we have started doing annual bicycle and pedestrian screen counts to determine the volume of bicycle and pedestrian traffic coming into the downtown and campus areas.
The President’s Message
By Stephan Hoffmann

I hope that you’ve been able to take advantage of at least one of the great Wisconsin Section activities that have been held already this year. Summer is almost here, which will bring many other competing interests, but I encourage you to make some time for a future ITE event. These events are an excellent way to learn more about our Transportation profession, and to network with other transportation professionals.

We had a nice turnout at the March 3rd UW Milwaukee and Marquette University Student Night Section meeting that was held at the Milwaukee Beer Bistro. Both the UW-Milwaukee and Marquette University ITE Student Chapters were well represented, and provided updates about their student chapter activities over the last year. Congratulations to Zhaoxiang He and Xiao Qin of UW Milwaukee for being this year’s recipients of the Martin Bruening Award. Mary Beth Pettit also provided a detailed look at the Milwaukee Lakefront Gateway project, and shared the ultimate vision of this exciting project that recently began its first construction phase.

The Traffic Engineering Workshop and Transportation Planning forum held on April 20\textsuperscript{th} was a tremendous success again this year with more than 220 participants in attendance! John Bieberitz and the rest of the Traffic Engineering Workshop Committee once again organized an excellent conference. There was a great line-up of technical speakers, as well as an inspirational and very entertaining lunch presentation from keynote speaker Mr. Rick Grandinetti.

Please mark your calendars and check the website for details on the following upcoming ITE events:  

- 2015 Midwestern District Conference -- June 26 to 28 in Chicago, IL  
- Summer Social Event – Milwaukee Food Tour – August 4  
- ITS/ITE Section Lunch Meeting – July 13 in Milwaukee  
- ITE Annual Conference – August 14-17 in Anaheim, CA. 

Thank you for your support of the ITE Wisconsin Section. I look forward to seeing you at one of these upcoming events. If you have any questions or comments, please feel free to contact me or any of the Board Members.

Just Fix It Wisconsin

The Transportation Development Association of Wisconsin has developed a campaign called “Just Fix It Wisconsin”. If you are looking for an easy way to provide feedback to your state elected officials about addressing transportation funding in Wisconsin, then get involved! You can get started by visiting http://www.tdawisconsin.org/just-fix-it-wisconsin/, or if you have a smart phone text justfixitwi to 52886. Simply input your name and home address and messages supporting sustainable transportation funding will be sent to your elected officials.

Are you interested in advertising in our quarterly newsletter or the ITE Wisconsin Section website? Advertising is a great way to sponsor the Wisconsin Section and promote your firm/agency to hundreds of fellow Wisconsin Section members! Contact Ashley Vesperman, Affiliate Director, at (608) 836-9800 or Ashley.vesperman@aecom.com for more details.
Recent Meetings and Events

UW Milwaukee/Marquette University Student Appreciation Night & Martin Bruening Award – March 3, 2016
By Kelly Greuel

On Thursday, March 3rd, 2016, the student chapter from UW-Milwaukee hosted this year’s UW-Milwaukee / Marquette student appreciation night at the Milwaukee Beer Bistro. This event provided a great opportunity for students to network with professionals.

The meeting began with presentations from the two student chapters. Xiao Qin presented a student update for UW-Milwaukee and Sam Roti discussed Marquette University’s student chapter upcoming and past student activities.

Following the student chapter updates, the Martin Bruening Award was presented, in honor of Martian Bruening, who was a traffic engineer for the City of Milwaukee from 1924 to 1972, and an advocate / support of the three “E’s” of traffic safety: Engineering, Education, and Enforcement. The ITE Wisconsin Section Martin Bruening Award is given annually to papers about a study or design project in the field of transportation or traffic engineering in which the author(s) served as a principal participant. There were two award recipients this year, which was presented by award chairman, Richard Coakley. Zhaoxiang He and Xiao Qin won the award for their paper titled “Geospatial Analysis of Rural Emergency Medical Service (EMS) Stations in South Dakota”. Congrats to Zhaoxiang and Xiao!

We enjoyed a presentation from Mary Beth Pettit from Graef, our guest speaker for the meeting. She presented on the I-794 Lakefront Gateway Project & Gateway Plaza Design Competition. The purpose and need of the project is to improve bicycle, pedestrian, and vehicular traffic, reduce the footprint, improve aesthetic appeal, increase economic development, and provide a “Gateway” to the City of Milwaukee. The project also included a design competition for the plaza. The goal was to connect everything together and draw people to the area.
The following biography is reprinted from the December 2012 edition of the “ITE Journal”, and was part of the “Pioneers of Transportation” section in that issue.

**Martin E. Bruening**
(1903 – 1994)

Martin Bruening’s career in traffic engineering spanned 48 years, all with the city of Milwaukee. He began in 1924 as a junior draftsman, was promoted to Milwaukee’s first traffic engineer, and retired in 1972 as Superintendent of the Bureau of Traffic Engineering and Electrical services. He took a two year drafting course at the Boys Technical High School and went to work with Allis-Chalmers Manufacturing as a draftsman in the hydraulic turbine department. He then enrolled in night courses at the University of Wisconsin, obtaining his credits in engineering and becoming registered as a Professional Engineer.

He constantly emphasized the three E’s of traffic safety (Engineering, Education, and Enforcement) and the necessity of coordination of geometric design and traffic control. He particularly noted the concept of complete intersection design, integrating channelization, signalization, signs, and markings. In his words, a successful intersection design “makes the right thing to do the easy and efficient way for both drivers and pedestrians”.

Bruening was an early advocate of progressive signal timing and employed many innovations in Milwaukee’s traffic signal program. He would often use unusual graphic charts, hand drawn by staff under close direction, showing green bands of progressive flow to explain the impacts of unwanted traffic signals with poor spacing on a given signal system. The city’s first origin and destination survey in 1946, conducted under Bruening’s direction, formed the basis of the Milwaukee’s early freeway system. He preached and practiced the concept of a balanced, multimodal transportation system long before it was mandated by legislation. In 1969, he was invited to testify before Congress to support such a change, including the use of the gas tax to fund mass transit.

Martin Bruening joined ITE in 1937. He was an active member of the Midwest Section before Wisconsin had enough members for a section of its own. He often led a group of staff to Chicago for the local section meetings. In 1966, he was a charter member of the newly created Wisconsin Section.
Bruening was active in the International Municipal Signal Association and the National Joint Committee on Uniform Traffic Control devices and was very interested in providing traffic control devices to aid pedestrians. As a result of his work, Milwaukee equipped all of its traffic signals with early "WALK" lights in the 1960s. He was one of the early experts in traffic signal control, drafting many of the "Manual on Uniform Traffic Control Devices" provisions that were adopted in the 1960s. Bruening is an honorary member of the Institute.
Traffic Engineering Workshop & Transportation Planning Forum – April 20, 2016
By Kelly Greuel

The annual Traffic Engineering Workshop & Transportation Planning Forum was held on Wednesday, April 20, 2016 with approximately 225 registrants. This year’s event included over 20 speakers on 15 topics on traffic engineering and transportation planning, with various dual-track sessions.

Our opening session speakers were John Davis (Ayres Associates) & Shawn Leight (ITE Vice President), Bob Bryson (City of Milwaukee), Joanna Bush (WisDOT), and John Corbin (UW-Madison). Shawn Leight presented on “ITE – Expanding your Horizons”, Bob Bryson on “Updates to the HCM”, Joanna Bush on “Statutory Language Updates”, and John Corbin on “Next Generation Transportation Systems Management”.

An ITE Wisconsin Section meeting was held during lunch. Our featured topic following lunch was on “Finding your Balance for Work Life Satisfaction”, presented by Rick Grandinetti from Succeed Inside the Box.

If you would like to go through the presentations again or didn’t get a chance to attend the workshop, the presentations are available on the ITE Wisconsin Section web page: [http://itewisconsin.org/content.php?page=Traffic_Engineering_Workshop](http://itewisconsin.org/content.php?page=Traffic_Engineering_Workshop).

A special thanks goes out to the TEW-TPF Committee consisting of: Joanna Bush, Cheryl Cieslewicz, Doug Dembowski, Alicia Dougherty, Tristan Hickman, Stephanie Olsson, Laura Schroeder, and John Bieberitz (Chair).

This event has consistently brought together the transportation engineering and planning industry together to discuss changes in the industry, case studies, new technologies and proven approaches to current problems.

The planning already under way for the 2017 Traffic Engineering Workshop and Transportation Planning Forum at the Country Springs Hotel in Pewaukee.
On May 11, the ITE Wisconsin Section Meeting was held in the Fox Valley Area at Holidays Pub & Grill in Neenah. This once a year meeting held in the Fox Valley provided a great opportunity for the ITE Wisconsin Section officers to visit with members located in northeastern Wisconsin.

Amy Canfield of AECOM presented on a very interesting project: the Downtown Appleton Mobility Study. Her presentation discussed the study’s purpose to improve connectivity of all modes of travel (vehicles, pedestrian and bicycle) within the City of Appleton’s downtown area located on the north side of the Fox River. Their initial information gathering uncovered two very interesting items about the downtown area: 1) the area has an overabundance of parking, and 2) the downtown intersections will operate at levels of service of B and C even in 2036.

Their study engaged numerous stakeholders such as downtown business owners, local public officials, Lawrence University officials, and bicycle and pedestrian advocates. Stakeholder meetings were held to bring forth issues and concerns to be considered by the study.

From their data gathering and these stakeholder meetings, several alternatives were evaluated in the study such as road diets to add bicycle accommodations on streets, conversion of one-way streets to two-way streets, elimination of traffic signals, pathways and stairways to the riverfront, improvement crosswalk identification, and the addition of wayfinding signs.

The engaging presentation brought forth numerous questions from the audience.
Upcoming Social Activity

14th Annual ITE Wisconsin Section Social Activity
Please join us for our social activity this summer!

**Milwaukee Pizza Bus Food Tour!**

**Date/Time:** Thursday, August 4, 2016 at 5:30 pm

**Location:** Meet at the Caradaro Club, at 5010 W. Vliet Street

**Price:** $25 per person

**Deadline:** Please sign up by **July 27, 2016** at [http://itewisconsin.org/](http://itewisconsin.org/)

**Details:** There will be 3 stops for pizza plus a gelato stop at the end. One drink plus water is included.

Celebrate PIZZA with Milwaukee’s bus-driven Pizza Tour! Join us as we sample the quintessential thin crust pizza, grab gourmet slices of tomato goodness, and search for the most historic pies in town.

We’ll go from old school, 5-star pizzerias to newer, upscale establishments and enjoy a variety of unique tastes that they each offer. As with all of our tours, we’ll find our way through historic neighborhoods and point out interesting city factoids and landmarks along the way. And, save room for dessert - our excursion concludes with a divine scoop of gelato!

- Although minimal walking is required, there is still walking involved.
- This tour is NOT handicap accessible and attendees will need to go up/down minimal stairs to get on/off the bus multiple times.
- This tour starts/ends about 8 minutes west of downtown Milwaukee, near Miller Park, just a few minutes off of I-94. Ample and free parking is available. The tour lasts about 3 hours.
- This tour is seafood/shellfish free.
- There is a vegetarian option on this tour. Please mention when registering.

Contact Tyler Tkachuk ([tyler.tkachuk@aecom.com](mailto:tyler.tkachuk@aecom.com)) or Stacey Pierce ([stacey.pierce@dot.wi.gov](mailto:stacey.pierce@dot.wi.gov)) with any questions.
Midwestern District Update

2016 Midwestern + Great Lakes Joint District Annual Meeting
June 26-June 28, 2016 – Chicago, Illinois

This meeting will represent 14 states, providing an opportunity for attendees to network with a diverse group of transportation professionals and to experience a robust technical program focusing on the latest trends in transportation. It will be located at the Holiday Inn Chicago-Mart Plaza River North, steps from downtown Chicago’s famous restaurants, shops, and attractions.

Conference website:
http://www.chicago2016mwglite.com/

Draft Technical Session Schedule is available at:

2017 Midwestern District Annual Meeting
June 18-June 20, 2017 – Madison, WI

In 2017, the Wisconsin Section will play host to the 11-state Midwestern District Annual Meeting and Conference. The dates of the meeting are June 18-20, 2017, and the site will be The Madison Concourse Hotel, in downtown Madison. The Section’s Local Arrangement Committee is starting to plan in detail the technical program and social events that will be a part of the 2017 meeting. If you would like to join the fun and excitement of planning this event, there are several committee’s available to join! Committee’s available to join include: Publicity, Venue/Hotel Arrangements, Finance, Registration, Corporate Sponsorship & Industry Exhibitor, Social Activities, Hospitality and Family Program, and Technical. If you don’t have time to volunteer before the event, there are plenty of micro volunteer opportunities available during the event. Please contact John Davis (DavisJ@AyresAssociates.com, (262) 522-4905) or Jess Billmeyer (Jess.Billmeyer@aecom.com, (608) 828-8157) if you are interested in helping out in some way. No experience is necessary!

Candidate for 2017 ITE International Board

Michael Sanderson, P.E., PTOE, LEED AP, FITE
President & CEO, Sanderson Steward, Billings, MT USA
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The world of transportation is transforming before our eyes. Big advances in technology, generational demographic shifts, and globalization are among the many forces that will transform our profession. This type of change can either be a threat, or it can present great opportunities. To seize the opportunities, ITE must take a leadership role to ensure that our members have the right information, the right connections, and the right opportunities to succeed.
Develop a strong ITE brand. ITE needs to clearly define its space among transportation organizations and then provide decisive leadership where it can be most effective.

Leverage technology and social media. ITE must modernize its approach to service delivery and communication by better utilizing technology, fully embracing online and cloud-based platforms, social media, and mobile technology.

Embrace & encourage diversity. In our changing profession, ITE must position itself as the organization of choice for professionals of all diverse origins and backgrounds.

Define ITE’s global role. A global economy more strongly dominated by Asia and other emerging economies is impacting the transportation industry, even for those that never work outside North America. ITE needs to identify how it can best engage and support transportation professionals globally.

Leadership. In our own organizations, in our profession, and in society, ITE members need to be the technical experts and the advocates leading the conversations and delivering the solutions to the transportation challenges of the 21st century.

ITE is the organization that I have devoted my career to serving for the last 20 years. I have served ITE as an elected leader at the chapter, section, district, and international levels, and I have served on many committees, task forces, and technical councils. I love ITE for what it has done for me professionally and for the many personal relationships I value so much. ITE is at a crossroads and change is needed for ITE to be successful into the future. With your help and collaboration, I look forward to applying my knowledge of ITE, along with my education and experience as a business leader, to effectively lead our Institute through this transformative time.
Upcoming Events

**June 26-June 28**  Midwestern + Great Lakes Joint District Annual Meeting  
Chicago, IL

**July 13**  Joint Meeting with ITS Wisconsin

**August 4**  ITE Wisconsin Social: Milwaukee Pizza Bus Food Tour

**August 14-17**  ITE 2016 Annual Meeting and Exhibit  
Anaheim, CA

**September 14**  WTS/ITE Joint Breakfast Meeting  
Milwaukee, WI

**September 28**  ITS Forum

Do you have some information or great ideas to share? The ITE Newsletter is an excellent medium for reaching section members. If you would like something published in the upcoming newsletter, please contact the 2016 Wisconsin Section Member Director, Kelly Greuel at (608) 828-8132 or kelly.greuel@aecom.com
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