

Association for Education and Rehabilitation of the Blind and Visually Impaired



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Orientation and Mobility Division Update

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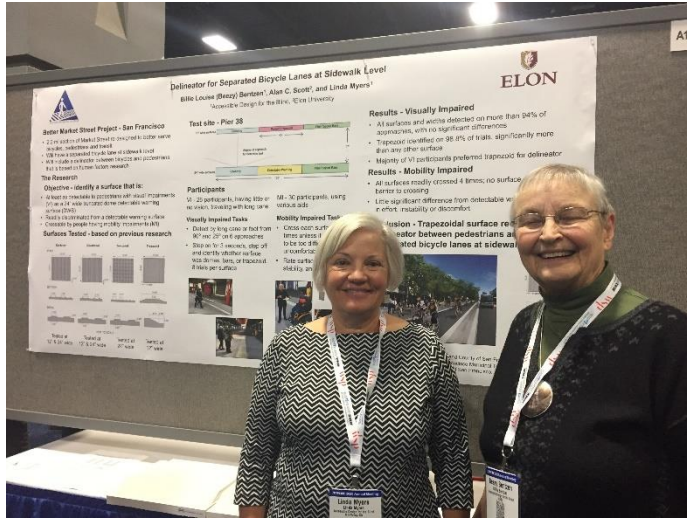
ENVIRONMENTAL ACCESS COMMITTEE REPORT

January, 2020

By Janet Barlow, Chair, and EAC members

As many of you know, members of the EAC attend the annual meeting of the Transportation Research Board, thanks to the support of AER, Polara Enterprises, OMSA and member donations. This huge meeting includes hundreds of presentations and committee meetings and we try to divide up and attend as many pertinent events as possible. At right is a photo of EAC members who were at TRB, Dona Sauerburger, JoAnne Chalom, Raychel Callary, Beezy Bentzen, Janet Barlow, Meg Robertson, Linda Myers and Lukas Franck.

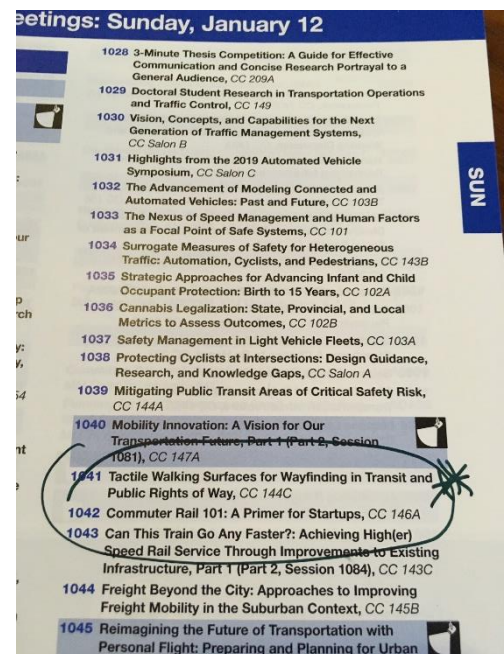




On the agenda this year were several posters and presentations from our field. Bezy Bentzen, Alan Scott and Linda Myers presented a paper and poster on their recent research in San Francisco to identify a delineator for separated bicycle lanes at sidewalk level. (Photo on left shows Linda and Bezy in front of their poster in the TRB poster session). Sidewalk level bicycle lanes are being implemented in many cities and this is an issue that EAC members are following. The solutions are difficult with assumptions among many designers that

bicycles and pedestrians can “mix” safely. The research presented suggested a delineator that may work well between the pedestrian and bicycle sides of separated bicycle lanes at sidewalk level. The recommended delineator, which is a continuous raised bar that is trapezoidal in cross section, and .75 inches high, is being implemented in San Francisco and elsewhere. We have concerns and questions about intersections and would like to hear more from O&M specialists about issues in their cities, whether our concerns are valid, and potential solutions.

A three-hour workshop on Sunday (proposed last year and organized by Bezy Bentzen) was on *Tactile Walking Surfaces for Wayfinding in Transit and Public Rights of Way*. Tactile Walking Surfaces can include both detectable warnings (truncated domes) and various guidance or bar tile surfaces. The presentations included information on current standards, international practice, and case study presentations from various cities and transit agencies who are using different guidance type surfaces. (Photo at right shows a portion of the page from Sunday’s TRB Program with dozens of workshops and activities listed and the workshop mentioned above circled.) This is an area where there is ongoing research and a great deal of interest from transportation agencies particularly in relation to separated bike lanes and wayfinding in transit stations and plaza type areas.



And another poster presented results from research led by Rob Wall Emerson at Western Michigan University which is ultimately looking at the use of guidance surfaces at midblock crossings, roundabouts and skewed intersections. The paper, *The Effect of Tactile Walking Surface Indicators on Travelers with Mobility Disabilities*, shared the effects of bar tile type



guidance surfaces oriented parallel versus perpendicular to the direction of travel for people having various mobility disabilities, using various aids. Raised bars oriented parallel to the direction of travel on the sidewalk, perpendicular to the direction of travel on crosswalks, which helped VI travelers align to cross, had less adverse effect on travelers with mobility disabilities than bars oriented perpendicular to their direction of travel along a sidewalk. This research is ongoing and will soon have results

of studies in three cities with pedestrians who are blind at midblock crossings, roundabouts and skewed intersections. (Photo above and at left shows researchers Janet Barlow, Beezy Bentzen and Alan Scott in front of the poster illustrating that research at TRB.

Here are a few reports from those who attended about issues that we are following and EAC members' experiences at TRB:

From Janet Barlow:

The TRB Pedestrian Committee had its usual very full agenda of information about ongoing projects and initiatives. There is an emphasis from Federal Highway Administration on pedestrian and bicyclist safety due to the increased fatalities in the past year. I was able to give a very short presentation on *Accessible Pedestrian Signals: Standards and Innovation* in which I encouraged pedestrian advocates to encourage APS installation and to be sure APS being installed meet the current standards. You can access the 2020 meeting information and handouts at this web site <http://www.pedbikeinfo.org/trbped/meetings.cfm>

As always, there was lots of networking and just generally continuing to emphasize that pedestrians who are blind do travel independently and need to be considered in facility and intersection design.

TRB had announced a reorganization of committees shortly before the meeting so some committee meetings were less productive than usual due to planning for the reorganization. I often attend committees where there is little emphasis or awareness of pedestrians with disabilities such as the Traffic Signal Systems Committee or the Geometric Design Committee. Traffic Signal Systems Committee considers traffic signal timing and has developed some research related to multimodal traffic signals (timing signals for pedestrians, bicycles, and vehicles). There should be a report from that research soon. The Intersections Joint Subcommittee, which has concentrated on alternative intersections, is being combined with the Roundabouts Committee, so their meeting discussion was mainly about the reorganization rather than upcoming research or proposals for next year.

From Beezy Bentzen

After more than 20 years of participating in TRB, I have decided that the most valuable use of my time now is attending committee meetings. I am a member of two committees, Intermodal Passenger Facilities, and Accessible Transportation and Mobility, but I attend several other committee meetings as well. Important functions of committees are helping to frame the research agenda for issues related to their topic. Here I get to suggest research on topics that are of concern for people with vision disabilities, and to get support for topics that I want to propose more formally. Committee support for research topics is an important contributor toward getting money designated for those topics. People attending committee meetings as members or guests have the opportunity to introduce themselves, and sometimes to say what their interests are. This helps me identify people who may be interested in issues that I'm interested in.

This year, I attended meetings of the Bicycle Committee for the first time. AER members are concerned about the growing number of shared bicycle facilities, as well as separated bicycle lanes at sidewalk level. We're especially concerned about designs for so-called "protected intersections," that are intended to be safer for cyclists. We're concerned that unless they are

well-designed, including appropriately located APS and detectable warnings, they can be quite hazardous for VI pedestrians. Committee members were supportive of research or development of guidance on “protecting” VI pedestrians at protected intersections.

Other research topics that I suggested, some of them to multiple committees, were:

- The Effect of Accessible Pedestrian Signals on Crossings by Distracted Pedestrians
- Pedestrian Countdown Signals and Pedestrians who are Vision Disabled
- Should Audible Countdowns be Permitted?
- Is the Flashing Hand Necessary with Countdown Signals?
- Wayfinding in Transit for Passengers with Disabilities
- Accessibility and Usability for Vision Disabled Travelers of Web-based Passenger Information

From Raychel Callary

Attending TRB was a great opportunity to contribute information about the experiences and perspective of travelers with vision loss to people who design the built environment, and to remind people that environmental considerations for people with vision loss can enhance safety for all pedestrians. I attended a variety of lectures, panel discussions, and committee meetings regarding trends in rideshare services, automation, intersection design, and accessibility. Between sessions, there were plenty of conference attendees to talk with about the work of orientation and mobility specialists, and encourage collaboration with professionals in their area.

One meeting of particular interest to people working with older adults was the Aging, Gender, and Transportation committee. They discussed the importance of creating a transition plan away from driving ahead of time that addresses transportation needs including friends, church members, volunteers, public transportation, and rideshare services. The Clearinghouse for Older Road User Safety (CHORUS) has listings for transportation options by state and region (roadsafeseniors.org). The CDC’s “My Mobility Plan” has information about prevention and planning for options to driving (https://www.cdc.gov/motorvehiclesafety/older_adult_drivers/mymobility/index.html).

A big surprise was the announcement of the discontinuation of the The Safe Mobility for Older Adults committee, with whom Dona Sauerburger has been involved for several years and I had anticipated becoming involved as well. It was discussed that members could work with the Accessible Transportation and Mobility, Human Factors of Roadway Design and Operation, or Human Factors and Behavioral Research Methods committees, among others. A moving case was made by people working with the CDC, AARP, Gerontological Society of America, Departments of Transportation from around the country, and others advocating for the continuation of the committee. Members and attendees expressed concern that the diffusion of members could lessen the impact that the group has had on research on aging issues, and about the difficulty of finding common research issues with committees that have another area of focus. Among the committee’s current projects is the updating of their publication “Taxonomy and Terms for Stakeholders in Senior Mobility”, a resource defining terms for people working with seniors across different fields.

From JoAnne Chalom

Connected and Automated Vehicles

Thanks to the support of AER, Polara Enterprises and the Orientation and Mobility Specialist Association, a team of O&M professionals were privileged to attend the Transportation Research Board's 99th Annual Meeting January 11-16, 2020. The Environmental Access Committee advocated for further research to advance accessibility and equity for individuals living with vision loss.

Connected Automated Vehicles (CAV) have continued to be a topic of interest to many stakeholders and as a continued topic of research. It was one of many areas of transportation options discussed at the Accessible Transportation and Mobility Committee and the primary topic of conversation at the Automated Vehicles and Pedestrians Subcommittee meeting, as well as many sessions addressing Universal Design and Automated Vehicles.



[Photo at left of TRB session showing attendees at round tables, and speaker at front of room with PowerPoint presentation on the screen)

Shuttle service was a continuous theme, as well as, access for all. How would a shuttle service address securement challenges for individuals with physical or orthopedic impairments? How

would individuals with visual impairments be able to locate the shuttle hub, know the routes it travels and be able to identify their destination? Terms that are frequently used in this specialty are V2P (vehicle to pedestrian) or V2X (vehicle to everything). V2P is used to describe vehicles connecting with pedestrians, while, V2X refers to how vehicles communicate or connect with everything. These systems can sense the transportation environment around them and communicate that information to other vehicles and other components of the system.

The annual Automated Vehicle Symposium 20 will be held in San Diego California from July 27 - 30, 2020. *Further information can be found at <https://www.automatedvehiclessymposium.org/home>*

Connected Automated Vehicles (CAV) can provide set route shuttle services. The legal, logistical, regulatory and design components of CAV were topics that were highlighted at many sessions, and committee meetings. These key areas of CAV were discussed at length, including design. How will CAV be accessible for people with visual impairments, blindness, and neurodiversity? Shuttle services are being piloted in places such as Santa Clara, California on the Veteran's Administration campus, Corpus Christi, Texas on the campus of Texas A&M University, and Gainesville, Florida at the University of Florida. The Easy Mile will be used on the campus of Texas A&M University-Corpus Christi. This free shuttle will be available to

faculty, staff, and students. The Surge can transport up to twelve passengers and passengers can track their ride using an app, Transloc. It is also intended to protect passengers from extreme weather as they ride in the air conditioned or heated bus.

Will this shuttle service be accessible to all passengers? Will the app be accessible for individuals with visual impairments and will the location of the transit hubs be easily identifiable? Was the Surge born accessible or will these universal design considerations need to be addressed? For additional information, go to <https://www.kztv10.com/news/community/vista-semanal/local/tamu-cc-rolls-out-new-self-driving-bus-to-get-around-campus>

From Linda Myers

2020 was my first time attending TRB's (Transportation Research Board) Annual Meeting. My main takeaway was that our streets and sidewalks are changing and that we all need to be involved in the process to ensure that these changes are accessible to pedestrians who are blind.

My first challenge was having to interpret all the acronyms. Following is a list which might be helpful if you attend or even if you never go to TRB's Annual Meeting; they also might be useful when talking to your local traffic engineer or if you want to research a new hot topic. In addition to learning a new set of acronyms, I also learned about micromobility vehicles, autonomous vehicles, and gateway treatments. I find that the acronyms are useful key terms when searching for more information about the other meeting topics.

Acronyms

APTA - American Public Transit/Transportation Association

ADT - Average Daily Trip

AASHTO - American Association of State Highway and Transportation Officials

CAVs - Connected Automated Vehicles

DOT/USDOT - United States Department of Transportation

FTA - Federal Transit Administration

ITE - Institute of Transportation Engineers

NCHRP - National Cooperative Highway Research Program

NHTSA - U.S. Department of Transportation's National Highway Traffic Safety Administration

FHWA - Federal Highway Administration

NACTO - National Association of City Transportation Officials

SAE - Society of Automotive Engineers

TCRP - Transit Cooperative Research Program

You can use these acronyms to find out more about these hot topics:

Shared micromobility vehicles

If you want to know the best definition of shared micromobility vehicles, you might pair the term with the acronym NACTO in your favorite search engine. You might get: “Shared-use fleets of small, fully or partially human-powered vehicles such as bikes, e-bikes and e-scooters. These vehicles are generally rented through a mobile app or kiosk, are picked up and dropped off in the public right-of-way and are meant for short point-to-point trips” (https://nacto.org/wp-content/uploads/2019/09/NACTO_Shared_Micromobility_Guidelines_Web.pdf).

Automated vehicles

Next you might search for “automated vehicles” and “NHTSA” and learn the following:

...Self-driving vehicles ultimately will integrate onto U.S. roadways by progressing through six levels of driver assistance technology advancements in the coming years. This includes everything from no automation (where a fully engaged driver is required at all times), to full autonomy (where an automated vehicle operates independently, without a human driver) (<https://www.nhtsa.gov/technology-innovation/automated-vehicles-safety#topic-road-self-driving>).

Gateway treatment

You might have heard of raised intersections and raised crosswalks, but what about a gateway treatment? “A gateway installation of the R1-6 signs can be installed at a crosswalk by placing them on the edge of the road and on all lane lines. This requires all drivers to drive between two signs. The gateway configuration has been documented to produce a marked increase in the percentage of drivers yielding right-of-way to pedestrians” (<file:///C:/Users/staff/Downloads/CTS17-05.pdf>).

Just a few more topics that might interest you as mobility specialists are innovative intersections (protected intersections or dedicated intersections) and slow vehicle lanes. Try searching for “protected intersection” and “NACTO.” How do these new protected intersections influence how a pedestrian without vision will cross?

I also learned that even a street with only two lanes (one in each direction) can have a multiple threat issue. A multiple-threat crash usually involves a driver stopping in one lane of a multilane road to permit pedestrians to cross, and an oncoming vehicle (in the same direction) strikes the pedestrian who is crossing in front of the stopped vehicle. However, it can happen on a two-lane road if a car uses the shoulder to go around a car already stopped for a pedestrian.

Explore these new developments and get involved to make streets safer!

From Meg Robertson

This conference has over 8,000 presentations on Aviation, Highways, Sidewalks, Trucking, Transit, Trains, Vehicles, Pedestrians, Bicyclists, Micromobility, etc. Our O&M Environmental Access Committee/EAC is one of the few groups in attendance promoting the needs of individuals with disabilities. Presentations began early Sunday morning, ending on the following Thursday. Some of the presentations I attended, included: *Tactile Walking Surfaces*

for Wayfinding in Transit & Public Rights of Way (EAC members presenting) ; *Developing Local Road Safety Plans Partnering with State DOTs Metropolitan Planning Organizations and Local Agencies*; *Do You Feel Me Creative Strategies to Engage a Diversity of Users*; *Making Autonomous Vehicles Accessible for All*, as well as many poster sessions on biking and pedestrian issues. At every presentation I attended, I was able to raise the needs of pedestrians who have vision loss. With the advent of increased installation of bike lanes, we have begun raising awareness the impact they have at pedestrian intersection crossings. We are learning how COMS can advocate for good design vs poor design as these are installed around the country. As a member of the TRB Work Zone Traffic Control Committee, I have begun a small subcommittee on pedestrian barricades around work zones. Although this committee main focus is on highway work zone, I have been able to slowly raise awareness of pedestrian issues around work zone issues. We are looking to develop outreach materials to train DOTs and local planners how to implement safe access for pedestrians around work zones.

Members Lukas Franck and Dona Sauerburger also attended and represented the EAC for a couple of committee meetings, bringing up issues and networking with committee members.

Thanks for your support of the EAC. Feel free to contact me with questions or concerns at jmbarlow@accessforblind.org

Members of the Environmental Access Committee and the Orientation and Mobility Specialist Association collaborated in Washington, D.C. to have an extended working lunch during the TRB meeting. Thanks to the generosity of the Orientation and Mobility Specialist Association (OMSA), we were able to reserve a quiet space to have a nice lunch and discuss topics such as the correct installation of accessible pedestrian signals, separated bike lanes, universal design components of automated shuttles, and the creation of a symposium for the AER Conference that addresses many topics frequently discussed by members of the Environmental Access Committee and the Orientation and Mobility Specialist Association.