

**TRB Committee on Roundabouts ANB75**  
**2013 Mid-Year Meeting**  
**Monday, August 5, 2013, 10:30am-12:00pm (at ITE Annual Meeting)**  
**Boston, MA (Hynes Convention Center, Room 110)**  
**Meeting Minutes**

**COMMITTEE SCOPE:** The TRB Committee on Roundabouts is concerned with all factors encompassing modern roundabouts. The Committee provides focus within TRB on current issues and future research needs pertaining to modern roundabouts. It serves as a forum for discussions about roundabout research, projects, and policy for all interested stakeholders; identifies research needs and develops research problem statements to meet the needs; and facilitates the exchange of knowledge by various media, meetings, and conferences.

- Committee web site: <https://sites.google.com/site/trbroundaboutscommitteeanb75/>
- LinkedIn group: <https://www.linkedin.com/groups?home=&gid=4960544&trk=anet ug hm>

**1. Welcome**

**2. Introductions, review of TRB on-line directory**

**3. Comments from the Chair:**

**Committee Web Site**

*Check out the committee web site. If you have ideas, let Marcus know.*

**Paper Review**

*Brian and Hillary will continue to help with papers. Gene will be asking committee members and friends to review papers. Gene prefers 4 to 5 reviewers for each paper. Committee members' primary duty is to review papers, with members expected to review 2 or 3 papers. "Active" friends (discussed below), are also encouraged to review papers, especially if you have an interest in joining the committee. Currently, the Roundabout committee has a good longstanding history of reviewing papers. If you would like to review papers and are not on the list, please contact Gene.*

**Future Meetings**

*The group discussed future meetings. In addition to the meeting in conjunction with TRB in January, and the mid-year meeting either at the ITE conference, or the Roundabout Conference, the group decided to have interim meetings via the web. Gene promised to keep them short, and would schedule a spring and fall web meeting.*

**Active Friends List**

*The group discussed whether there should be an "Active" friends list since the current Listserv now has over 400 members. The proposed initial "Active" friends list that Gene passed around was the current committee members, the paper reviewer pool, and a few other individuals. The group thought the "Active" friends list was a good idea because it helps set up the rotation of committee members. The group also pointed out that the primary duty of committee members is to review papers, and you should attend (either in person or remotely) committee meetings. If you would like to be on the "Active" friends list, please contact Gene.*

### **Committee Web Presence**

*The group discussed the various ways information is passed along to the committee. The current options are the Listserv, LinkedIn or the [TRB Community website](#). The Listserv has about 400+ members with some days more active than others. The LinkedIn group has 45 members, all invited or approved by Marcus. The TRB Community website is currently in beta, and hasn't been officially released by TRB yet. The group decided that email will remain the medium for "official" communication, and Marcus will add "active" friends to the Committee email list. If you want to be in the LinkedIn group, please contact Marcus.*

### **Scope, Mission, Business Plan review.**

*Gene wants to vote on these in January and selected a subgroup of "key advisors" to assist on this, calling them the Business Plan Subcommittee. He would like to have some help looking at a business plan which hasn't been looked at since we became a standing committee. Previously, Hillary had done most of the work on the mission and scope.*

*This led to a discussion about the relationship and potential overlap between the ITE committee and the TRB committee. The ITE committee has been in touch with this committee to establish a scope of each committee. Gene feels this committee's main goal is to advance research of roundabouts. ITE will put more emphasis on reaching out to practitioners. ITE wants to make a greater emphasis on journal articles/webinars and the like, and will look for active discussion topics from the listserv and other mediums. Research topics will be kicked back to the TRB committee. Hillary pointed out that in many occasions, things tried in practice, especially experimental, ends up in the research realm. Because of this, there is overlap between the committees. TRB started looking at "shovel ready" projects a few years ago, for instance. Organizational restrictions also factor into which committee should look at different topics; for instance, the ITE committee does not have the recommendations restrictions that the TRB committee has. The Business Plan Subcommittee will take a look at these issues.*

*Additional volunteers for these efforts are welcome, and should contact Gene if interested.*

### **Triennial report, (TSP) initial preparation**

*We just missed the requirement to submit a triennial report based on the date when we became a committee. Our next (first) one is due in 2015, and if we complete a good business plan, we'll be in good shape for the triennial report. Scope, Mission, and Goals are the key components, and a brief history, and setting agenda for the next three years (beyond 2015) are other components. The history piece can go on a website, and Gene will develop a draft.*

### **TRB 3-Question Survey**

*All chairs were asked to answer three questions from TRB related to past and future research topics. TRB is using this information to celebrate their legacy, publicize committees, and have material for newsletters and the like. They're doing this this year because they're moving the location next year. Lee came up with a draft response to the top two research breakthroughs that everyone agreed to. The two topics were:*

- 1. FHWA Roundabout Guide, 2nd Edition NCHRP Report 672.*
- 2. Accessibility research over the last ten years*

*The group discussed also considering the IHS study, because it was the first US-based research. The group agreed that it was seminal, especially because it was completed before the 2000 FHWA Roundabout Guide.*

## **TRB Comments**

*Rich Cunard gave the TRB report: TRB January meeting will start January 12, 2014, and "Celebrating Our Legacy, Anticipating Our Future" is the theme. The committee is encouraged to highlight this topic. TRB will provide a flash drive for the last time in 2014. In the future, all papers will be on the web. Current plan is to keep the papers online for five years. The thinking is that TRR is capturing the papers that should have longevity.*

*The 2015 meeting will start on January 11, 2015.*

*The overall publication percentage will likely be lowered nominally due to increase in the number of papers submitted. Budget and other issues guide this.*

## **4. January 2013 Minutes – review of any action items, key issues. Changes? Acceptance?**

*Because we did not have a quorum of voting members, Gene will send out via email to approve by proxy vote. All revisions submitted to Marcus following the January meeting were included in the final version of the minutes distributed to the membership, so approval of the minutes should be a formality.*

## **5. 2014 International Roundabout Conference and "preconference" session.**

*The conference still needs to develop the technical program papers and sessions, and TRB will open the website in mid-September. Announcements will go out through Listserv and through Seattle planning committee. Abstracts will be called for and the technical sessions will be developed from the abstracts. Papers will be optional. The abstract site will be open for about six weeks.*

*The conference will be held at the Sheraton in downtown Seattle. The Thursday event has yet to be determined, but nice weather is possible in April in Seattle.*

*Exhibitors are still being discussed, as are possible training sessions (these are not officially part of the conference). The conference usually has a workshop that is included in the agenda.*

*Sponsorship opportunities are available. These can only be used for general support for the conference, not for a specific event.*

*Andrew Paul made a preliminary presentation to invite the next roundabout conference in 2017 to Boston. Andy expects to have 50 roundabouts in the state by 2017; 30 are in the state now.*

*The formal vote on where to hold the next conference will be taken at the Annual Meeting in January 2014. For the previous vote everyone in the room voted, not just committee members. If more than one person or group wants to host the conference, they should be prepared for a 5-10 minute presentation at the January meeting and then a vote will be held to decide.*

## **6. Getting More Research into TRB RNS**

*Gene wants to clean up the Research Need Statements, and everyone who sent in an RNS from the January "mini-workshop" is now on the RNS subcommittee. The deadline for submitting proposals to NCHRP is September 15. Phil takes those that are promising for NCHRP, and will write them up in great detail for consideration by NCHRP. This is just one of the many uses of the TRB RNS.*

*The committee currently has 17 topics on the website. Gene passed around the RNS' from TRB and the subgroup names. He plans to contact the members at a future date.*

## **7. Mike Hutt Designers' Time Research**

*Mike Hutt is leading a research project looking at collating guidelines and projects that are less technical. Specifically, he is exploring what issues are taking the designers' time away from creating a more effective design, and getting from evaluation to construction. Mike will distribute a prompt sheet electronically to those interested.*

## **8. 2014 Sessions – tentatively, one paper and one presentation session plus posters (Brian, Hillary)**

*Brian will do the Video Theater again, and is always open to help. If you have ideas for invited sessions, please let Hillary know.*

## **9. Webinars – past successes and future ideas**

*Last webinar discussed major crash types at roundabouts are vehicles exiting the roundabout. All three webinars averaged over 1000 participants. DOTs are the primary audience, and Gene looks to DOT people to lead this. If you want to be on the webinar subcommittee, please let Gene know. One more may be possible for this year. Gene also wants to put on a series similar to SHRP 2 Tuesdays, but this is just in the discussion stage for 2014.*

## **10. Subcommittee reports /discussion**

*Gene will post written reports from the subcommittee chairs, and all persons not in attendance, who reported via email online. These reports are provided in the minutes as post-meeting attachments.*

## **11. Interacting with other TRB Committees**

Coordinator or subcommittee chair (Bastian) See attachment 4 , number 4, for Bastian's updates on this and also research he is involved in )

*This wasn't discussed, but the current liaisons are listed below. Please let Gene know if you have updates.*

- a. ANB20 Safety Data, Analysis and Evaluation, former parent committee
- b. ANF10 Pedestrian Committee (Lois Thibault – Retired- others ?) Alek Pochowski volunteered
- c. AHB70 Access Management (Phil Demosthenes)
- d. AHB60 Hwy-Rail Grade Crossings (Gene Russell)
- e. AHB50 Traffic Control Devices (Gene Russell or Gene Hawkins)
- f. AHB25 Traffic Signal Systems
- g. AHB65 Operational Effects of Geometrics
- h. ANF20 Bicycle Committee (*Alek Pochowski volunteered*)
- i. AHB40 Highway Capacity (Lee Rodegerdts)
- j. ABE60 Accessible Transportation and Mobility
- k. ANB30 Operator, Education and Regulation
- l. Intersection Subcommittee (Jeff Shaw)

*Others (as available) Note: If we can't get other committee member(s) to come to our meeting we could have volunteer(s) go to theirs. From TRB list of members, list of potential other committees to interact with:*

- AFB10 Geometric Design (Marcus, Brian, J. Brewer, Hillary)
- ANB25 Highway Safety Performance (Melissa Anderson)

- ALO60 Eminent Domain and Land Use (Phil Demosthenes)
- ALO70 Tort Liability and Risk Management (Gene Hawkins)
- ATO55 Truck Size and Weight (Peter Lynch)
- AHB55 Work Zone Safety (Wade Odell)
- AND40 Visibility (Wade Odell)
- AHB65 Operational Effects of Geometrics (Jeff Shaw)
- Others – volunteers present who generally go to other TRB committees

## **12. Interacting with other organizations:**

***FHWA:** FHWA continues to fund evaluation projects related to roundabouts. KAI (Kittelsson) is the lead contractor of those efforts. These include: 1.) RRFB at multilane roundabouts. 2.) Operations/data collection and calibrating HCM equations. 3.) Air quality at roundabouts. 4.) Fatal crashes and severe injuries.*

*Time constraints prevented other groups from providing an update.*

## **13. International: Australia; Germany; UK; Netherlands; New Zealand**

*If international members or friends have an update, please pass these along to Gene.*

## **14. Ongoing/Proposed Research**

*These were not discussed due to time constraints. Updates that were sent via email were sent out after the meeting and will be attached to these minutes. If other updates are available, please provide to Gene.*

- Accelerating Roundabout Implementation in the U.S. – Evaluations to Address Key Issues (FHWA?)
- NCHRP 3-100 –ROUNDABOUT CORRIDORS (Lee Rodegerdts): See Attachment #1
- NCHRP 03-110 Estimating Life-Cycle Cost of Intersection Design (Lee Rodegerdts): See Attachment #1
- Impact of Roundabouts on Business (Gene): Completed, report available on Kansas DOT (KDOT) Publication web site
- Pooled Fund Study on Accommodation Oversize/Overweight (OSOW)(Gene): Completed – report available on Kansas DOT (KDOT) Publication web site, and FHWA Pooled Fund web site
- Optimizing Truck Routing in Kansas (Gene): Ongoing
- Future 2014 NCHRP: Project 17-70; Roundabout Crash prediction method for the Highway Safety Manual
- Others' research? ( See email(s) below for those not attending and sending via email)

## **15. Hot issues?**

*This was not discussed due to time constraints. If an update is available, please provide to Gene.*

## **16. Old business**

*This was not discussed due to time constraints. I don't believe we have any pressing "old business". If anyone believes we do, please let Gene know.*

## **17. New or other business**

*This was not discussed due to time constraints. Members are encouraged to suggest new items for the next meeting at any time or even a topic for an intermediate, short web meeting, if appropriate..*

**18. Close - Next "face" Meeting in D.C. January 2014**

*Plugs were also made for the ITE roundabout tour and sessions and the ITE committee meeting.*

**Minutes taken and typed by Alek Pochowski**

## **Attachment #1 – Updates from Lee Rodegerdts provided via e-mail**

Informational Guide Update subcommittee: This effort is on hold for the time being, with the focus right now on generating the new content through various FHWA, NCHRP, and state-funded projects. My anticipation is that ~2020 is about the right time for the update, knowing that some of the content will be in practice before then through other venues (FHWA and NCHRP research reports, HCM, etc.). This project should therefore start around 2017-2018, which means a research problem statement for NCHRP funding would need to be ready to go by September 2016.

HCQS update: The HCQS Committee is looking at developing a major update to the HCM, likely in the 2015 timeframe. The majority of the effort is to integrate new work from SHRP2 on reliability and from FHWA on active traffic and demand management. However, it is likely that this update will also include the research work from NCHRP 03-100 for evaluating roundabouts on urban streets and from FHWA TOPR34 on the update roundabout capacity model.

NCUTCD: Gene Hawkins should be designated to give this update, but the essence is that effort is underway to issue a new MUTCD around 2016, subject to the outcomes of the strategic planning effort underway.

### Research updates

- FHWA TOPR34: Project continues. Jeff or Hillary can give a more detailed update.
- NCHRP 03-100: Draft final report is in panel hands for review and approval.
- NCHRP 03-110: Project is just beginning. Product will be a methodology and tool to evaluating life cycle costs to compare various intersection configurations.
- NCHRP 03-78b: Project is just beginning. Product will be guidelines on implementing accessible crossings at roundabouts and channelized turn lanes.

## **Attachment #2 – Updates on Canada from Keith Boddy provided via e-mail**

### *TAC Canadian Roundabout Design Guide*

The Transportation Association of Canada (TAC) has embarked on the creation of the first Canadian Roundabout Design Guide. As a funded project through the Geometric Design Standing Committee, this guide will be a comprehensive resource for roundabout designers across Canada to promote consistency of design and overall approach to roundabout implementation. The guide will be a companion to the Canadian Geometric Design Guide, which is also undergoing a rewrite, to be completed in the next years.

A team formed by Hatch Mott Macdonald, Boulevard Transportation Group and Kittelson and Associates was recently awarded the project. Work is to begin in earnest at the Annual Conference being held this year in Winnipeg September 22-25, 2013. The project sponsors include members from various Provincial, Territorial and Municipal governments as well as other industry members who are interested in Roundabouts.

The project schedule results in the delivery of the Canadian Roundabout Design Guide by 2015. We have a motivated Project Steering Committee and Consulting team and everyone involved is looking forward to having solid guidance available for the Canadian context of Roundabout design.

### *Provincial Efforts*

Current estimates of roundabout numbers are vague as we do not currently have a good database of installations. There are approximately 250-300 roundabouts in the country and the number is increasing every year. Through the Joint Roundabout Subcommittee with TAC, we have been trying to monitor to the progress of Roundabout implementation in the country and offer the following highlights from a few jurisdictions.

- Nova Scotia (NS) currently has 20 roundabouts on NS jurisdiction roadways, 19 of these are at interchanges. The province has many roundabouts in the planning stages and sees roundabouts as a tool to be used as appropriate for a variety of challenges.
- British Columbia (BC) currently has 25 roundabouts on BC MoT jurisdiction roadways, eleven of these are at interchanges. There are 9 upcoming roundabouts either being designed or under construction. Two of these will be at interchanges.
- Alberta (AB) completed one roundabout last year at Cold Lake and one has been tendered this year at Villeneuve. Alberta Transportation is now constrained as capital funding has been restricted and they are not building many new roundabouts. There are many in the planning and design stages but no more in construction.
- Prince Edward Island (PEI) currently has 9 roundabouts, 5 of which are in the provincial capital of Charlottetown. There are a number of upcoming roundabouts either being designed or under construction.
- Other provinces and cities around Canada are progressing with roundabout installation as well; New Brunswick and Newfoundland have a number of projects underway including roundabouts. Quebec and Ontario are big proponents of roundabouts updated numbers were not received from their representatives in time for this report.

### *Canadian Challenges*

A number of challenges have been identified for Canadian practitioners and will form part of our Design Guide preparation, a few key items are listed below.

- Reluctance with accepting roundabouts versus a traffic signal for intersection upgrades

- Accommodating heavy haul trucks with extraordinary loads on primary highways (e.g. up to 60 m long and/or up to 7.2 m wide)
- Accommodating oversize vehicles (i.e. typically somewhat larger than a WB-20 or 26 m long B-Train) on secondary highways
- Consultants' understanding of how to design effective roundabouts, even with the availability of detailed design manuals, is a challenge. The subtleties of effective roundabout design are not translated well by manuals.
- The concept of Entry Path Overlap is still an issue for designers to understand in terms of developing their entry geometry with multilane roundabouts.
- The use of approach curves on roundabouts which have been proposed on higher speed facilities. The issue arises where the roundabout is situated on two-lane-two-way highway, on a heavy haul route with raised channelization on the approach, some of the expected extraordinary loads could not navigate it without driving on the curb.

#### *Future Research Considerations*

Various Canadian jurisdictions are investigating treatments for different aspects of roundabouts, further review and research will be required for the following items.

- Comprehensive signage and line painting standards have yet to be published in Canada, the next revision of the Canadian MUTCD will include roundabout information
- The use of Rectangular Rapid Flash Beacons (RRFB) is being examined in BC to assist with crossings, especially elementary aged children to cross the legs of the roundabout.
- BC is looking into developing policy for utilizing the Pedestrian Hybrid Beacon, which will aid us if dealing with visually impacted pedestrians.
- The Region of Waterloo in Ontario is working closely with Accessibility concerns to establish an array of tools for implementation when situations and context warrant.
- The implementation of truncated domes in the Canadian context is being discussed and evaluated.
- Speed tables for pedestrian crossings are also being investigated for use as appropriate.
- Alberta is actively involved in searching for practical ways to reduce the capital cost of roundabouts without impacting the safety or operations.
- Alberta is considering allowing oversized loads to traverse the central island so as to allow for smaller dimensions to be used throughout. This would require a highly visible, crash-worthy removable object to be placed in the centre island.

**Attachment #3 – Update on U.S. Access Board from Melissa Anderson provided via e-mail**

The Access Board staff is still finalizing its analysis of all of the comments and working on draft text for the Board's approval. I believe we will have the final text before the end of the year, but there are other government agency reviews and approval processes to go through and the cost analysis has to make it through the Office of Management and Budget. We have also been working with the Department of Transportation and the Department of Justice to help make the adoption to standards go as smoothly as possible.

#### Attachment #4 – Updates from Bastian Schroeder

I will not be able to attend the ITE Annual Meeting due to more travel for other projects. Here is my update on the two items you requested (and two additional ones of interest).

1. **NCHRP Project 3-78b** is underway and is in the process of developing "Guidelines for the Application of Crossing Solutions at Roundabouts and Channelized Turn Lanes (CTLs) to Assist Pedestrians with Vision Disabilities". The project officially started on 6/12/2013 and will run through 6/11/2015. As one of the first tasks, the team has assembled an online survey to identify roundabouts and intersections with CTLs with existing accessibility-enhancing treatments. This survey will be distributed via various list-serves probably in advance of the ITE Annual Meeting - it would be great to get input from ANB75 on any sites they are familiar with. The research team includes ITRE @ N.C. State, Accessible Design for the Blind, and Kittelson and Associates, Inc. More information is available here:  
<http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3389>
2. **FHWA TOPR34** is ongoing and evaluating the accessibility benefits of Rectangular Rapid-Flashing Beacons (RRFBS) for multi-lane roundabouts. The research team has currently studied eight approaches at five roundabouts in four states (Springfield, OR, Olympia, WA, Carmel, IN, and Oshkosh, WI), and is planning on studying three additional roundabouts in Davidson, NC (2) and Albany, NY this fall. Final results are expected in early 2014. The research team includes ITRE @ N.C. State, Accessible Design for the Blind, Virginia Tech Transportation Institute, and Kittelson and Associates, Inc.
3. A project developing **Pedestrian-Vehicle Interaction Algorithms for Microsimulation** funded by the STRIDE Center at the University of Florida is ongoing. The project studies interaction at mid-block pedestrian crossings (not roundabouts) at 30 crosswalks across three states (North Carolina, Florida, and Alabama) with results expected in the spring 2014. The algorithms will be directly incorporated into CORSIM simulation, but will further be available to other software developers. While not directly observed at roundabouts, the resulting algorithms and models may be adaptable to roundabout pedestrian modeling. The research team includes ITRE @ N.C. State, University of Florida, and University of Alabama at Birmingham.
4. **Committee Coordination:**
  - o I have attached an updated spreadsheet with 19 Partnering Committees, and an inventory of who of the ANB75 members is also a member or friend of these other committees.
  - o The good news is that we have representation on 18 of these 19 committees, with the only "blank" being AND30 (Simulation and Measurement of Vehicle and Operator Performance), which may not be the most critical one. However, we only have identified "official" liaisons for 3 of these committees.
  - o I would like to get a commitment from folks for the other 15 partnering committees to be sure that we are represented. Can you please ask those in the room if they would be willing to act as an official liaison?
  - o The key responsibilities of an "official liaison" from my perspective are:
    1. Regularly attend meetings of ANB75 and the partnering committee
    2. Provide briefing at ANB75 meeting on activities of the other committee
    3. Provide briefing at partnering committee on activities and interests of ANB75
    4. Identify opportunities for collaboration on research, conferences, webinars, etc. between the committee.

I hope that this answers the various items, but please let me know if you have any clarifying questions. My apologies again for not sending this earlier ... I am still hoping that things will go back to normal soon - and that the current state hasn't become the new normal ;-)

Regards,  
Bastian