

# NCUTCD BTC meeting, June 28, 2017

## Pittsburgh, PA

Minutes prepared by John S. Allen, edited by BTC

### ***Attendance***

#### **BTC members:**

Richard Moeur, Chair	Dwight Kingsbury
John Allen, Secretary	Rock Miller
Patrick Baxter	Kirk Roberts
DeWayne Carver	John Schubert
Dongho Chang	Ryan Snyder
Mike Cynecki	Mighk Wilson
Josh DeBruyn	Ron van Houten
Bill DeSantis	

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#### **Guests:**

Dave Kirschner, FHWA MUTCD team (after break)  
Gary Madine, LCI  
Josh Mehlem, Fox Tuttle Hernandez  
Amanda Purcell, City of Pittsburgh  
Luciano Rabito, Howard Stein Hudson  
Craig Schoenberg, Toole Design Group  
Gary Smart, County of Santa Barbara, California  
Kevin Sylvester, FHWA MUTCD team (near end of meeting)

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Richard Moeur called the meeting to order at 1:15 PM

### ***BTC business***

Moeur retired from Arizona DOT March 10. The Board of Directors will vote at 4 PM and recommend Bill DeSantis as Richard's successor as chairman of the BTC. DeSantis will assume chair duties after this meeting. Richard intends to remain as a committee technical member and will have retired public employee status.

June 2016 minutes are not yet posted; Moeur will address this and he will also review the January minutes.

There are prospective members at the meeting: do they want to be members? They must attend at least one meeting previous to the one at which their membership is approved. Bylaws require a minimum 50% public-agency or public-university membership. There is a waiting list for non-government members. Gary Smart becomes a member automatically as he was appointed to Council by a sponsor organization. The Board will vote on Lou Rabito tonight. Rabito worked 25

years at Massachusetts DOT and therefore qualifies as a government member, though he is now working in the private sector.

## ***Reports on the morning's meetings***

### **Edit Committee**

BTC members at the Edit Committee meeting included Dwight Kingsbury, Bill DeSantis and Rock Miller.

17A-Edit-01: EC Ballot Item regarding changes to Section 1A.10 generated substantial opposing comments from the BTC and sponsors. The objection had been proposed Guidance statements recommending automatic cancellation of experiment approvals if reports are not submitted. DeSantis discussed issues of cancellation and notice of cancellation of Requests to Experiment (RTEs) in the edit committee. The EC members developed a revised proposal including changing the Guidance statement for automatic cancellation to a Support statement. BTC members concurred with the revised language.

DOT Docket No. OST-2017-0057: Transportation Infrastructure Review of Policy, Guidance and Regulation: USDOT issued a request for comments from stakeholders regarding federal policies and/or regulations that impeded implementation of transportation infrastructure. EC was considering drafting a response on behalf of the National Committee noting the delay to a Manual update. The administration seeks to have two regulations rescinded for each new one. (The MUTCD is a single regulation for this purpose.) The Feds also want to subject every new proposed regulatory provision to a detailed cost-benefit analysis. There will be discussions as to whether this is tenable or feasible. There are currently 187 proposals for recommended changes to the MUTCD submitted to FHWA. There is a slight possibility that the MUTCD could be eliminated as a regulation. Could some private organization (or combination thereof) maintain it as a (non-regulatory) document? The example of the Uniform Vehicle Code is not inspiring. We are going to continue to develop new BTC proposals for inclusion in the MUTCD in the future. The EC ultimately recommended that the NC not submit a response.

### **Electronic Signs Task Force**

Kirk Roberts reported on the Electronic Signs Task Force: There could be a possibility for dynamic signs which could be more effective. Leaders from the Electronic Signs Task Force will be visiting the BTC on Thursday afternoon.

### **Connected and Autonomous Vehicles Task Force**

Snyder attended the Connected and Automated Vehicle (CAV) Task Force, which started by searching for its optimal purpose: what needs to be done. There was an instructive presentation from the State of Michigan and 3M and another by a Carnegie-Mellon professor. Take-away: under normal conditions, autonomous vehicles work well, but what if conditions are unpredictable? Snyder asked us what he would like the committee to do. The Task Force will consolidate the information collected in January from the technical committees and is working on creating accepted definitions.

Schubert: We have a good intuitive understanding of existing traffic-control devices, but not with an invention in progress. Uber did not show up for the task force meeting, though Pittsburgh is its test city. An advantage of the NCUTCD with 300+ members is that each of us sees things

others do not. New features for the AV environment, for example QR codes, would need to be addressed as TCDs. None of the computer stuff will be uniform unless computer guys make it so.

Snyder: The professor discussed transmitters alongside the road for DSRC (Dedicated short-range communications) etc.

Carver: How will an autonomous vehicle know that a lane is going away?

Snyder: vehicles are being trained to work in today's environment: add redundancy as a backup. Their sensing is already redundant.

Schubert: The first CAV meeting was 1 1/2 years ago. There are 2 camps: the Detroit camp says make better TCDs, and the Silicon Valley camp says that our devices are going to be so smart, we don't need that.

Snyder: The vehicles are trained to recognize and avoid bicycles, but what about unexpected and unpredictable behaviors? Bicycles and pedestrians can also contribute to the communication with a device? Van Houten: people will resist. From another perspective: screening crashes (cyclist momentarily screened by an intermediate vehicle) can be very injurious but vehicles could learn how to avoid them. Snyder: That is what designers are working on.

Allen: if bicyclists operate according to the rules of the road, motorists will avoid them. But deer, trash cans etc. will not be instrumented.

Snyder: cars can operate with less headway, freeing up street space for bike lanes, etc.

### ***Railroad Crossing Skew Warning and Bicycle Overtaking (Passing Clearance) Signing***

Turner-Fairbank Highway Research Center has essentially completed research on the railroad crossing warning sign and overtaking-clearance signs but has not yet released the final report. We can't take action on these proposed signs until the report is released.

### ***Bicycle repair Sign***

Van Houten presented results of his sign comprehension project, presenting images of four signs to students and asking them what the signs indicate. A bicycle symbol above the word "repair" got 94% correct; a wrench below a bicycle got 86%. Dero products have both the wrench and the text. The BTC voted to prefer the all-symbol sign, 10 votes; a bicycle with the word "REPAIR" got 4 votes.

Moeur: FHWA guidelines are to prefer use of symbol signs (to word and part-word signs) as much as practical. At break, Moeur will ask Tom Honich about presenting this proposal to GMITC for review and approval on Thursday; with GMITC's approval, we would send the proposal to sponsors in the fall 2017 cycle.

Sizes for service signs intended for viewing solely by bicyclists may be 12 x 12 inches, but service signs intended for viewing by other road users, not only bicyclists, must be at least 18 x 18 inches.

## ***R10-15b and UVC, Bicycle Signals and Bicycles in Crosswalks***

John Fisher, Signals TC, has questioned a proposal approved in 2014 for signs requiring that turning vehicles yield to bicycles or to both bicycles and pedestrians. It is Mr. Fisher's opinion that a yield-to-bikes-when-turning sign would change the longstanding meaning of the circular green in the MUTCD and the UVC Rules of the Road.

Moeur was concerned with the effectiveness of the sign, but the NCUTCD Council approved it. Fisher believes either an MUTCD or UVC change is needed.

Is a bicycle being ridden in a crosswalk a vehicle?

Chang: The UVC is archaic. Any time you are turning, you have to yield (to any parallel through traffic). You want to be able to use that sign.

Allen: There are operational issues as well as UVC issues. Connected/automated vehicles will avoid colliding with bicyclists as long as some sensor on the vehicle has a line of sight and there is sufficient reaction time. This reduces concern over overtaking collisions but also over bicyclists in drivers' blind spots. There are also travel-time issues.

DeSantis: The statement from Fisher notes "vehicles don't have to yield to bikes because bikes are also vehicles" as defined by the MUTCD. But a bike lane is also a preferential use lane, thus lane rules apply. So in fact vehicles are required to yield to cyclists in a bike lane. Any turning vehicle has to so yield, so Fisher's statement and argument aren't supported. Perhaps we need to revise the R1-015a text.

Cynecki: There is a liability risk if a jurisdiction doesn't use the sign, once it becomes the norm.

Miller: the sign has important applications and needs to be in the MUTCD. The UVC is archaic and should not be the reason to not adopt a needed sign.

Van Houten: See MUTCD sections 9C6, 9C5: the sign will apply when entering a right-turn lane or crossing a bike lane.

Mehlem: There is another sign: right turn lane begins, yield to bikes.

Snyder: The sign could be applied elsewhere.

Moeur listed several BTC response comments, emailed Fisher and is awaiting a response.

## ***Review of proposals and sponsor comments***

DeSantis took over at 3:55 PM as Moeur left for the NCUTCD Board of Directors meeting. The BTC took up two agenda items which had been scheduled for Thursday's session. (See Moeur's e-mail to the BTC of 5/29/2017, <http://www.ncutcdbtc.org/future/btcpriority.pdf> and <http://www.ncutcd.org/Pages/SponsorComments/comments-201705.aspx> )

### **17A-BIK-01 - Raised Devices and Bike Lanes**

The BTC reviewed sponsor comments on removal of raised-devices prohibitions for bike lane buffers. There had been a number of minor changes to the proposal. (Document should be

posted.) The most significant comments noted that language must be added to require protected bike signal phases if the bike lane is to be placed to the right of a right-turn-only lane.

Someone: A big federally funded study on safety of on-street separated bikeways is getting under way.

The BTC moved to present a slightly revised proposal to the full committee on Thursday.

### **17A-BIK-02 - Speed Terminology in Part 9**

An EC Task Force completed a draft proposal to achieve consistency on the use of the term “speed” through all Parts of the Manual. It recommended two changes in part 9. It appears that BTC is the only TC to have addressed this so far with its own draft proposal. The proposed changes are editorial and do not change the speed thresholds for bike TCDs. The vague terms “low speed” and “high speed” are used in several parts but not defined. Allen: What kind of speed: posted speed limit, design speed, 85% speed? DeSantis: The Manual is silent on that and (because clarifying use of the terms would raise substantive, not purely editorial issues) the EC has not addressed that issue.

The BTC moved to present a slightly revised proposal that is fully consistent with the EC Task Force suggestions to the full Council for approval on Friday.

### ***Adjournment***

The meeting adjourned at 5 PM to make room for the Pedestrian Task Force.

# **NCUTCD BTC meeting, June 29, 2017**

## **Pittsburgh, PA**

Minutes prepared by John S. Allen, edited by BTC

### ***Attendance***

#### **BTC members:**

Richard Moeur, Chair	Rock Miller
John Allen, Secretary	Luciano Rabito
Patrick Baxter	Kirk Roberts
DeWayne Carver	John Schubert
Dongho Chang	Gary Smart
Mike Cynecki	Ryan Snyder
Josh DeBruyn	Mighk Wilson
Bill DeSantis	Ron van Houten
Dwight Kingsbury	

#### **Guests:**

Joanne Conrad, TAPCO, and Electronic Signs Task Force  
Dave Kirschner, FHWA MUTCD team  
Gary Madine, LCI  
Amanda Purcell, City of Pittsburgh  
Craig Schoenberg, Toole Design Group

Richard Moeur was presenting to GMITC. Bill DeSantis called the meeting to order at 1:15 PM

### ***BTC business***

Luciano Rabito and Gary Smart were approved and are now Technical Members of the BTC.

### ***Electronic signs***

The Electronic Signs Task Force is seeking input from technical committees. Joanne Conrad from the Task Force led a discussion with the BTC. The Task Force is seeking input on whether Standards, Guidance and Options for electronic and digital TCDs should be in a separate Part or Chapter or be added to existing Parts/Chapters based on intended use. The general opinion of the BTC was that electronic signs should be covered in sections of the MUTCD along with other signs covering the same topics. Some provisions might be in a special section: in particular, technical ones concerning power supplies, reliability and standardization of electronics. There were questions about what specific purposes the signs might serve. Question for continued discussion: are there signs that we should push forward because they would provide better information?

Conrad requested that BTC forward any bike-related ED TCD research needs.

Potential bike-related electronic TCDs were discussed, including:

- Warning of bicyclists entering an intersection
- Warning of bicyclist on a narrow bridge or in a narrow tunnel
- Warning of bicyclists crossing high volume/high speed roadways.

Forward any input to Joanne or Randy McCourt (contact info available through NCUTCD). ED Task Force will provide an additional progress report at the January 2018 meeting.

### ***Discussion of priorities***

The BTC next returned to a discussion of its priorities. The priority list is updated periodically at <http://www.ncutcdbtc.org/future/btcpriority.pdf>

The first topic was bicycle signal phasing and turn phasing to address turning and other vehicle/bicycle conflicts at intersections. This has effects involving the MUTCD, ADA and UVC.

In connection with definitions in part 1 of the MUTCD there was a discussion of the UVC updating process, which is not moving forward at present. This needs to be addressed at the level of the NCUTCD Council. MUTCD and traffic law must be consistent with one another and this is not possible for newer types of traffic-control installations without changes to the UVC, as a model for state traffic laws.

The discussion had not covered all topics when Moeur returned.

### ***Bicycle repair signs***

Moeur returned from meeting with the GMITC and discussed the proposal for repair signage. The GMITC had some concerns: agencies should develop a policy on the use of general services signs on bikeways.

GMITC agrees that bicycle repair signing could be useful, but still the biggest concern is that if this sign is included in Part 9, it will be viewed as the first in a series of service signs for different types of vehicles. 17 GMITC members voted for the proposal, 9 abstained, 1 was opposed, short of the 2/3 majority needed. Moeur recommends tabling the proposal.

Miller: Consequence will be 50 different types of signs.

Moeur reported that Tom Honich of GMITC agreed to put together a working group for the bicycle repair sign. Moeur and Michael Jackson are to be on the working group.

Cynecki volunteered to address the issue of "2 for 1" and "revenue-neutral" requirements as outlined in the current Administration's guidelines for rulemaking.

### ***Change Lanes to Pass Bicycles plaque***

This plaque is intended for use under R4-11 Bicycles May Use Full Lane signs. Getting agreement from the Regulatory and Warning Signs TC on this is difficult. We could get concurrence if we can develop a robust-enough proposal. There would be a restriction that it be covered by same restrictions as the sign with which it is associated. There had been a plan to put a proposal together after the January meeting, but there was no follow-through. We need a volunteer to work on this issue.

### ***Discussion of priorities, continued***

Again, see the priority list.

Discussion addressed:

- Improved Guidance for bike signal warrants. Miller has volunteered to address this
- New bicycle-related definitions to be added to the Manual

- Incorporating Standards, Guidance and Options for bike related TCDs at protected intersections to compliment the new AASHTO Bike Guide and current SBL Guides. This issue needs a BTC volunteer.
- Wayfinding signs and bicyclists. Allen brought up an issue with the East Coast Greenway's using a nonstandard (small) sign. DeSantis says there is enough about this topic in MUTCD section 2D-50. Work on this is not a heavy lift: just an adaptation of auto wayfinding signs. Josh DeBruyn offered to work on this with Bill Schultheiss.
- Bicycle parking plaque. Lower its priority.
- Advanced placement distances for bicycle warning signs: this is ongoing.
- Connected and automated vehicles: This awaits task-force action.
- Technical guidance on shared lane marking use in right turn only lanes. DeSantis noted figures and text removed from the proposal approved at the January 2017 meeting over concerns/comments about the proposed figures. Snyder is to forward sketches to DeSantis for drafting a shared-road plaque.
- Sidepath guidance, bicycle community wayfinding, signal lane control signs status will be updated on the new priority list.
- Colored bike lanes, how do they incorporate IA-14?
- Snyder mentioned SLMs and high-speed streets without road diets or bike lanes, listed in the priority list as SLM Phase 2b

### ***Tribute to Richard Moeur***

The BTC paid its respects to retiring Chair Richard Moeur with a sing-along of their 1960 hit "Walk, Don't Run". New lyrics had been composed for the occasion by BTC member John Allen. To avoid further embarrassment, the lyrics will not be repeated here. Then incoming chair Bill DeSantis presented a record of service for which former BTC member John LaPlante had supplied numerous photos, listing Richard's accomplishments with the BTC over the years. DeSantis displayed the booklet page by page on the screen at the front of the room. The photos brought forward some recollections from Richard, who in the end formally concluded the transition to the new "follicularly challenged" chair.

### ***Adjournment***

The meeting adjourned early, around 4:30 PM, thanks to some of the agenda's having been addressed on the previous day.

Next meeting will be held in Arlington, Virginia, January 3-5, and the summer 2018 meeting will be June 20-22 at the Renaissance Marriott Stapleton in Denver, Colorado, a couple days before the ITE meeting in Keystone, Colorado.