

# **NCUTCD Bicycle Technical Committee, Meeting of June 22, 2011, Boise Idaho**

Minutes prepared by John Allen, December 6, 2011

## ***Attendance***

### **BTC members (10 in person and 2 by Skype connection)**

Richard Moeur, Chair  
John Ciccarelli  
Bill Fox  
David Gleason  
Bill DeSantis  
Michelle DeRobertis (spent some time at Signals TC)  
John LaPlante  
Dwight Kingsbury  
Bill Schultheiss  
Craig Williams (arrived 1:30)  
John Allen, Secretary (by Skype connection)  
Mike Colety (by Skype connection)

### **Guests:**

Roland Stanger, Safety Operations Engineer, FHWA  
Renee Hurtado, Transportation Engineer, DKS Associates Portland, Oregon  
Dan Lang, Flint Trading (prospective BTC member)

## ***Call to Order***

Chair Richard Moeur called the meeting to order at 1:12 PM.

## ***Minutes of January, 2011 meeting***

Everybody got to see the minutes and they are posted on the BTC site at <http://members.cox.net/ncutcdbtc/agenda/min0111.pdf>

## ***A Caution***

Moeur: We are very active, and he is pleased with that but when talking about stuff we are dealing with, make it clear that you are speaking on your own behalf unless you are referring to a published position.

## ***Membership***

We have 10 government and 9 non-government members. According to NCUTCD Bylaws, we must have 50% + 1 government members, and so we cannot add any more non-government members at this time. A government member is defined as a government employee, or was for twenty years, or employed by a public university. Prospective members must attend at least one meeting. Craig Williams joined in January, and is a government member as he worked for over 20 years for the Illinois DOT. Ted Curtis, who works for the City of Columbia Missouri, and, Dan Lang, Flint Trading, are pending. We are holding off on Ted Curtis because he could not attend this meeting, though he attended the January meeting. Moeur will talk to the Board of Directors about possibly approving his membership. Ryan Snyder is a

potential non-government member. He is an independent consultant in the Los Angeles area. Moeur was approached yesterday by another person in government.

## **AASHTO Bicycle Guide**

[This item updated as of December 6, 2011] The AASHTO guide is very close to going to ballot; the last conference call about it was a couple of weeks ago. All critical issues in the 1000+ state comments have been addressed; the Guide will go to the AASHTO Subcommittee for Design for balloting, and then to the Standing Committee on Highways for final approval. The only significant addition to last year's version will be language on colored bike lanes, as they now have interim approval from the FHWA. Publication will likely not occur until mid-2012 at the earliest.

## **Sponsor comments on current proposals.**

There may not be a quorum at the General Council Friday, so we should go through these today.

For details of the proposals we discussed, see our spring 2011 proposals to sponsors at <http://members.cox.net/ncutcdbtc/sponsors.html> and the Excel spreadsheet **Part9Standards-Master.xls** sent to the BTC by Bill DeSantis in an e-mail on May 10. (Revised version from showing resolutions is **Part9Standards-Jul11.xls**, also copied in sections in the minutes of this meeting and the next day's meeting.) (Is it online?)

### Modification to markings for Bike Lanes, Section 9C.04,

- (Note, this is an updated version of the document discussed at the meeting, as the proposal was approved by the General Council).
- (See rows 27-30 in **Part9StandardsJul11.xls**, also in minutes of June 23 meeting.)
- 9C.04 refers only to longitudinal markings; proposed change also aligns with 3C.01. There were a number of comments. The BTC wanted no change, and the proposal remains unchanged (and intended as a standard).

(DeRobertis left 1:45 to show the Signals Technical Committee the video on the Davis bicycle signal.)

(DeRobertis returned at 1:52. She had a generally positive report but there had been a technical problem and she had not been able to show the video.)

### Redesign of M1-8 & M1-8a Bicycle Route Marker

- (Note, the linked document is an updated version of the one discussed at the meeting, as the proposal has been approved by the General Council).
- (MUTCD Section 9B.21 P2 -- See row 16 in **Part9StandardsJul11.xls**, also in minutes of June 23 meeting.)
- This was for a non-oval sign, adding a pictograph and word legends. 33 states commented, 1 dissented, and one offered no comment. Also from IBTTA there were concerns about changing out signs immediately, but actually new signs will go up as old ones wear out or in new corridors. We have addressed this if we define the compliance date as the service life of the sign.
- From ASCE, there were questions about the definition of a bike route. Do we need to add one to the MUTCD? We decided no. "Pathway" is in definition # 135 in the MUTCD and includes multi-use paths but not sidewalks. "Greenway" is not defined. A greenway could be defined as a pathway.
- An ASCE concern was answered: colors allowed for the pictograph could be left to engineering judgment.

- IMSA had a comment about wanting a rectangular sign. LaPlante: there's no problem with that. Moeur: not all options may make it into the final manual.
- Do we want to modify our proposal? No, but we may want to get back with an explanation. They don't have to call it an M1-8a. LaPlante: if it's an M1-8a, it's got to have a route designation, which could be a number.
- ITE comment: does the multiplicity of series bulk the manual unnecessarily?
- The proposal does show all the reasonable feasible options – generic round, state-level, word legend, pictograph in each of 2 different sizes. FHWA might put one of those in Part 9 and put the others in the standard highway signs manual. LaPlante: leave it to FHWA. Moeur: important to give the dimensions of subelements, otherwise they make mistakes. Ciccarelli: we could put the 4 options on a single table with a concise table of subdimensions. Moeur – make that suggestion to FHWA.
- Another comment: Should page 3, lines 14-21 be a standard or guidance?
- Moeur: we are trying to come up with a uniform format.
- Ciccarelli: it's got to say bike somehow, or if they do their own sign and it doesn't, then we get modal icons for every allowed mode.
- LaPlante: one county in Illinois has a pathway system, so called. Schultheiss: paths are called greenways in Colorado. Moeur: reflectorization is already covered in part 9A. We can leave it and if anyone complains, say that. So it will all be guidance. We don't agree to delete the sign.
- Proposal was changed (in yellow highlighting in revised version now posted) – “shall” changed to “should” and we to rid of “greenway” and “retroreflectorized”, though the design of the signs themselves was not changed.

Moeur: Research committee is to meet Thursday at 1:45, and give status of research proposals.

#### [Revised Use of Selective Exclusion Signs](#)

- (Note, this is an updated version of the document discussed at the meeting, as the proposal was approved by the General Council).
- (This proposal affects Section 2B.39 and relates to Section 9B.09, see row 11 in **Part9StandardsJul11.xls**, also in minutes of June 23 meeting -- the BTC decided that Section 9B.09 is redundant and could be deleted).
- Moeur: Do we change the wording, and eliminate “if used”, to avoid confusion? Is it necessary to put up signs everywhere bicyclists are prohibited, or not? If no prohibition is shown, can the bicyclist reasonably assume that there is a safe path of travel?
- LaPlante: many states don't post these signs, or speed limit signs, and there are other blanket regulations. There's no practical problem that requires a state to label every ramp, and many do not. Guidance is on design and location, not on whether used. If you take out “if used,” you remove that option. In several western states, Rockies and west, bicycles are allowed on Interstates by default. We are removing “if used”.
- What about other users who are not bicyclists or pedestrians...the issue is that there must be a prohibition for the sign to be installed.
- Sections 1A.02 and 1A.04 (?) do not cover this situation, and that is why we need this proposal.
- Ciccarelli: Does the wording “right-hand side of the roadway” in line 43 really apply to the ramp, not the roadway? How do we want it to be interpreted?

- Should we say “entering from the right”? There are few if any locations where a bicyclist would enter from the left. We could go too far with our definition.
- We should change the wording back to include “expressway”, which is clearly defined in the MUTCD.

## ***Report from Signals***

DeRobertis was at the Signals TC meeting as the BTC meeting resumed at 3:20 PM following a break. She returned from Signals at 3:28. Her presentation was generally well received. She described a number of comments. Richard asked to show a DVD of a Davis signal installation to the BTC now, but realized we had no speakers for the audio portion; will try again tomorrow with Moeur’s loudspeakers.

## ***Temporary Traffic Control***

(See Bill Fox’s presentation, which was shown at the meeting (I have this as **Proposed bicycle related Part 6 revisions with TTC comments 6 22 11.pdf**. I am unaware whether this has been posted or e-mailed to the BTC.)

Monday, we finally got comments back from TTC on proposal to add new provisions for bicyclists in work zones.

We recommended a share-the-lane sign or a BMUFL sign. Maryland said that it would never use the BMUFL signs.

We want to keep all these provisions as guidances, not options. TTC recommended a number of changes, which we accepted.

The BTC agreed to Bill Fox’s resolutions of these issues, which need to be presented to the TTC sometime before 1 PM tomorrow. The next step is to work out the details, and then we can take it to sponsors this fall if we get the legwork done. We would have 3 or 4 weeks to put together the details. If sponsors agree, we can send it to them in January 2012. We proposed it, TTC is being asked to endorse it, looks as though it will, and we’re close to having a proposal.

## ***Part 9 Action and Guidance***

[Update as of October, 2011]

States cannot go back to the 2003 MUTCD. All states will be required to adopt the 2009 MUTCD (intact, with a state supplement, or as a state-specific manual) by January 15, 2012. The Congressional bill hasn’t gone anywhere since it was filed in June. Substantial compliance is defined in 23 CFR 655.603. The rulemaking on definition of Standard and engineering judgment began after the June meeting (opened August 2, closed October 3).

## ***Part 9 Revisions***

The committee reviewed the spreadsheet document **Part9Standards-Master.xls**, sent to the BTC by Bill DeSantis in an e-mail on May 10.

## ***Adjournment***

The meeting adjourned at 4:56 PM. Will reconvene at 1 PM tomorrow.

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John Ciccarelli  
Bill Fox  
David Gleason  
Bill DeSantis  
Michelle DeRobertis  
John LaPlante (until meeting break)  
Dwight Kingsbury  
Bill Schultheiss (left 5:40)  
Craig Williams (arrived 1:30)  
John Allen (by Skype connection)  
Mike Colety (by Skype connection)

#### **Guests:**

Roland Stanger, Safety Operations Engineer, FHWA  
Renee Hurtado, Transportation Engineer, DKS Associates Portland, Oregon  
Lance Johnson, FHWA Idaho  
Dan Lang, Flint Trading (prospective BTC member)  
Paul Wejciechowski, CHZM Hill, Inc., St. Louis Missouri

### ***Call to Order***

Chair Richard Moeur called the meeting to order at 1:05 PM,

### ***Report on General Session***

All 3 of our proposals were approved in the general session, unanimously.

### ***Davis Bicycle Signal video***

The Davis bicycle signal head video was shown. It is now online at  
<http://www.youtube.com/watch?v=JG05y2c7i9s>

(John Allen has also posted links to the research report and a handout about the Davis signal heads project at [http://john-s-allen.com/research/davis\\_studies/index.htm](http://john-s-allen.com/research/davis_studies/index.htm))

Michelle DeRobertis described issues with the installation as an experiment shown in the video e.g., that the nose of a median was cut back at the same time the signals were installed.

Bill Schultheiss is working on his bicycle-signal proposal. John LaPlante remarked that it would be hard to make a signal on a cycle track invisible to motorists. One in Portland on Williams is on a pole, not a mast, and louvered. Portland State University is pursuing research along with Oregon DOT. Instead of focusing on bicyclist compliance, signal siting and visibility are issues. A task force has been set up (in the BTC? (Members?))

## **Size of the MUTCD**

(In this connection, see an e-mail which Richard Moeur sent to the BTC on May 26.)

Gene Hawkins, Chair of the Markings Technical Committee, says that the MUTCD is getting too large. Could any content be moved to a different book? The BTC already did that with Part 9, which is almost a template for what might be done – all of the operational details are in the AASHTO Guide. Are we where we need to be? Does anything need to move out of Part 9?

Schultheiss: didn't they want to strip it down just standards?

LaPlante: that may be one option. But they need some kind of support. Some devices are just options.

Moeur: The BMUFL sign is one example. The General Council wants a bullet list.

DeRobertis: A lot of what we have is figures. Some are duplicated in other sections.

Moeur: Agencies and practitioners can use the NACTO Urban Bikeway Design Guide - but this could be problematic if the content keeps changing. (Note: NACTO has partially addressed this by publishing PDF and print versions of the UBDG material as of earlier this year).

Schultheiss likes the MUTCD as it is.

Moeur: Putting figures separately saves on space. He has a copy of the Mexican MUTCD; it uses a different layout which saves space.

Kingsbury: The UK probably has as much signing and marking guidance as MUTCD, but "standards" are in a 447-page document called the Traffic Signs Regulations and General Directions, adopted by Parliament, relatively compact, compared to the MUTCD.)

Gleason: If we pull out guidance and options, the presentation gets disjointed.

Moeur: many municipalities may have only one professional engineer and want a cookbook presentation.

LaPlante: So, we might have a big book and a cookbook.

Moeur: There was a new ITE Traffic Control Devices Handbook in 2001 but the next edition will cover new topics – BMUFL, SLM, colored bike lanes etc. [Update: The drafts of chapters were supposed to be ready by August (some chapters did not complete until early October). The actual Handbook likely will not be published until some time in 2012.]

If FHWA doesn't want the MUTCD, AASHTO would take it back.

Example of bloat: Asking for signal pre-emption next to railroad crossings goes into amazing detail, based on the Fox River Grove train/school bus crash. (NTSB report is at <http://tinyurl.com/3zuft8z>.)

Ciccarelli: how much of the problem is because the MUTCD was a print document? It's a packaging issue. Another problem: many on the Council don't know the issues outside their specialty.

Moeur: is working on the Arizona MUTCD Supplement and has to study the MUTCD very closely.

LaPlante: can we downgrade standards and guidances?

Allen: The MUTCD is being thought of as a print document, though it is a Web document, allowing much more flexibility in organization.

Moeur: linking to other documents outside the MUTCD leads to liability concerns.

LaPlante: Maybe the ITE will take on the task?

Moeur: The AASHTO Guide is the quickest way to get information out, but it isn't free. The bike guide got pirated (PDF file from the CD-ROM was posted on the Internet), and electronic versions of newer versions are locked down.

Schultheiss: that is working against AASHTO; people aren't using it as much.

Ciccarelli: We have a learning-curve issue misstep like the one for digital music rights. One thing missing is a micropayment scheme.

DeRobertis: some people don't know that the Standard Highway Signs Manual exists. Why do we have it when we have the MUTCD?

Moeur: many signs in the 2009 MUTCD haven't even been designed yet. We want the MUTCD so the signs manual doesn't screw them up.

LaPlante: summing up, the jury is out on where we are going, but we need to be looking forward, not backward.

And then who would own it? It would be guidance? The AASHTO guide becomes a legal document even though it has no legal standing. The MUTCD has a stronger standing.

Moeur displayed a list of items that could be moved out of Part 9.

Ciccarelli: what are we trying to achieve?

Moeur: Put the MUTCD into 2 or more volumes – only one with official designs would have to go through rulemaking. The other would have details. This makes updating easier.

Ciccarelli can see a third level – local examples. Link from volume 2 to case studies.

DeRobertis: What about ownership and accessibility of v. 2?

Schultheiss: push toward a minimal v. 1 with designs and warrants.

Ciccarelli: there are numbers that can be described using a nomograph rather than tables.

Schultheiss: suggests cuts, the tightest way to draw the line around volume 1. It is probably not one-dimensional either, not a spectrum but a web. We need a command decision as to which decisions are delegated to the states.

Notes on how contents might be split are now displayed on the screen (see file **Part9Standards-Jul11.xls**), which is copied in sections in these Minutes.

### ***Looking at the List of Standards (cont.)***

Bill Schultheiss and Bill DeSantis have recommended changing the language in Section 9B.04 para. 2 to be consistent with Part 2. The 2009 MUTCD has a single section covering intersection right of way.

Moeur: An unintended change in 2003 made it harder to use yield signs. That was corrected in 2009. We could reference Part 2 but that would require additional language about paths. We could go with what is here or table it and fix it once and for all. If we keep punting it, it doesn't get done. Keep a standard, or rework later? FHWA wants a list of standards to drop to guidance. We still need to put together a proposal.

The BTC continued reviewing the list of Standards for possible modification, demotion or removal. The following table, a copy of part of the spreadsheet **Part9Standards-Jul11.xls**, summarizes the discussion.

<b>MUTCD Section/Paragraph</b>	<b>Current Standard</b>	<b>Resolution</b>
Section 9B.26.P3	All object markers shall be retro reflective.	Delete Standard - defined adequately elsewhere

Section 9B.26.P4	On Type 3 object markers, the alternative black and retroreflective yellow stripes shall be sloped down at an angle of 45 degrees toward the side on which traffic is to pass the obstruction.	Delete Standard - design defined elsewhere (SHS)
Section 9C.02.P2	Markings used on bikeways shall be retroreflectorized.	Retain as Standard - combine with paragraph 4
Section 9C.02.P4	The colors, width of lines, patterns of lines, symbols, and arrows used for marking bicycle facilities shall be as defined in Sections 3A.05, 3A.06, and 3B.20.	Retain as Standard - see above
Section 9C.04.P2	Longitudinal pavement markings shall be used to define bicycle lanes.	Retain as Standard - modified in proposal approved by NCUTCD June 2011 (following this meeting)
Section 9C.04.P4	If the bicycle lane symbol marking is used in conjunction with word or arrow messages, it shall precede them.	Deleted in proposal approved by NCUTCD June 2011 (following this meeting)
Section 9C.04 P6	A through bicycle lane shall not be positioned to the right of a right turn only lane or to the left of a left turn only lane.	Retain as Standard - add possible exception in future if bicycle signals approved
Section 9C.04 P12	Bicycle lanes shall not be provided on the circular roadway of a roundabout.	Retain as Standard
Section 9C.07.P3	Shared Lane Markings shall not be used on shoulders or in designated bicycle lanes.	Retain as Standard
Section 9D.02 P1	At installations where visibility-limited signal faces are used, signal faces shall be adjusted so bicyclists for whom the indications are intended can see the signal indications. If the visibility-limited signal faces cannot be aimed to serve the bicyclist, then separate signal faces shall be provided for the bicyclist.	Retain as Standard - possibly move to Part 4?
Section 9D.02.P2	On bikeways, signal timing and actuation shall be reviewed and adjusted to consider the needs of bicyclists.	Although not satisfactory, keep as Standard for now

### ***Temporary Traffic Control for Pathways (cont.)***

Bill Fox – came back from Temporary Traffic control with a positive result, a few minor edits. DeSantis: we owe thanks to David Church from TTC

## **Colored bike lanes**

We came up with a good proposal and sent it to FHWA. FHWA sent out something different, and RCM sent us a link by e-mail. He read the FHWA version. Supplement to other pavement markings. All sorts of variations permitted.

First question about this was whether colored bike boxes are experimental. They are according to FHWA.

We came up with a minor modification to the FHWA wording.

Moeur: suggested starting small but not being too ambitious and possibly being shot down. Keep within boundaries of the interim approval. The better it conforms to the interim approval, the easier to get it approved.

LaPlante: there are many on the National Committee who believe that bicyclists don't belong on the road at all. That worked this morning (?). Richard asked someone to come up with a draft rather than our wordsmithing it together.

If we go to Interim approvals and rulings on the MUTCD site, now we have a complete database of all of them from the BMUFL back to 1978. Revisions to the M1-9 come up on a regular basis. (I need the URL) You can't get to the ATSSA material, though. It's being locked down with passwords.

Pending action items. Question is whether we want to go gung ho on revising the MUTCD figures etc. We will table this given the proposed changes to the MUTCD.

## **Advanced stop lines**

Ciccarelli: doesn't like multi-lane bike boxes but likes single-lane ones well. He has a series of photos of an installation at Scott and Fell streets in San Francisco. (John sent me this but I don't know whether this has been posted for the BTC. I would be willing to post it and will ask John for permission –John Allen).

Allen objected to single-lane bike boxes too due to conflicts on the new green.

Moeur pointed out that only a small percentage of cyclists in the Portland bike-box study moved left into the bike boxes. Researchers were unable to answer whether that was because the first few bicyclists blocked it or because the others didn't choose too.

Ciccarelli suspects that it is situation-specific. At Scott Street at Fell in San Francisco, the bicycle mode share is higher than the motorist mode share. In absence of a car, bicyclists will filter across the travel lane. The bike box there facilitates a left turn.

Moeur described results of the Portland study, with different rates of encroachment and locations of bicyclists in the bike box. Some locations had more conflicts, others fewer. The Portland study had enough bicyclists to come up with significant results. One of the studies, Austin, did not prohibit right turns on red. Without this, there was a very low level of motorist compliance.

Schultheiss: dimensions, depth, elements, applications and signal timing need to be studied and defined.

John Allen's video of a bicycle crosswalk in Phoenix was played, as an extreme example of a bike box-like installation (actually a bicycle crosswalk) with problems (conflicts when approaching the intersection, long delays, low compliance). The video stars a person in a Hawaiian shirt and is online at <http://www.youtube.com/watch?v=h6f5mlPk23Q>.

## **Alternative to Share the Road Signs**

John C. – some communities would not install the BMUFL. Some alternatives...? Supplemental messages – change lanes to pass, pass with care. The existing share-the-road sign does not work.

There are concepts for alternative signs.

John C. would hope to remove the share-the-road plaque from the manual. H thinks that it fails two or three of the five characteristics of an effective traffic control device as shown at the front of the manual. It conveys different messages to different people, and is applied in different situations in different ways.

Moeur – at the AASHTO traffic-control meeting this week, Delaware was not comfortable with BMUFL signs on higher-speed roadways, above 45 mph.

John C. – We should ask whether there is a speed limit on that. An SLM in that context may be advisable.

Preston Tyree's video and the issue of high-speed lanes were mentioned. John Allen sent an e-mail with a link to that video and to photos of variant signs in Massachusetts. The video is at <http://www.youtube.com/watch?v=iHwV0WJgYXY>

An ad-hoc task force chaired by John Ciccarelli and Bill Schultheiss was formed.

Bill Schultheiss left, 5:40 PM.

### ***Information on Experiments***

DeRobertis is to e-mail Bruce Friedman to request final reports on green-colored bike lanes, not currently on the FHWA MUTCD Website. Interim approvals have been issued but reports have not been issued. ATTSa used to handle this task.

Gleason's Chicago study: no report, sorry to say. Chicago has installed a sidepath on Federal way, with stop signs on cross streets, and yield signs on the 7-8 foot wide sidepath. (Dwight Kingsbury: which study was this--colored BLs?)

### ***Adjournment***

The meeting adjourned at 6:08 PM.

### ***Post Adjournment***

Post adjournment, there was a discussion of sending proposals about standards to be removed to the FHWA. There was to be a rulemaking on the definition of standard. This is still in process. We need to develop a proposal for standards changes.

Next meeting is January 18-20, 2012. June is tentatively the week of June 17<sup>th</sup>, in Orlando, Florida. The January 2013 meeting will likely be in early January due to the Presidential inauguration. June 2013, Portland, Maine. 2014 upper Midwest, not yet determined). 2015 back in the West. The summer meetings are determined by the AASHTO Subcommittee on Traffic Engineering, typically 1-3 years in advance.