

Replacement of “Share the Road”

BMUFL Signage Working Group

November 7, 2015

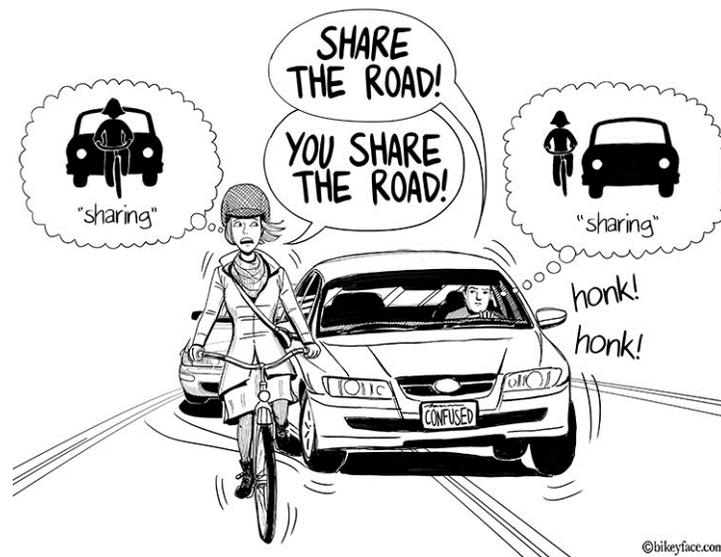
Abstract

A working group of bicycling stakeholders from across North Carolina recommends discontinuing use of the “Share the Road” placard (MUTCD W16-1P). Alternative signage and messaging is recommended, including the Bicycles May Use Full Lane sign (R4-11), lane-centered shared lane markings, or the bicycle warning sign (W-11) by itself. Warrants for signage based in operational considerations and harassment concerns are suggested.

Background

The North Carolina Department of Transportation pioneered use of the “Share the Road” placard in 1987. Its purpose is described by NCDOT as follows: “The sign serves to make motorists aware that bicyclists might be on the road, and that they have a legal right to use the roadway. It is typically placed along roadways with high levels of bicycle usage but relatively hazardous conditions for bicyclists.” These signs are commonly installed where marked travel lanes are too narrow for motorists to pass bicyclists safely within the same lane. Motorists must wait until safe before moving into the adjacent lane to pass bicyclists on such roads. Bicyclists will sometimes ride in the center of a narrow marked lane to deter unsafe same-lane passing and consequently improve their safety.

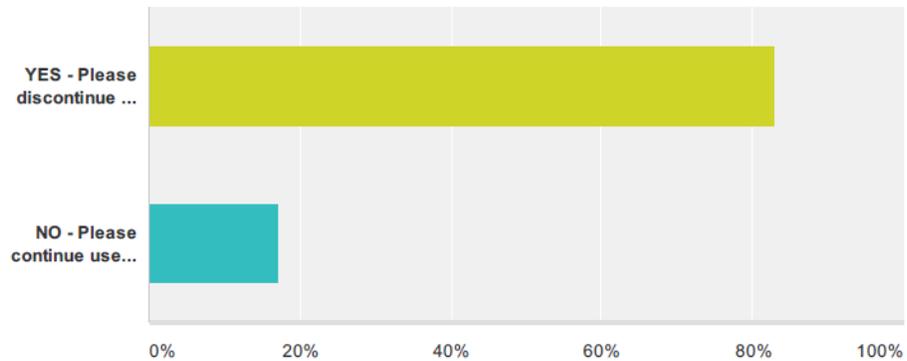
Bicyclists contend that the “Share the Road” text is ambiguous, allowing an alternative interpretation by motorists that bicyclists are expected to stay far enough to the right to share the same travel lane side-by-side with passing motorists. Such close passing is often hazardous to bicyclists, and motorists sometimes harass bicyclists whom they feel are “in their way” as illustrated in this cartoon by Boston-area artist and cyclist “bikeyface” <http://bikeyface.com/> :



In 2013, Delaware DOT cited this ambiguity when it elected to discontinue use of the “Share the Road” text placard in favor of alternatives. <http://www.bikede.org/2014/04/07/why-share-the-road-is-gone/> Following this decision, BikeWalk NC conducted a web survey through social media to measure support for the “Share the Road” placard. 82.85% of the 309 survey respondents favored eliminating the “Share the Road” placard in favor of alternative signing including the “Bicycles May Use Full Lane” placard or the bicycle warning sign by itself.

Q1 Should North Carolina discontinue and phase out use of the W16-1P SHARE THE ROAD text plaque in favor of using the W-11 bicycle warning sign alone and/or alternative signage such as R4-11 BICYCLES MAY USE FULL LANE?

Answered: 309 Skipped: 0



Answer Choices	Responses
YES - Please discontinue use of SHARE THE ROAD plaques in favor of clearer messages about bicyclists' road rights	82.85% 256
NO - Please continue use of the SHARE THE ROAD text plaque.	17.15% 53
Total	309

Research comparing the efficacy of “Share the Road” signs to other traffic control devices for communicating bicyclist’s road rights was recently conducted by George Hess and M. Nils Peterson (summary below, <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0136973>).

Alternative Signage

Alternatives to the “Share the Road” placard are the “Bicycles May Use Full Lane” sign, shared lane markings, and the bicycle warning sign alone or with different text.

Bicycles May Use Full lane

The “Bicycles May Use Full Lane” sign (R4-11) is described in the MUTCD as being intended for those roadways where bicyclists will be operating in a general purpose travel lane that is too narrow for motorists to pass safely within the same lane.



Section 9B.06 Bicycles May Use Full Lane Sign (R4-11)

Option:

01 The Bicycles May Use Full Lane (R4-11) sign (see [Figure 9B-2](#)) may be used on roadways where no bicycle lanes or adjacent shoulders usable by bicyclists are present and where travel lanes are too narrow for bicyclists and motor vehicles to operate side by side.

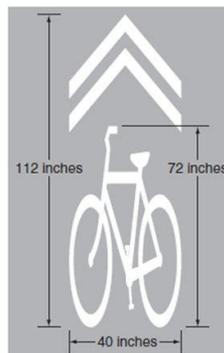
02 The Bicycles May Use Full Lane sign may be used in locations where it is important to inform road users that bicyclists might occupy the travel lane.

03 [Section 9C.07](#) describes a Shared Lane Marking that may be used in addition to or instead of the Bicycles May Use Full Lane sign to inform road users that bicyclists might occupy the travel lane.

Support:

04 The Uniform Vehicle Code (UVC) defines a "substandard width lane" as a "lane that is too narrow for a bicycle and a vehicle to travel safely side by side within the same lane."

Shared Lane Marking



The Shared Lane Marking can be effective at communicating bicyclists’ road rights in narrow travel lanes when the marking is applied in the center of the usable lane. Detailed guidance for placement of Shared Lane Markings in various roadway configurations is given in the 2013 (2nd Edition) ITE Traffic Control Devices Handbook; it suggests the Shared Lane Marking be centered in any travel lane of effective width not greater than 14 ft.

Bicycle Warning Sign



According to the MUTCD, the bicycle warning sign (W11-1) is intended for situations where bicyclists may enter the roadway unexpectedly.

Section 9B.18 Bicycle Warning and Combined Bicycle/Pedestrian Signs (W11-1 and W11-15)

Support:

01 The Bicycle Warning (W11-1) sign (see Figure 9B-3) alerts the road user to unexpected entries into the roadway by bicyclists, and other crossing activities that might cause conflicts. These conflicts might be relatively confined, or might occur randomly over a segment of roadway.

Option:

02 The combined Bicycle/Pedestrian (W11-15) sign (see Figure 9B-3) may be used where both bicyclists and pedestrians might be crossing the roadway, such as at an intersection with a shared-use path. A TRAIL X-ING (W11-15P) supplemental plaque (see Figure 9B-3) may be mounted below the W11-15 sign.

03 A supplemental plaque with the legend AHEAD or XX FEET may be used with the Bicycle Warning or combined Bicycle/Pedestrian sign.

Guidance:

04 If used in advance of a specific crossing point, the Bicycle Warning or combined Bicycle/Pedestrian sign should be placed at a distance in advance of the crossing location that conforms with the guidance given in Table 2C-4.

Compared to crossing movements, a bicyclist traveling along a roadway will usually be seen by other same-direction drivers well in advance of any required braking and not create a sudden conflict that might warrant a warning sign. However, a bicycle warning sign may be useful in situations where drivers have a history of driving too fast for sight conditions. Delaware DOT is currently considering alternative text messages for use with the bicycle warning sign, such as “Bicycles in Lane” to alert motorists that bicyclists will likely be using the travel lane and not a paved shoulder. In those locations where the best practices to recommend for bicycle operation and passing are not clear, a bicycle warning sign with no text may be preferable to text that is ambiguous or unhelpful.

Comparison of Comprehensibility

A recent study comparing road user comprehension of “Share the Road” signs, “Bicycles May Use Full Lane” signs, and Shared Lane Markings was conducted by NCSU researchers George Hess and M. Nils Peterson. The study found “Bicycles May Use Full Lane” signs to be most effective, and “Share the Road” signs to have no measurable benefit. From the conclusions:

“Of the three bicycle-related traffic control devices we tested, “Bicycles May Use Full Lane” signage delivered the message about the rights and responsibilities of bicyclists and motorists with respect to travel lane occupancy most consistently: bicyclists are permitted in the travel lane and need not move to allow motorists to pass them within the lane. Although Shared Lane Markings did increase comprehension in some cases, they did not deliver the message as consistently as “Bicycles May Use Full Lane” signage. We speculate that a combination of “Bicycles May Use Full Lane” signage and Shared Lane Markings might be particularly comprehensible. “Share the Road” signage failed to provide any additional comprehension in this regard when compared to the unsigned roadways in any of our tests. “Bicycles May Use Full Lane” showed particularly strong increases in comprehension for novice bicyclists and private motor vehicle commuters, critical target audiences for these traffic control devices and for efforts to promote bicycling in the US.”

<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0136973>

Suggested Warrants

There is cause for concern that over-use of road signs may reduce the efficacy of signage and generate unsightly clutter. A policy is desired to guide placement of signs in areas of greatest need and utility. The following warrants are suggested for selection and placement of signs:

- **Bicycle Warning Sign (W11-1):** Install in locations to alert users of roadway entry and crossing activities by bicyclists as per 2009 MUTCD Section 9B.18, and to alert users of bicyclist travel along roadway segments that may require special caution by motorists or where bicyclists might otherwise be unexpected.
- **Shared Lane Marking:** Install in the center of the effective travel lane width per guidance in the 2013 (2nd edition) ITE Traffic Control Devices Handbook on roadways with effective lane widths narrower than 14 feet that carry significant bicycle traffic.
- **Bicycles May Use Full Lane Sign (R4-11):** Install on roadways with travel lanes that have an effective width that is too narrow for safe same-lane passing of bicyclists (i.e., a lane narrower than 16 feet on a truck route, or narrower than 14 feet otherwise) where one or more of the following conditions exists: (a) a history or likelihood of collisions or unsafe operation given limited sight distances in combination with use by bicycle traffic are cause for concern; (b) public complaints of unsafe same-lane passing or harassment of bicyclists have been received, or (c) a public request has been made. See the 2013 ITE Traffic Control Devices Handbook (2nd edition) for guidance on usable lane width in context of roadside conditions such as on-street parking.

Education

A public education campaign is recommended to explain safe passing practices to drivers on shared roadways. The nuances of safe vehicle operation cannot be explained adequately by road signs and markings alone. An example of an unambiguous safe passing Public Service Announcement developed by the Austin Police Department can be seen here:

<https://www.youtube.com/watch?v=aUtFluEODC0>

BMUFL Signage Working Group Members

<u>Name</u>	<u>Organization or Location</u>	<u>Email</u>
Jeff Viscount	WeeklyRides.com	Jeff@weeklyrides.com
Steven Goodridge	BikeWalk NC	steven.goodridge@gmail.com
Lisa Riegel	BikeWalk NC	Lisa@bikewalknc.org
Barb Mee	City of Asheville	bmee@ashevillenc.gov
Bethel Paris	East Coast Greenway Alliance	psubiker@bellsouth.net
Branson Kimball	Bike Durham	bullcitybiker@gmail.com
Eric Phillips	Skinny Wheels Bike Shop	2skinnywheels@gmail.com
Esther Lumsdon	NCBC, BikeWalk NC	esther.biking@gmail.com
George Hess	NCSU	george_hess@ncsu.edu
Joe Sanders	Blue Ridge Bicycle Club	joesanders0522@gmail.com
Laura Peoples	Bicycling in Greensboro	laura.peoples@bikegso.org
Michael Hernandez		Michael@capturehappy.com
Mike Dayton	Raleigh BPAC	mdayton1@gmail.com
Steve Doolittle	Cool Breeze Cyclery	steve@coolbreezecyclery.com

Acknowledgement

The BMUFL Working Group thanks NCDOT Bicycle and Pedestrian Division director Lauren Blackburn for meeting with the group to discuss the issues covered in this work.