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October 17, 2011

Alan Meadors, P.E.
Planning & Research Division
Arkansas State Highway & Transportation Department
P.O. Box 2261
Little Rock, Arkansas 72203-2261

Subject: Comments: Policy for the Use of Rumble Strips on State Highways in Arkansas

Dear Mr. Meadors:

I am writing on behalf of Bicycle Advocacy of Central Arkansas (BACA) to document our comments on the proposed state policy for placing rumble strips on state highways. BACA is a 501(c)(3) non-profit organization which represents the interests of more than 700 cyclists in the central Arkansas metropolitan area.

We appreciate the opportunity to provide input on the proposed policy, and look forward to better and closer cooperation between the Department and the state's cycling community to make our roads better and safer for all travelers.

Historically, in accommodating bicyclists and pedestrians on state and other public roadways, the Department has relied on an outdated policy which provides that AHTD will only consider designated bicycle facilities on routes that have been officially designated in a city's or MPO's transportation plan. AHTD has not updated or revisited this policy since 1998.¹ This policy conflicts with the state's traffic code at Arkansas Code of 1987, Annotated, § 27-49-111, which provides that *"Every person riding a bicycle or an animal, or driving any animal drawing a vehicle upon a highway, shall have all the rights and all of the duties applicable to the driver of a vehicle, except those provisions of this act which by their nature can have no applicability"* so as to include

¹ http://arkansashighways.com/planning_research/statewide_planning/bicycle_pedestrian_planning/Statewide%20Bike-Ped%20Trans%20Plan.pdf, dated April 2008. Little or none of the provisions of this plan has been implemented at the present time (2011). AHTD's construction standards (http://arkansashighways.com/planning_research/statewide_planning/bicycle_pedestrian_planning/AR%20bike%20ped%20policy.pdf) were last revisited in 2005, with little or no change from the 1998 plan. Files accessed September 11, 2011.

cyclists as legitimate and rightful users of the public streets and highways throughout Arkansas. Many state highways as well as city streets which include state highways are in constant, daily use by utility, recreation, and transportation cyclists, without regard to their official designation as a “bicycling facility.” Every state road, with the exception of the interstate highways and controlled-access highways, should be considered a bicycle facility or potential bicycle facility, and should equitably accommodate non-motorized traffic.

We have reviewed the proposed policy, and are in general agreement with it. BACA appreciates the severe problem and high fatality rate that run-off-road crashes pose to Arkansas motorists. Distracted and drowsy drivers who run off the roadway or stray from their proper traffic lane do not only kill or maim themselves and other motorists; our traffic crash records are full of instances where they have also run over and killed cyclists and pedestrians. Distracted driving is Arkansas’s number 1 traffic problem, and we deeply appreciate the Department’s efforts in seeking to reduce or eliminate these sorts of crashes.

We concur with the recommendation that rumble strips be placed only on roadways where the shoulder is in good condition, and where a paved shoulder at least 5’, 4” is present.

However, in the next paragraph (“Bicyclists,” at the bottom of Page 2), the proposed policy inexplicably reduces the allowable shoulder width to 4 feet, or 5 feet where a guard rail is present. We believe that for consistency’s and safety’s sake, there should be a uniform standard of 5’ 4” (six feet would be better, and a nice round number). In the absence of a specific statute addressing the use of highway shoulders, Under the State’s traffic code, Arkansas cyclists are expected to ride in single file, as far to the right as is practicable in the rightmost traffic lane which serves their destination, unless they are required to move further left in order to make a left turn, avoid debris or other hazards in the roadway, or to pass slower-moving traffic. Because of the great disparity in speeds between automobile traffic and bicycle traffic, most cyclists prefer to ride on the highway shoulder where a usable shoulder is present.

A concern is that with a 12”-wide rumble strip on rural undivided highways, adding a 4” offset from the outside lane line, passing traffic begins to uncomfortably encroach on cyclists riding on the shoulders. Given a 4-foot shoulder as mentioned in the “Bicycling” paragraph on Page 2, the rumble strip design subtracts nearly half that space (20”), leaving the cyclist only about two feet to ride in. Most bicycle handlebars range from 18 to 20 inches wide, leaving only about 24 to 30 inches between the cyclists and overtaking traffic.² Arkansas law (A.C.A. 27-51-311) requires passing motorists to provide at least three feet passing distance, which becomes difficult if the cyclist is

² Some cyclists themselves are wider than the handlebar measurement, but that’s one big reason that they’re cycling instead of driving. We would like to keep encouraging these people to improve their health and reduce our State’s hideous obesity rates.

riding in the center of the shoulder, and the usable/rumbled shoulder is only 3 feet wide.

We concur with the proposed criteria for rural, divided highways with both full and partial access control. Cyclists are typically prohibited from riding on the freeways, and the rumble strips themselves tend to serve as an added measure of protection for cyclists using divided highways such as Highway 65, or the 4-lane stretches of other roads.

In proposing the design for rural undivided highways, which see the most use by cyclists, AHTD seems to be planning on an offset of 4 inches from the edge line or traffic lane which doesn't meet the AASHTO guidelines. Also, AASHTO requires the 5-foot width from the face of guardrails, curbs or other roadside barriers; the AHTD memo only mentions guardrails. Curbs are mostly found in urban areas, though you will find them in rural areas when clear-zone requirements can't be met in a traditional manner. Also, the gutter pan isn't supposed to be counted as part of the 4-foot width which is why there is a 5-foot width recommendation when curbs are present (it seems to be typical in Arkansas to have a 1-foot wide gutter pan on curb-and-gutter sections).

Regarding the section "special consideration for narrow shoulders", AHTD plans to use rumble "stripes" which would be 6" wide and located on the edge line. The guidelines here do not make any mention of a longitudinal gap pattern. This would impact roadways with narrow existing shoulders, which are very common in Arkansas. Cyclists can ride on a 2-foot shoulder if need be, but a continuous rumble stripe would "trap" the cyclist on the narrow shoulder. Additionally, the passing distances noted above would also be an issue in these cases. BACA would prefer a policy whereby rumble strips or stripes are not allowed if the shoulder doesn't meet a minimum design width (5 or 6 feet). A wider shoulder is safer for all road users (cyclists, pedestrians and motor vehicles). General AASHTO and other state recommendations argue against rumbling narrow shouldered roadways, or roadways with no shoulders, as the shoulder is a necessary facility to allow the distracted/drowsy motorist to recover before they wind up in the ditch or off the roadway.

We would additionally recommend that, where possible, AHTD incorporate the "shoulder stripe" installation where the inner edge of the rumble strip is incorporated into the shoulder stripe. This would not only spare valuable shoulder space for cyclists, but would reinforce for all drivers the idea of staying away from and not riding the roadway edge stripes. Experience in other states has shown that these installations are more effective at nighttime because the edges of the rumbles allow the reflective paint to show up much better in headlight beams, the narrower offset provides earlier warning to the driver of his growing hazard and provides him with more room to recover before a crash occurs.



The above image shows this concept in place on a Tennessee roadway, where the rumbles are integrated with the roadway edge line, and sufficient shoulder space is preserved to safely accommodate cyclists. This design readily accommodates cyclists.

In many cases, rumble strips have already been applied to roadways commonly used by cyclists, which had little or no shoulder space to begin with. One thing missing from the proposed policy is some sort of guidance or requirements that provides where rumble strips have been applied to these roads, the shoulders should be widened to accommodate non-motorized traffic and provide the necessary 5 feet of shoulder space, or the rumble strips should be removed from those stretches of roadway.



Example of rumble strips placed on a shoulderless roadway, Arch Street Pike in southwestern Little Rock

In cases where retrofit of these rumbled roadways is not feasible, other accommodation measures should be put into place, such as reduced speed limits, extensive “share the road” signage, or shared lane pavement markings, where the speed limit has been reduced to no more than 35 mph.

With respect to the placement of centerline rumble strips, a similar minimum shoulder width should be established for those sections of roadway. In our experience as well as that of motorcyclists, motorists tend to stay in the center of the traffic lane and squeeze cyclists when centerline rumble strips are present because the motorist doesn’t want to cross the centerline rumble strip.

Again, we appreciate the opportunity to provide comments on the proposed policy, and look forward to an improved partnership with the Department in the common goal of making Arkansas’s roads safer for all travelers. If you should have any questions or need more information, please call me at (501) 912-1989, or e-mail TomEzell@aristotle.net.

Sincerely,

A handwritten signature in black ink that reads "Tom Ezell". The signature is written in a cursive style with a large, sweeping flourish at the end.

Tom Ezell
President