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Wichita, Kansas 67212-1842
May 14, 2021

The Docket Clerk
Dockets Management Facility
US Department of Transportation
1200 New Jersey Ave. SE
Washington, DC 20590

Dear Sir or Madam:

I am writing as a private citizen to submit comments in response to the notice of proposed rulemaking (docket number FHWA-2020-0001) published on December 14, 2020, laying out FHWA's proposals for a major revision to the *Manual on Uniform Traffic Control Devices*.

I would like to express my appreciation to FHWA's *MUTCD* team for the thorough way in which it developed this NPRM for public presentation. It has been helpful to examine proposed figures and text alongside the *Federal Register* notice.

I have keyed the following comments to the numbered paragraphs in the notice.

34, 156, 190—My concern with these pertains not to the changes themselves (horizontal alignment of legend, minimum letter heights for overhead conventional-road guide signs, and tabulation of letter heights for freeway guide signs), but rather to other language in the sections concerned that deals with the ratio of capital letter height and lowercase loop height. The language in § 2D.05 quotes lowercase letter heights that are uniformly three-quarters of the corresponding capital letter heights but does not note this is an unvarying relationship or that the lowercase measurements are for *loop* height. § 2A.08 and § 2E.12 are explicit about the three-quarters relationship and the fact that it is based on nominal lowercase loop height. The language in these three sections, much of which has been carried over from past editions of the *MUTCD*, is clearly intended to describe a property that is inherent in the FHWA Series typefaces and in all computer fonts based on them that preserve their forms and proportions. For example, if I am working in a sign drawing program with an E Modified font and I fix the capital letter height at 16 inches, I do not need to change the size to get lowercase letters at the correct 12-inch loop height. However, it has become evident both in signing plans and in field installations that many practitioners think it is allowable, even required, to reduce the size of the lowercase letters so that loop height plus ascender height (essentially, capital letter height at the new size) is three-quarters the height of the actual capital letters. This phenomenon, which in road enthusiast circles is described as the “three-quarters error,” results in unsightly signs that ill serve the motoring public. I urge FHWA to devise a way of describing the three-quarters ratio that doesn't unintentionally encourage ill-formed mixed-case destination legend.

195—In cases where an exit direction sign does not perform lane assignment, this proposed

change (in new § 2E.18) would require the arrow to be positioned to the side when the sign is mounted overhead, and on the bottom when it is placed to the side of the road. While I have great sympathy for the apparent motivation of preventing overhead exit direction signs being misinterpreted as showing lane drops when the arrow is at bottom, I am not aware of research showing that motorists err in this way with any frequency. I also see the potential for this change to cause more problems than it solves. In almost 20 years of examining sign panel detail and sign elevation sheets, I have yet to see an agency that already observes this distinction in its guide signing practice. Unless FHWA were to mandate early replacement of signs (at significant cost), it would therefore take at least a full sign replacement cycle for there to be enough consistency in arrow deployment (compliant to the proposed standard) for motorists to pick up on a pattern. It would also generate added cost by taking away the flexibility to position the arrow so that sign panel area is at a minimum while maintaining appropriate space padding. In marginal cases, it could even force replacement of overhead signbridges and cantilever structures. I would respectfully suggest that FHWA not proceed with this change unless and until it is clear the benefits outweigh the costs.

199—I agree in general with the proposal to elevate from Guidance to Standard the ban on redundant word “Exit” on the main sign panel when an exit tab is present. However, this could have the unintended effect of preventing agencies from adding exit numbering to freeways that currently lack it (something they are encouraged to do) simply by retrofitting exit tabs to signs in the field. Iowa DOT did this for its non-Interstate freeways in the early 2000’s, as did Caltrans in its District 2 (far northern California) when it first rolled out exit numbering in 2002. I believe Georgia DOT in the 1970’s was unusual, possibly unique, among state transportation agencies in removing the word “Exit” and re-centering the distance legend when retrofitting exit tabs.

200—I support the proposed change requiring interchange sequence signs to show distances just to the next two or three exits. However, I can foresee this change attracting opposition from agencies that use a hybrid sign in the transition to rural areas that shows the distance to the next exit or two followed by the distance to the next town. (Colorado DOT has at least one example on I-25 north of Denver.)

201—I agree with the suggested change calling for exit tabs for right exits to be right-mounted. The time is ripe for this provision, since signs with center-mounted tabs are becoming rarer and rarer in the field.

214—As reconstruction does not preclude the persistence of geometric features for which traditional (stippled-arrow) diagrammatic guide signs are useful, these should also be allowed at locations deemed reconstructed. I also have reservations about FHWA’s proposal to include new figures showing divergences with long narrow gores. The principle of uniformity in signing would suggest that the same signs should be used regardless of gore shape. In these proposed figures, FHWA is mixing APLs with pull-throughs and exit direction signs that perform lane assignment (other figures show just an APL without distance expression where an exit direction sign would otherwise be used). Moreover, multiple APLs without distance expression are used in succession: how does the motorist know

which of these is actually at the exit? (At lane drops without option lane, an advance guide sign within a quarter-mile of the exit—which is allowed not to have a distance expression—is still distinguishable from the exit direction sign since the lane arrow points down rather than up and to the side.) I also find it troubling that in one of the figures, the gore sign has an arrow pointing downward and to the side. It violates positive guidance by clashing with the upward-pointing lane arrows on the exit direction sign. Moreover, could motorists misinterpret this as indicating a sharper-than-usual curve on exit? (Some agencies use gore signs with horizontal arrows for exit ramps that curve sharply.)

215—To limit message loading, I support the proposal to require agencies not to use diagrammatics or overhead arrow-per-lane signs to perform lane assignment downstream of the split. However, I am aware of many installed examples (especially of APLs) that do this, and suspect agencies will continue to erect such signs in defiance of a *MUTCD* prohibition. However, I do not support the proposed alternative change except insofar as it allows “sawn-off” APLs. Stippled-arrow diagrammatics retain value as a mechanism for advising drivers of unusual road geometry, and should be left in the toolbox.

216—I support the proposal to add sawn-off APLs to the *MUTCD*. However, I disagree with the design approach shown in the proposed figures. The legend block (shield and destination) appears to be horizontally centered on the “Exit” and “Only” patches, and for a narrow block such as is shown in the figures (one shield plus a short destination), this leaves a large amount of empty green space on the left side of the sign. While this might have value in setting off the route and destination as being reached by exiting, it gives the sign an unbalanced appearance, and it is unclear what happens with wide legend blocks, such as might result from multiple shields and a long destination. Agencies that have actually tried sawn-off APLs in the field have invariably centered the legend block on the total width of the sign. This approach yields a much cleaner appearance and is more forgiving of long placenames. I doubt a sign comprehension study would show any benefit to additional green space on one side of the sign. (As an aside, I would like to highlight the wisdom of stress-testing innovative sign designs—such as APLs, sawn-off or not—against real-world placenames, the more unwieldy the better, rather than short ones like “Medford,” “Dover,” “Concord,” and “Pomona.” Design rules for diagrammatics have stood the test of time for 50 years partly because the first signs were tried in areas with long placenames like “Washington,” “Frederick,” “Baltimore,” and “Democracy Blvd.”)

220—I have reservations about the proposal to ban pictographs (other than ones related to transit systems) on supplemental guide signs. It is footnoted to a study that references sports team logos, yet it seems it would have the effect of banning the train station symbol, the Amtrak logo, and various transit agency logos, all of which have been used on freeway guide signs.

227—The accompanying figure shows exit numbers used for intersections at grade. While I understand the desire to maintain continuity in distance-based numbering on expressway sections of a route that is otherwise freeway, I think exit tabs either should not be used at all, or some word other than “Exit” (which implies grade separation) should be used on

number tabs for these intersections.

647—As part of this change, FHWA proposes a Standard statement that would govern how the Clearview typefaces are used on traffic signs in the United States. Only Clearview 5-W would be allowed, and only for destination legend (not cardinal direction words, distance expressions, or other generic elements such as word “Exit” in tabs) on freeway and expressway guide signs. The required interline spacing would be based on the actual lower-case loop height of Clearview (84% of capital letter height), rather than that of the FHWA series (75%). I interpret this as an attempt to close the book on Clearview, recognizing that revocation of the interim approval in 2016 failed to stick because Congressional representatives from Clearview-using states such as Texas had enough leverage to force its reinstatement. However, I believe FHWA’s suggested language needs some refinement. First, I disagree with the proposed name “Series E (modified)-Alternate” for Clearview 5-W (a humanist typeface), as I consider this likely to mislead people into thinking it is typographically similar to the other FHWA alphabet series (all gothic typefaces and part of the same family, at varying levels of condensation). I suggest that it simply be called by its actual name—“Clearview 5-W”—and be described as an alternate to Series E Modified in freeway/expressway guide signing applications. I also do not think it is necessary to restrict Clearview 5-W just to destination legend as long as it is used only in positive contrast and not within any type of route marker (such as the Interstate shield) where digits appear in positive contrast. Few agencies have observed the nicety of confining Clearview to destination legend; Texas and Michigan have not, for example. Also, in 18 years of collecting tens of thousands of sign panel detail and sign elevation sheets for signs that use Clearview, I have seen hardly any where the interline spacing used is 84% capital letter height, rather than the 75% that is usual for the FHWA series. Clearview was designed to work with 75% interline spacing to keep sign height the same when it is swapped in for Series E Modified. (If Clearview 5-W-R is used, width also stays the same.) In the absence of compelling evidence of motorist benefit from 84% spacing, I fully expect agencies to continue designing signs for 75%.

This concludes my comments on this proposed rulemaking but, as ever, I am happy to supply any clarifications or additional information that may be required.

Yours sincerely,

Jonathan Winkler