

May 5, 2021

Stephanie Pollack  
Acting Administrator (HOA-1)  
Federal Highway Administration  
1200 New Jersey Avenue, S.E.  
Washington, DC 20590

Re: ITE Comments on Notice of Proposed Amendment for Proposed 11<sup>th</sup> Edition of the Manual on Uniform Traffic Control Devices (MUTCD)

Dear Acting Administrator Pollack:

I am writing to offer comments on the December 14, 2020 Notice of Proposed Amendment (NPA) to the MUTCD on behalf of the Institute of Transportation Engineers (ITE) and its more than 16,000 member transportation professionals. ITE appreciates the opportunity to provide comments on this NPA.

Overall, there is a lot to like in the changes proposed in the NPA. Many of the changes made through prior Interim Approvals and proposals by the National Committee on Uniform Traffic Control Devices (NCUTCD) and others have been incorporated into the NPA. Additional changes have been proposed by FHWA to help ensure uniformity, consistency, and user safety. We recognize and appreciate the level of effort needed to produce a new MUTCD and commend both you and the FHWA staff for all of the hard work that has been done.

The comments contained in the attachment to this letter are based on a thorough review and solicitation of input from ITE technical staff, members of the ITE delegation to the NCUTCD, ITE members who serve as reviewers of NCUTCD proposals, key ITE Councils and Committees, and individual ITE members, which identified more than 300 issues of concern. The comments detailed below are a subset of this input and focus largely on high level issues of greatest importance and impact, and supplement the detailed comments made individually by ITE members and through the work of our delegation to the NCUTCD, which are being submitted separately to the *Federal Register* docket.

Our comments generally fall under three main themes:

- **The MUTCD needs to support the needs of all users** -The MUTCD was originally developed and has continued to evolve as a primarily vehicle-centered document. Specific pedestrian and bicycle provisions have been added over the years, but the vast majority of the material contained in the MUTCD remains centered primarily on safely accommodating vehicle movement. We believe that the MUTCD must continue to evolve to include an equal focus on the needs of all users, especially vulnerable road users, such as motorcyclists, pedestrians, and bicyclists. Vulnerable road user safety must be prioritized over vehicle movement in the selection of traffic control devices. We provide many comments that can help strengthen the focus on safety for all road users.

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- **The MUTCD needs to be grounded in current practice while supporting flexibility and innovation** - The MUTCD should provide sound guidance on minimum requirements for consistently selecting and using traffic control devices, but should avoid being a design guide. The MUTCD should standardize traffic control devices where necessary to ensure safety, but should not unnecessarily set standards that limit the ability of agencies to adapt traffic control devices to specific contexts. Many of our comments focus on ensuring flexibility to innovate where absolute uniformity is not required.
- **The MUTCD needs to be a forward looking document** – The transportation system continues to evolve and the provisions of the MUTCD must to continue to evolve as well. The transportation system of today does not look like it did a decade ago nor what it will look like a decade from now. The MUTCD must be a more nimble document that can be updated more frequently to adapt to changing conditions, updated practices, and new research results. A number of our comments focus on these more forward-looking issues.

As we stated in earlier correspondence, ITE strongly encourages FHWA to stay the course on this rulemaking action and finalize and issue an updated MUTCD as soon as possible, rather than pull back the NPA in order to perform a major overhaul of the content of the MUTCD. This is because we believe that an updated version of the MUTCD is desperately needed and can be completed in the near term. However, we also believe that the process of rethinking what a new version of the MUTCD should look like must start sooner rather than later and must include a full reevaluation of the content and structure of the MUTCD, removal of unnecessary material, increased flexibility where possible, and a more streamlined and timely process for updating the provisions contained in the MUTCD. ITE stands ready to assist and support FHWA in this effort.

Thank you again for the opportunity to provide our views on the content of this foundational resource for transportation professionals.

Sincerely yours,



Alyssa Rodriguez  
ITE President

Attachment – ITE Comments on Specific Issues Contained in the MUTCD NPA

## Attachment

### ITE Comments on Specific Issues Contained in the MUTCD NPA

#### Issues Related to Supporting Needs of All Users

##### Section 1A.03 Target Road Users

We believe we understand the intent of this new section. However, as the transportation profession begins to adopt and move more towards the Safe System Approach to ensure the safety of all users, it is important to consider the fact that road users are human, they make mistakes, and the design of the system, including traffic control devices, should account for the mistakes that will inevitably be made to the maximum extent possible. These concepts should be reflected in the language used in this Support statement. Also, the distinctions between target road users proposed in the NPA seems unclear and incomplete. If retained, we believe this language would be much clearer if these distinctions were removed and replaced by a simpler statement regarding assumptions that traffic control devices are designed for reasonable and prudent, alert and attentive road users who are acting lawfully.

##### Section 2B.21 - Speed Limit Sign

ITE is aware of and supports proposals from other organizations and individuals that recommend removal of all speed limit setting guidance from the MUTCD and alternatively direct users to other practitioner resources. However, if a decision is made to retain the proposed speed limit setting guidance in the NPA, we believe it moves in the proper direction towards recognizing that setting safe speed limits on freeways and expressways vs. surface streets and in rural vs. urban contexts involve very different considerations. For example, we believe that prevailing speeds data should be included as a factor to be considered in setting speeds on freeways and expressways. We do not believe prevailing speed data should receive primary or special consideration in setting speed limits on urban streets, which instead should take into consideration many factors, including those listed in the proposed NPA language but also including additional factors such as transit services and infrastructure and presence of pedestrian and bicycle facilities. The Support statement should also refer to existing guidance regarding speed limit setting through use of experts systems and a Safe System Approach.

##### Pedestrian Facilities

- The term pedestrian or pedestrians appears in multiple parts of the MUTCD more than 1,300 times. Similar to Part 9, which is focused on bicycle facilities, creating a separate Part of the MUTCD for Pedestrian Facilities would provide a clear focus on safety and traffic control devices for a common vulnerable road user. ITE recognizes that this would be a significant undertaking and recommends that this be included in the next, more comprehensive update to the Manual. Creating a new Part of the MUTCD focused on pedestrians would also need to be carefully cross referenced to any pedestrian material that remains in other Parts.

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- The Standard and Guidance for Aesthetic Treatments in Crosswalks under 3H.03 is unnecessarily restrictive and the designs provided in the figure seem arbitrary and inconsistent with aesthetic treatment already permitted by many agencies that have not found them to cause safety issues. ITE believes aesthetic treatments in crosswalks on low speed, low volume roads should be permitted unless they create a documented safety issue.
- Section 4F.19 includes a Standard that allows the pedestrian change interval to be truncated or removed during transition to preemption control when clearing traffic near moveable bridges and rail-grade crossings when boats or trains are approaching. This creates a condition where a pedestrian may not have enough time to safely complete a crossing before the pedestrian interval ends. If this language is retained, it should be accompanied by guidance to practitioners to minimize its use to only those situations where a clear conflict at the bridge or rail crossing must be avoided.
- The restrictions in section 2B.20 on use of the In-street Pedestrian or Trail Crossing sign do not match research conducted or the previous NCUTCD proposal 16B-RW-02-In-Street Pedestrian Signs Gateway Installation that was specifically supported by ITE in our May 22, 2020 letter to FHWA on interim approvals. The addition of Standards that only allow the use of In-Street or Overhead Pedestrian Crossing sign in conjunction with the Pedestrian Crossing (W11-2) warning sign is too restrictive and should be changed to a Guidance statement or only applied to higher-speed roads. This same concern also applies to the in-street trail crossing sign.
- The Standard added in Sections 3C.01 and 9E.13 requiring crosswalk markings at a non-intersection locations and shared-use path crossings will increase visibility and safety of vulnerable road users at crossing points that are often at unique or unsafe locations, so we strongly support this change. FHWA may want to consider adding an option statement that additional traffic control devices may need to be considered in addition to the crossing markings to further increase visibility, particularly at mid-block locations or on higher-speed roadways.

## Bicycle Facilities

- The expansion of Part 9 in the NPA to address increased use of various types of bicycle facilities is generally supported by ITE. However, the addition of so many Standards as well as design guidance in Part 9 may unnecessarily restrict the installation of traffic control devices that are meant to increase safety of bicyclists in specific contexts. FHWA should carefully review each new Standard to ensure it is necessary to be a Standard, if use of the Standard may limit bicyclist safety, and if too much design guidance is provided beyond what is necessary for traffic control devices for bicycle facilities.
- The new provisions for buffer-separated, separated, and counter-flow bicycle lanes are good additions to the MUTCD; however, these facilities should also be specifically defined in Part 1 to ensure clarity. Again, we believe the number of Standards and amount of design guidance related to these bicycle facilities can be simplified or reduced. For example, the Standard requiring a buffer for a parking lane in section 9E.07 should be changed to a Guidance statement.
- The Standard in section 9E.05 stating “bicycle lanes shall not be provided on the circulatory roadway of a circular intersection” should be reconsidered or further clarified regarding the specific types of bicycle lanes this Standard is prohibiting, and what is specifically meant by circular intersection and “on the circulatory roadway”. Applied in

the broadest sense, this Standard may prohibit safe accommodation of bicyclists at types of roundabouts that have been shown to be effective at reducing conflicts between bicyclists and motorists (e.g., Dutch style roundabouts).

- The addition of green pavement under section 3H.06 for bicycle facilities is a good addition to the MUTCD that increases safety of bicyclists. It should be made clear that green pavement is permitted for buffer-separated and counter-flow bicycle lanes when located within the roadway.
- The addition of Section 9E.03 Extensions of Bicycle Lanes through Intersections increases bicycle visibility and safety through an intersection; however, chevron markings should be permitted to be used as well as dotted lines in these extensions since chevron markings are more visible and will generally last longer in intersection traffic than dotted lines.

### **Bicycle Signals**

- In general, the language within the NPA on bicycle signal faces (Part 4H) is too restrictive and is not consistent with the flexibility provided for other signals in the Manual. With the amount of research and experimentations done related to bicycle signals faces, the NPA should go beyond just the incorporation of interim approval IA-16.
- The Standard statement and related option in section 4H.01 will prevent bicycle signals from being used in all contexts where they could be safely used. This Standard and associated Option statement should be converted to a Guidance statement.
- The NPA also proposes to prohibit use of bicycle signal faces with PHBs (section 4H.02). There is a known problem with bicycles entering crosswalks controlled by PHBs during the flashing red interval and this can be alleviated by introducing bicycle signal indications to regulate bicycles on the approach.
- We believe the proposed Standard requiring the use of bicycle signal signs (the new R10-41 series of signs) should be changed to a Guidance statement in the absence of specific research or experience that supports the use of these signs as a Standard.

### **Issues Related to Supporting Flexibility and Innovation**

#### **Overall Number of Standards Statements**

We are concerned with the overall number of Standards statements in the NPA. There are many situations where uniformity is absolutely required in terms of design and placement of traffic control devices, in order to ensure quick and correct comprehension and action by road users. However, it appears that the NPA contains many Standard statements, both new and existing, where strict uniformity may be desirable but is not essential to support a safe transportation system. These Standard statements should be changed to Guidance statements. We have included many examples of these issues in our comments in this letter.

#### **Section 1A.04 - Use of the MUTCD**

We agree that traffic control device decisions should be made by qualified and experienced professionals. However, compliance is not likely practical in every situation (e.g. streets controlled by homeowner's associations or small communities without engineering expertise on staff). This new language should be changed from a Standard to a Guidance statement.

#### **Section 1B.06 Experimentation**

The proposed changes to this section do not improve a process that is already seen as too complex, too inflexible, too costly, and not straightforward for agencies to apply, many of which simply want to sign onto an experiment already proposed by another jurisdiction. Making the entire process part of a Standard statement and adding numerous new requirements makes this situation worse. ITE believes that this process needs to be recast as Guidance, not a Standard; simplified to the maximum extent possible; and include provisions for additional agencies to sign onto an approved experiment by simply providing a list of locations where the experimental treatment will be used and evaluated and an agreement to comply with the established parameters for the experiment in question. A more simplified and shared experimentation process will likely increase the amount of useful information and data provided to FHWA so that your staff can more easily and consistently evaluate new traffic control devices under the same problem statement, and increase understanding of variations agencies may use in the same or similar conditions. Agencies requesting an experiment are essentially self-funding traffic control device research, so the process should be as simple and straightforward as possible.

#### **Section 1D.11 - Placement and Operation of Traffic Control Devices**

ITE appreciates the intent of the Standard statement in this section regarding the placement of necessary traffic control devices before any new roadway is open to public travel. However, this may not be necessary or practical for all roadway classifications (e.g. markings on a new low speed, low volume local roadway where final paving is not yet complete, but public travel does not create a safety issue). This Standard should be changed to a Guidance statement

#### **Section 2L.02 - Applications of Changeable Message Signs**

ITE is generally supportive of the intent of the changes that were made to section 2L.02 with new/revised language pertaining to changeable message signs. However, most of this material is more appropriate as Option or Guidance statements rather than as Standards.

### **Section 3A.04 – Normal Width Lines**

Use of wider longitudinal pavement markings have acknowledged safety benefits for human drivers, as well as existing and emerging driver assistance systems and automated vehicles as outlined in the NPA. However, in reviewing FHWA analysis of the cost of this proposed new Standard, no specific cost is provided as reliable estimates of both the total road mileage affected by the new Standard and the proportion of the affected road mileage which is already marked with 6-inch wide markings are not available. State DOTs should be able to provide this information for most freeways and expressways and ramps and we expect them to comment on this issue. We believe it is safe to say that the vast majority of roadways other than freeways, expressways and ramps with speed limits greater than 40 mph covered by this provision are not currently marked with 6-inch longitudinal markings and that the total cost of compliance with this provision is an initial one-time cost which totals in the hundreds of millions of dollars (or higher), with a similar additional cost incurred each time the markings are reapplied (which is quite frequent compared to replacement of other types of traffic control devices). Due to the significant cost burden to public agencies, including local public agencies, we believe that this provision should be changed from a Standard to a Guidance statement or applied only to freeways, expressways and ramps.

### **Forward Looking Issues**

#### **Use of Warrants**

**(new Section 2B.12 thru 2B.17, 3B.02, 3B.03, 3B.06, 3B.10, 4C.01 thru 4C.10, and 4G.03 | existing Sections 2B.07, 3B.01, 3B.02, 3B.04, 3B.07, 4C.01 thru 4C.10)**

ITE believes that the use and application of Warrants in the MUTCD needs to be fully re-examined, if not for this version of the MUTCD in the very near future. Many of the warrants use values for criteria that are dated, appearing to be carried from one version of the MUTCD to the next and should be informed by more current research (e.g. the traffic signal 8 hour warrant volumes have not changed since 1961 MUTCD. However, in that Manual, actuated signals did not need to meet side street volumes. This concept was dropped in 1971 MUTCD. Further, the peak hour and 4-hour traffic signal warrant volumes have not changed since 1978 MUTCD).

Warrants are also not treated in a consistent manner throughout the MUTCD. Warrants for all way stop control, for example, are defined as Options while those for traffic signals follow more usual format sequence of Support-Guidance-Standard-Option. This may cause confusion regarding the consistency of importance of warrants in the MUTCD.

In addition, some existing warrants are contrary to current engineering and safety practice. A good example is Section 4C.08 Warrant 7, Crash Experience, which notes fatal motorist and pedestrian crash thresholds to be considered in whether a traffic signal may be warranted. This is not consistent with the Safe System principle that any loss of life is unacceptable and potentially warrants changes to the road system in order to avoid future fatal crashes.

## **PART 5 – Automated Vehicles**

We commend FHWA on proactively developing initial MUTCD content focused on traffic control device provisions needed support automated vehicles (AVs), recognizing that this is an evolving area that will continue to change. The overall approach of providing Guidance (not Standards) based on available knowledge about the technology and how it might be deployed is sound. We would caution that much more needs to be understood about how automated vehicles will safely interact with pedestrians, bicycles and other vulnerable road users and that the evolving AV guidance needs to focus as much on the safety of these users as on the operation of the automated vehicles themselves.

### **Yellow Change and Red Clearance Intervals (new Section 4F.17 | existing Section 4D.26)**

ITE appreciates that the new MUTCD references and incorporates elements from ITE’s Recommended Practice *Guidelines for Determining Traffic Signal Change and Clearance Intervals* (2020). ITE notes that the new MUTCD does not incorporate all of the relevant material from the Recommended Practice. However, we recognize that research is underway on a number of topics on the subject of yellow change and red clearance intervals. ITE will be updating and revising our Recommended Practice once those findings are available. As a result, ITE believes that text in this section should include the phrase “most recent version” when referencing the ITE publication. ITE plans to update our Recommended Practice on a recurring basis as ongoing and new research projects are completed.

### **Separate Part for Pedestrian Facilities**

As noted earlier, ITE recommends creating a separate Part of the MUTCD for Pedestrian Facilities, which would provide a clear focus on safety and traffic control devices for a common vulnerable road user.

### **Rethinking the MUTCD**

Finally, as noted in the body of this letter, we believe that the process of rethinking what a new version of the MUTCD should look like must start sooner rather than later and must include a full reevaluation of the content and structure of the MUTCD, removal of unnecessary material, increased flexibility where possible, and a more streamlined and timely process for updating the provisions contained in the MUTCD.