

# Comments on Docket No. FHWA-2020-0001 National Standards for Traffic Control Devices; the *Manual on Uniform Traffic Control Devices for Streets and Highways*; Revision

Please use this form to provide comments on the Notice of Proposed Amendments for the MUTCD.

## INSTRUCTIONS:

1. Add your name or organization name where indicated in the footer of this form.
2. Use Table 1 to provide your original comments.
3. Use Table 2 to indicate your agreement with a comment that another commenter has submitted to the docket.
4. Do not adjust formatting of the rows and columns; text will automatically wrap and expand the row height as you type.
5. To add rows to this form, use the "Insert Rows" function, or hover just outside the left edge of the row below which you would like to add a row and click the encircled "+" that appears.
6. If you choose to provide a letter to accompany this comment form, please **print the document as a PDF**; **please do not scan a hard copy**. This will assist FHWA with cataloging your comments.

**TABLE 1. ORIGINAL COMMENTS ON PROPOSED CHANGES.** Please indicate the applicable proposed Section numbers in the far-left column. In the next three columns, please indicate your agreement, disagreement, or whether the column is applicable to your response by placing a, "YES," "NO," or "N/A" in the appropriate column of the row. If you agree with a proposed change, then there is no need to fill out the additional columns beyond the first two. However, it can be helpful to explain why you agree with a proposed change based on your objective experience as a roadway operator and/or empirical data. If you disagree in part or in whole, then please provide additional information that FHWA may find helpful.

Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording of text in Comments	Disagree with concept	Comments <i>Please include justification for your position based on objective experience and empirical data. If there is a specific statement with which you take exception, please provide the Page and Line numbers from the mark-up version of the proposed MUTCD text.</i>
1A.03	N/A	N/A	YES	Page 2, Line 38, Comment: There's an entire chapter about autonomous vehicles, but the MUTCD is only directed toward "...This target user is a reasonable and prudent individual who is alert and attentive..." This language appears to conflict with the reason and existence of the autonomous vehicles chapter. Does the target road user include autonomous vehicles or not?
1A.05	N/A	N/A	YES	Page 5, Line 1, Comment: There is current discussion in the traffic engineering industry as to the general acceptance of this document and we do not think it should be referenced at this time.
1C.02	N/A	N/A	YES	Page 20, Line 50, Comment: Highway is defined as "...for purposes of vehicular travel...". We find that our highways and associated public way are used for other uses as well, including walking, bicycling, retail, and street amenities such as bike racks, streetlights, and trees. We'd like this definition to be more inclusive of other uses.
1C.02	N/A	YES	N/A	Page 20, Line 50, Comment: "Public Way" does not appear to be defined.
1C.02	N/A	N/A	YES	Page 21, Line 39, Comment: This makes it seem like meeting signal warrants on a divided roadway will be more difficult when they are now evaluated as two independent intersections. However, if a large vehicle such as a WB-67 is used as the design vehicle, even the former 30-foot definition would not hold a WB-67 with sufficient storage in the interior area (the median). We are also concerned about how this will be integrated during safety analysis of intersections and if for operational analysis the intersection might be two intersections, but during safety analysis it is reviewed as a single intersection.
1C.02	N/A	N/A	YES	Page 26, Line 21, Comment: We'd like to see a definition for "Queue Jump Signal" added for buses.

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1C.02	N/A	N/A	YES	Page 27, Line 9, Comment: Our Right-of-Way, Public Highway, and the "land within these limits" is not dedicated to "highway uses", which as earlier defined is for the purposes of vehicular travel. Our ROW is also used for sidewalks, bike lanes, benches, tables, and other amenities, particularly in downtown areas.
1C.02	N/A	N/A	YES	Page 33, Line 1, Comment: Please keep the HOT definition.
1C.02	N/A	N/A	YES	Page 33, Line 18, Comment: Please keep the PCMS definition.
2A.14	N/A	N/A	YES	Page 53, Line 30, Comment: Both ADAAG and the Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way (2011) state that signs shall be installed a minimum of 80" above the walking area or pedestrian circulation paths, not 84". Please use the 80" as noted in the other documents.
2A.14	N/A	YES	N/A	Page 53, Line 29, Comment: We think it should read "for signs" not "of signs".
2A.15	N/A	N/A	YES	Page 55, Line 7, Comment: We would like this to read "...low-volume rural, urban, suburban, and special-purpose roads..." The reason is we have a number of urban and suburban areas where we would like to locate signs less than the lateral offset prescribed by the section. In particular, we have some improved roadways meeting current AASHTO Green Book standards with shoulders and no curb and gutter in a suburban setting. We do not think placing the signs 12' away from the edge of travelled way is a good way to make the signs visible in what is otherwise a suburban setting where if we had curbs the edge of the sign would be 2' behind the curb instead.
2A.22	N/A	YES	N/A	Page 59, Line 30, Comment: We find this wording difficult to understand and suggest the following instead. "If either one or both of the conditions of Paragraphs 1 of the Section do exist, the divided highway crossing should be signed and marked as two separate intersections."
2B.03	N/A	N/A	YES	Page 63, Line 41, Comment: We disagree with the requirement to use a supplemental sign on the near side of the intersection if the sign is more than 120 feet away for a few of reasons. We would prefer to use a larger sign size instead of requiring a near-side sign between distances 120'-180' and then a supplemental sign on the near-side if over 180'. This would also help reduce sign clutter at intersections. This would be similar to requirements for traffic signal head visibility.
2B.11	N/A	YES	N/A	Page 69, Line 42, Comment: We find the wording for condition "D" to be vague and we're unclear what this means or where it would be applied.
2B.19	N/A	N/A	YES	Page 73, Line 15, Comment: Requiring the R1-5 sign to be placed 20'-50' in advance of the nearest crosswalk line frequently obstructs the visibility of a RRFB, when present, at the crosswalk. Please allow for the omission of the R1-5 sign if an RRFB or other higher level warning device is installed at the crosswalk.
2B.21	N/A	N/A	YES	Page 76, Line 12, Comment: The National Transportation Safety Board Report NTSB/SS-17/01 specifically states in their Section 4.1 Findings for their fourth finding that "The Manual on Uniform Traffic Control Devices guidance for setting speed limits in speed zones is based on the 85th percentile speed, but there is not strong evidence that, within a given traffic flow, the 85th percentile speed equates to the speed with the lowest crash involvement rate on all road types." Additional their sixth finding states that "Expert systems such as USLIMITS2 can improve the setting of speed limits by allowing traffic engineers to systematically incorporate crash statistics and other factors in addition to the 85th percentile speed, and to validate their engineering studies." NCHRP Project No. 3-67 which developed USLIMITS2 frequently references the 50th percentile

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				depending on the type and location of the roadway being analyzed for speed limit setting. We would like to see the 50th percentile listed in addition to the 85th percentile for the MUTCD's guidance "A" and USLIMITS2 or a generic "Expert Systems" listed as a new guidance "E" in the MUTCD.
2B.26	N/A	N/A	YES	Page 82, Line 24, Comment: We oppose the use of the R6-1, R6-2R, and One-Direction Large Arrow sign and would propose keeping the R6-4 and R6-4a signs in the central island of the roundabouts. The city approximately 4 years ago finally changed all of our roundabout signage in the central islands for all roundabouts city-wide to meet the current 2009 MUTCD. This change will have a negative unnecessary economic effect on our signing budget for the coming years if we have to change them all again.
2B.28	N/A	N/A	YES	Page 84, Line 1, Comment: Please change the "should" to "shall" for the use of R3-7 signs adjacent to full-width portion of mandatory turn lanes and should to shall for not be installed adjacent to a through lane in advance of a turn bay taper or adjacent to a turn bay taper. The R3-7 sign is frequently located in the incorrect location and provides misleading information to drivers. It also reduces the usefulness of R3-7 signs when they are placed in mandatory turn lanes as drivers have ignored all of the other signs.
2B.40	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 91, Line 43, Comment: The section appears to reference itself.
2B.50	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 99, Line 11, Comment: We disagree with the change to signing in and approaching roundabouts as a whole. Please keep the R6-4 series signs for use in the roundabout.
2B.50	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 99, Line 15, Comment: We find it highly unlikely that jurisdictions are going to stack two signs, the One-Direction Large Arrow sign above or below the One Way sign in the middle of the roundabout, which then necessitates the use of the R6-5P plaques under each Yield sign. This is sign clutter for roundabouts. This also appears to support the idea that the One Way signs are too small for drivers to see in the middle of the roundabout, and that the R6-4 series signs should be kept in use instead.
2B.52	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 100, Line 16, Comment: Please keep this section for the reasons listed above.
2B.52	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 100, Line 22, Comment: See previous comments regarding roundabout signing.
2B.60	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 108, Line 11, Comment: Seeing as how the MUTCD failed to provide a sign for the left turns on flashing yellow arrows, many jurisdictions, including ours, designed a sign on our own and have used it extensively in the field. We have been changing over many of our previously left turn on green ball signals to left turn on flashing yellow arrows and replacing the signs at the same time. Now requiring the new R10-12a text sign would have an a negative economic effect on our traffic signal maintenance budget trying to get all of those signs replaced. We'd like permission to keep our existing R10-FYA sign as we have called it, shown in the adjacent column. This sign is very similar to the design of the existing R10-12 sign.



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2B.60	N/A	N/A	YES	<p>MUTCD_11ed_NPA_Text-Mark-up.pdf Page 108, Line 42, Comment: The proposed R10-23a sign has way too many words and too many lines of text. We've seen and used a sign that looks similar to the one in the adjacent column that reads "Crosswalk; Stop on Red Ball; Stop on Flashing Red Then Proceed If Clear". While it is a larger physical sign, it is easier to understand and clearer than the wall of text that is proposed in the R10-23a sign.</p> 
2B.60	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 109, Line 3, Comment: Is this like a traffic signal warrant or should a different word be used? Perhaps "Where conditions may require..."?
2B.60	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 109, Line 10, Comment: Please replace "may" with "shall". Otherwise in some situations it is unclear who has the right-of-way at an intersection.
2B.61	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 110, Line 9, Comment: Is it "U Turn" or "U-Turn" as the use is not consistent throughout the document.
2B.71	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 114, Line 2, Comment: Please define "Minor Crash". Would "Non-injury" be more appropriate?
2C.04	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 121, Line 6, Comment: Please keep the sentence that started with "Warning signs should not...". We find it beneficial to place signs close to where the drivers would need to react to the issue being warned about on the sign. Placing a warning sign too far in advance in an urban area that already has sign clutter and competing driver interest is of no benefit to drivers other than to allow the jurisdiction to say they warned drivers but it wasn't at the correct time.
2C.10	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 125, Line 28, Comment: The One-Direction Large Arrow sign has gone from we shall not use them, to it's optional, and on top of that we can't use the R6-4 series signs we're using now. This has negative economic effects on our signing budget for what appears to be little value.
2C.10	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 125, Line 31, Comment: Why would we want to place a black on yellow One-Direction Large Arrow sign in the middle of the roundabout? That's a warning sign, not a black on white regulatory sign requiring drivers to turn right. If the proposed newly required One-Way sign is too small, keep the existing R6-4 series signs as we've previously requested.
2C.36	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 137, Line 15, Comment: We strongly disagree with this change to guidance from a standard. We have one example where we reduced the crash rate at a signalized approach by ~75 percent after we identified that drivers could not see at least two signal faces for the distance specified in Table 4D-2. This change in particular seems to be completely counter to the changes that are being proposed related to Table 2C-3 where for deceleration to 0 mph now (we think unnecessarily) will not allow for the 180 foot of sign legibility. In summary, it appears that based on the proposed MUTCD changes that drivers that have to stop can't see a sign until they are adjacent to the sign, yet for a traffic signal where they may have to stop for a red signal indication not only can they see the traffic signal in

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				advance, they only need to see a single signal indication? We strongly disagree with both of these proposed changes.
2C.48	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 143, Line 8, Comment: We think that an additional guidance statement should be added that states "The W9-4 sign should be installed in advance of the W4-8 sign."
2C.59	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 148, Line 47, Comment: This sentence creates a circular reference back to the 2009 MUTCD when the proposed MUTCD references the Traffic Control Devices Handbook.
2C.59	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 148, Line 15, Comment: We find that the advisory speed plaques are buried in the document too far away from the horizontal warning sign section, which is where we've found the advisory speed plaques are most used.
2C.59	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 148, Line 24, Comment: The W13-1P plaque is not shown in figure 2C-17 and is shown Figure 2C-1 with the horizontal warning signs. Yet the descriptive text related to W13-1P is contained in section 2C.59. It appears the MUTCD can't make up their mind as to if the warning plaques get their own section or if the Advisory Speed plaque specifically should be combined with the horizontal alignment signs both in the figures and the text.
2C.59	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 149, Line 10, Comment: Please leave the ball bank indicator criteria in this section as it currently exists. The earlier change references the Traffic Control Devices Handbook, but that reference just cites the 2009 MUTCD. Indirectly, the proposed MUTCD is just citing an earlier version of the MUTCD. We are also concerned that drivers will find different jurisdictions using different criteria which does not promote a uniform response from drivers as they travel from one jurisdiction to another which may be using different criteria for setting advisory speeds on horizontal curves.
3A.01	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 335, Line 31, Comment: Does "adequately" have a value associated with it? We're aware of Section 3A.05 which is being reserved for the future, but we're not sure how to evaluate "adequately" in the meantime.
3A.04	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 337, Line 30, Comment: We disagree with this requirement to widen the normal width line for higher speed roadways. This appears to be primarily driven by the prospect of autonomous vehicles for those who can afford them, but the costs of the extra pavement marking will be based out of the general city budget. This has a negative economic effect on our pavement marking budget.
3A.04	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 337, Line 43, Comment: Please define the distance necessary to be recognized as a double line. Is this recognized by machine vision, or a human driver?
3B.03	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 340, Line 36, Comment: We disagree with changing the sentence that starts "The passing sight distance on a vertical curve..." along with the following sentences from standard to support. This standard provides a way for agencies to uniformly apply passing sight distances and reduces the likelihood of an agency suggesting that both vehicles will not be passenger vehicles, but one will be a truck or SUV with a higher object height or driver eye height.
3B.06	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 344, Line 31, Comment: We're not sure what this line is supposed to mean. Perhaps a figure would provide clarification?

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3B.07	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 346, Line 20, Comment: The sentence that starts with "the lane drop marking should begin no closer..." we think should be a shall (standard) statement and also somehow be referenced in the R3-7 signing section as many engineers placing the R3-7 signs do not realize where the first R3-7 sign should be placed. We do not think the majority of the public understands the lane drop markings alone yet, and we've had some success at reducing late lane changes out of mandatory turn lanes by adding R3-7 signs at the start of the lane drop marking as noted currently as guidance in this section.
3B.19	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 357, Line 26, Comment: Suggest adding an exception to the sign adjacent to the yield line pavement marking to reduce occlusion of RRFB or higher level traffic control device. Wording could be something like "...that requires vehicles to yield such as an RRFB or higher level traffic control device." It's unclear if the presence of the RRFB at the crosswalk location exempts us from placing a R1-5 sign in advance of the crosswalk thereby hiding the RRFB from drivers.
3B.19	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 358, Line 6, Comment: Suggest adding "...shall be used unless a RRFB or higher level warning device is in place."
3B.19	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 358, Line 7, Comment: Suggest adding "(R1-5 series) sign or RRFB or higher level warning device is in place in advance of a crosswalk that..."
3B.30	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 367, Line 11, Comment: Figure 3B-28 is missing.
3B.31	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 367, Line 15, Comment: Is the MUTCD really going to call a "Diverging Diamond Interchange" which the FHWA has used in publications for years now a "Transposed Alignment Crossroad"? Why is the MUTCD adding new terms which will likely increase confusion.
3B.31	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 367, Line 37, Comment: Figure 3B-29 is missing.
3C.05	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 371, Line 20, Comment: We strongly disagree with the requirement that the lateral spacing between subsequent individual longitudinal elements in a high-visibility crosswalk shall be uniform. We have very intentionally placed these longitudinal elements outside of wheel tracks to try and increase the longevity, visibility, and durability of the pavement markings which would otherwise need to be maintained more frequently with a negative economic effect on our pavement marking budget. We have tried to place these pavement marking elements on lane lines or in the center of the wheel tracks, which is typically the center of the lane. However, when lane widths vary between through lanes and turning lanes the spacing between the longitudinal elements must change as well. Our current guidance reads "When used, the lines should be 24 inches wide and separated by gaps not less than 3' and not more than 5' based on the lane width. The design of the lines and gaps should be spaced as evenly as possible across the lanes of vehicle travel and avoid the wheel paths as much as possible." In practice, we try not to change the gap between the longitudinal lines by more than 0.25 feet between subsequent longitudinal lines so it is not as obvious the spacing is not exactly uniform.
3C.05	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 371, Line 23, Comment: We strongly disagree with the requirement that the lateral spacing between subsequent individual longitudinal elements in a high-visibility crosswalk shall be uniform. We have very intentionally placed these longitudinal elements outside of wheel

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				tracks to try and increase the longevity, visibility, and durability of the pavement markings which would otherwise need to be maintained more frequently with a negative economic effect on our pavement marking budget. We have tried to place these pavement marking elements on lane lines or in the center of the wheel tracks, which is typically the center of the lane. However, when lane widths vary between through lanes and turning lanes the spacing between the longitudinal elements must change as well. Our current guidance reads "When used, the lines should be 24 inches wide and separated by gaps not less than 3' and not more than 5' based on the lane width. The design of the lines and gaps should be spaced as evenly as possible across the lanes of vehicle travel and avoid the wheel paths as much as possible." In practice, we try not to change the gap between the longitudinal lines by more than 0.25 feet between subsequent longitudinal lines so it is not as obvious the spacing is not exactly uniform.
3C.07	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 371, Line 42, Comment: Perpendicular Crosswalks is a terrible name due to the likely confusion it will cause with the adjacent ramp elements which are described as parallel ramp, perpendicular ramp, and blended transition to follow PROWAG nomenclature. Please just call what is being proposed as a "perpendicular" crosswalk marking a "ladder" crosswalk marking which is entire intuitive and doesn't conflict with the adjacent ramp elements. Otherwise we're going to end up in discussions where we try and describe the crossing of a street as a parallel ramp with perpendicular markings, which if somebody isn't listening closely is going to result in a perpendicular ramp. FHWA, ITE, NCUTCD, and NACTO have all historically described this as a Continental crosswalk as well.
3C.11	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 373, Line 12, Comment: Is the MUTCD really going to call a "Diverging Diamond Interchange" which the FWHA has used in publications for years now a "Transposed Alignment Crossroad"? Why is the MUTCD adding new terms which will likely increase confusion.
3C.11	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 373, Line 2, Comment: Figure 3B-29 is missing.
3D.02	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 375, Line 14, Comment: We are unsure what the "reduce the gap between 10-ft lane lines (down to a 10-ft space between lines)." really means. Could the proposed MUTCD please provide a figure?
3D.04	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 375, Line 42, Comment: The referenced Figure 3D-2 shows the yield lines to be optional, while the text says a yield line shall be used at multilane roundabouts.
3D.06	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 376, Line 36, Comment: Can we please keep the "fish-hook" language that is already familiar to the profession? Fish-hook is a better visual description than elongated anyway.
3D.06	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 376, Line 43, Comment: This does not seem to match any of the figures and does not seem like we should use an oval in the circulating lanes.
3H.01	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 389, Line 31, Comment: This seems to conflict with the standard above. It can be used if it does not communicate with drivers, but it can only be used to supplement other markings?
3H.01	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 389, Line 37, Comment: What if it does not communicate with traffic? This seems to contradict other areas in this section.

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3H.03	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 390, Line 20, Comment: Again, we disagree that the right-of-way is dedicated exclusively to highway-related functions as noted earlier in our comments. Our right-of-way is used for sidewalks, bike lanes, benches, tables, and other amenities, particularly in downtown areas.. We recommend removal of this sentence.
4A.05	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 405, Line 23, Comment: Comma not required.
4A.05	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 405, Line 28, Comment: What if we have a "dead red" law?
4A.05	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 405, Line 29, Comment: This is a really long sentence and should be broken up if possible.
4A.05	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 405, Line 30, Comment: Sign reference is RX-XX.
4A.05	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 405, Line 34, Comment: What does "; and shall remain stopped until a GREEN BICYCLE signal indication permitting the movement indicated by such RED BICYCLE signal indication is displayed." even mean?
4A.05	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 406, Line 1, Comment: Sign reference is RX-XX.
4A.07	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 406, Line 30, Comment: We disagree with trying to summarize the guidance in sections B-G when the reference listed in A provides an entire document on roadway crashworthiness and fixed object placement considerations. Other areas of the proposed MUTCD have removed restating guidance provided from other more comprehensive references. We recommend removal of sections B-G.
4A.08	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 406, Line 89, Comment: This list did not include signs related to bicycles at traffic signals.
4A.10	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 407, Line 35, Comment: Did they mean "responsible agency" rather than just "responsible"?
4D.05	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 425, Line 29, Comment: We strongly disagree with this change from standard to guidance for lines 29-38. If the signal heads can not be seen by drivers, they can not be obeyed or followed. We have had at least one instance where adding signal heads so they were more visible reduced the crash rate by ~75%.
4F.01	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 438, Line 33, Comment: The green arrow for the left turn and the overlap green arrow right turn should never be displayed at the same time in our opinion, as the arrows denote a protected movement. U-turn drivers shown a green left turn arrow at a permissive U-turn location should not have to consider if that arrow actually means the valid U-turn movement is not actually protected due to the presence of an overlap green arrow right turn that they are unaware of. Please change the language to not allow overlap green arrows at the same time as a signal head which shows a protected left turn but also allows U-turns at the same time.
4F.01	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 438, Line 36, Comment: Section 2B.63 does not seem to be an appropriate reference. Likely should refer to either 2B.60 or 2B.61.
4F.16	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 455, Line 28, Comment: We find the wording in this section confusing and seems possibly contradictory from a driver's perspective. Additional clarification as to what this means is requested.



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4F.17	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 457, Line 37, Comment: There is current discussion in the traffic engineering industry as to the general acceptance of this document and we do not think it should be referenced at this time.
4G.04	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 463, Line 5, Comment: We would like this to read "mode should have a minimum duration of 6 seconds." as we have some larger intersections where we have found higher all-red times to be beneficial prior to resuming normal operation.
4I.05	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 472, Line 3, Comment: We disagree with trying to summarize the guidance in lines 3-25 when the reference listed on line 4 provides detailed requirements. Other areas of the proposed MUTCD have removed restating guidance provided from other more comprehensive references. We recommend removal of these sections and listing more detailed appropriate sources. We'd also like to recommend referencing PROWAG 2011 even through it is not final as a solid reference.
4L.01	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 488, Line 18, Comment: Paragraph X is not defined.
5A.03	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 511, Line 28, Comment: Please define what DAS stands for. We do not expect to have to look within the Automated Driving System (ADS) definition to find another definition for any acronym we don't know.
5A.03	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 511, Line 31, Comment: Please define what DDT stands for. We do not expect to have to look within the Automated Driving System (ADS) definition to find another definition for any acronym we don't know.
5A.03	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 511, Line 34, Comment: Please define what ODD stands for. We do not expect to have to look within the Automated Driving System (ADS) definition to find another definition for any acronym we don't know.
5A.04	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 512, Line 2, Comment: Needs a ";" at the end.
5B.02	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 513, Line 44, Comment: What is considered "decorative"? This needs to be more clearly defined.
5B.04	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 514, Line 36, Comment: Should this be asphaltic oil rather than asphalt as asphalt itself can't be sprayed.
5B.05	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 515, Line 8, Comment: "V2I infrastructure" seems redundant as the I in V2I is infrastructure. Perhaps "V2I communications"?
5B.06	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 515, Line 14, Comment: What is the appropriate road marking we should place for the end of a bike lane? We can't find one proposed in the MUTCD anywhere.
6A.01	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 517, Line 6, Comment: "Site Roadway" is not defined in Section 1C.02.
6A.01	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 517, Line 6, Comment: Consider defining "road users" elsewhere and removing the majority of lines 6-9.
6A.02	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 519, Line 36, Comment: When reducing the road capacity it is not guaranteed that demand will exceed the reduced available capacity. Please change "demand will" to "demand may".
6A.02	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 520, Line 31, Comment: Please provide a reference to what defines clearly visible and clean.

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6A.02	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 531, Line 31, Comment: We recommend the removal of the sentence that reads "Work zone personnel may also provide assistance to the pedestrian as necessary." due to perceived potential liability while helping another individual.
6D.06	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 541, Line 14, Comment: We strongly disagree with the change from standard to guidance. A flagger station that is positioned at a location without sufficient distance to stop will likely result in a fatality. This should remain a shall condition for flagging operations.
6J.01	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 562, Line 19, Comment: This guidance appears to directly conflict with Section 5B.04. Line 25 "should" vs "shall".
6J.01	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 562, Line 22, Comment: Is it the job of the MUTCD to determine if the removal method should minimize pavement scarring?
6J.01	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 562, Line 25, Comment: Should this be asphaltic oil rather than asphalt as asphalt itself can't be sprayed.
6J.03	N/A	N/A	YES	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 563, Line 28, Comment: The 5 feet shall be installed every 40 feet appears to mirror the new requirement of 10'/30' pavement marking spacing. What happens if an agency uses a different cycle length (e.g. 6'/18') but also uses TRPMs during maintenance operations. Typically during maintenance operations the TRPMs are placed prior to removing the existing pavement marking. Would the TRPMs need to be spaced at the new required interval, or could we space the TRPMs to match the existing pavement marking which would be much easier to accomplish since the marking is already there for reference and is easier to verify.
6J.03	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 563, Line 37, Comment: Could the MUTCD show a figure detailing this text? We're not sure what this means.
6P.01	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 611, Line 31, Comment: Table 6P-2 appears to be missing.
7B.04	N/A	YES	N/A	MUTCD_11ed_NPA_Text-Mark-up.pdf Page 673, Line 42, Comment: Section 2B.12 likely should reference 2B.20 instead.
2A.12	N/A	N/A	YES	Figure 2A-2, Comment: We have a lot of areas that are not rural, and are more suburban in nature but do have sidewalks and crosswalks but do not have curb and gutter. We're finding it difficult to agree with the current MUTCD guidance that states in an area without curb and gutter that the signs should be a minimum of 12 feet from the edge of traveled way. We'd like some additional flexibility added to the MUTCD to address these issues and allow as little as 4' from the edge of travelled way to the edge of the sign.
2A.12	N/A	N/A	YES	Figure 2A-2, Comment: On graphic "C" could this also read "...or residential area and urban / suburban areas"?
2A.12	N/A	YES	N/A	Figure 2A-3, Comment: Please draw in the back of curb or edge of shoulder for all diagrams in this figure. It has never been clear if

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				some measurements are from the edge of travelled way, face of curb, or back of curb.
2A.12	N/A	YES	N/A	Figure 2A-4, Comment: Are the R3-5 signs optional both on the mast arm and at the Alternate Signing at Overhead Location diagrams? They seem unnecessary as a requirement, especially if you have arrows on the traffic signal heads indicating the direction.
2B.52	N/A	N/A	YES	Figure 2B-22, Comment: We oppose the use of the R6-1, R6-2R, and One-Direction Large Arrow sign and would propose keeping the R6-4 and R6-4a signs in the central island of the roundabouts. The city approximately 4 years ago finally changed all of our roundabout signage in the central islands for all roundabouts city-wide to meet the current 2009 MUTCD. This change will have a negative unnecessary economic effect on our signing budget for the coming years if we have to change them all again.
2B.52	N/A	N/A	YES	Figure 2B-22, Comment: There is frequently quite a bit of deflection in the roadway alignment on the roundabout approach and the R6-5P plaque may not be visible on approach. We would prefer to keep the W2-6 sign instead of the unnecessary R6-5P plaque.
2B.52	N/A	N/A	YES	Figure 2B-23, Comment: We oppose the use of the R6-1, R6-2R, and One-Direction Large Arrow sign and would propose keeping the R6-4 and R6-4a signs in the central island of the roundabouts. The city approximately 4 years ago finally changed all of our roundabout signage in the central islands for all roundabouts city-wide to meet the current 2009 MUTCD. This change will have a negative unnecessary economic effect on our signing budget for the coming years if we have to change them all again.
2B.52	N/A	N/A	YES	Figure 2B-23, Comment: There is frequently quite a bit of deflection in the roadway alignment on the roundabout approach and the R6-5P plaque may not be visible on approach. We would prefer to keep the W2-6 sign instead of the unnecessary R6-5P plaque.
2C.24	N/A	N/A	YES	Figure 2C-12, Comment: Having different size arrows is confusing. It gives us the impression that the large arrow is for a higher class of roadway. Please use the same size arrows with a vertical line separating them.
3B.05	N/A	N/A	YES	Figure 3B-7, Comment: The dimension for 8 to 16 feet is unclear what is being dimensioned (e.g. the tip of the arrow, the end of the arrow shaft, etc.). Please dimension from the tail (bottom) of the arrow to the bottom of the arrow.
3B.05	N/A	YES	N/A	Figure 3B-7, Comment: Please label the cross streets and driveways on the diagrams.
3B.05	N/A	N/A	YES	Figure 3B-7, Comment: Within "B - Intersecting Driveways" it appears that the side-street is not a driveway at the bottom of the page, and is a cross street, and should be labeled as such.
3B.06	N/A	YES	N/A	Figure 3B-13, Comment: It says it's Sheet 2 of 2, but Sheet 1 of 2 is missing which likely contains examples A and B.
3C.03	N/A	N/A	YES	Figure 3C-1, Comment: Perpendicular Crosswalks is a terrible name due to the likely confusion it will cause with the adjacent ramp elements which are described as parallel ramp, perpendicular ramp, and blended transition to follow PROWAG nomenclature. Please just call what is being proposed as a "perpendicular" crosswalk marking a "ladder" crosswalk marking which is entire intuitive and doesn't conflict with the adjacent ramp elements. Otherwise we're going to end up in discussions where we try and describe the crossing of a street as a parallel ramp with perpendicular markings, which if somebody isn't listening closely is going to result in a perpendicular ramp. FHWA, ITE, NCUTCD, and NACTO have all historically described the "Longitudinal Bar" as a Continental crosswalk as well.

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3D.01	N/A	YES	N/A	Figure 3D-2, Comment: The Yield lines in this graphic are shown as optional, but in Section 3D.04 is a Standard (shall) condition.
3D.01	N/A	YES	N/A	Figure 3D-3, Comment: Where are the Yield lines for multi-lane approaches like Section 3D.04 states?
3D.01	N/A	YES	N/A	Figure 3D-4, Comment: Where are the Yield lines for multi-lane approaches like Section 3D.04 states?
3D.01	N/A	YES	N/A	Figure 3D-5, Comment: Where are the Yield lines for multi-lane approaches like Section 3D.04 states?
3D.01	N/A	YES	N/A	Figure 3D-6, Comment: Where are the Yield lines for multi-lane approaches like Section 3D.04 states?
3D.01	N/A	YES	N/A	Figure 3D-7, Comment: Where are the Yield lines for multi-lane approaches like Section 3D.04 states?
3D.01	N/A	YES	N/A	Figure 3D-8, Comment: Where are the Yield lines for multi-lane approaches like Section 3D.04 states?
3H.06	N/A	YES	N/A	Figure 3H-4, Comment: It would be helpful to have additional figures drawn showing other situations such as weaving areas, in the Standard Section 3H.06.
3J.03	N/A	N/A	YES	Figure 3J-2, Comment: In Figure B, we don't think the double white should be double white, and should be a single white line.
3J.03	N/A	N/A	YES	Figure 3J-2, Comment: In Figure B, the stop line is too far forward for all drivers to view oncoming traffic approaching from nearly behind their vehicle. The stop line should be pulled further back from the intersection.
3J.03	N/A	N/A	YES	Figure 3J-2, Comment: In Figure B, we don't think the double white line, if used, should go all the way to the gore, and that it should only go part way to the gore on the right side of the page.
4I.05	N/A	YES	N/A	Figure 4I-2, Comment: In the ramp in the lower left, where does the 1 foot minimum dimension come from? We could not find that described in the associated text.
4I.05	N/A	N/A	YES	Figure 4I-2, Comment: In the ramp in the lower left, we do not understand how a button face that is parallel to the crosswalk is going to be accessible in the shaded areas given the clear space and pedestrian access route requirements in front of the button when the button is located so close to the edge of the ramp wing.
6I.02	N/A	YES	N/A	Figure 6I-1, Comment: Can the MUTCD change the text and symbols and reduce the size of both? When we have these on sidewalks adjacent to streets drivers start to follow the bike/pedestrian detours rather than the signed vehicle detours. That would also change the sign dimensions in Table 6I-1.
6P.01	N/A	N/A	YES	Figure 6P-54, Comment: Why do we need a sign that says "Lane Ends Merge Left" when that is not normally used for a right lane closure? Is one extra sign needed just because it is approaching a roundabout because that does not make sense to us.
7B.02	N/A	N/A	YES	Figure 7B-3, Comment: Could you please change this figure to show something more likely to occur and which would have higher driver compliance than reducing the speed from 45 mph to 20 mph in a school zone? Perhaps show 35 mph to 25 mph, or any other 10 mph reduction that is more likely?

**TABLE 2. AGREE WITH ANOTHER COMMENTER.** If you agree with another commenter, please indicate the commenter with whom you agree with and note any additional information FHWA may find helpful or any exceptions.

Docket Comment Number and/or Commenter Name	Agree with commenter's comments as written	Agree with commenter; with exception(s)	Additional information helpful to FHWA, or exceptions to commenter's comments