

## Attachment No. 2

### SIGNALS NO. 2

This recommendation was approved by the National Committee Council on 01/19/07.

#### TECHNICAL COMMITTEE RECOMMENDATION

**TECHNICAL COMMITTEE:** Signals Technical Committee

**DATE OF ACTION:** June 28, 2006

**TOPIC:** **Proposed modifications to Part 4 regarding the use of the word “safe” and its variations**

**ORIGIN OF REQUEST:** Edit Committee

**DISCUSSION:** The Edit Committee asked all Technical Committees to review use of the word “safe” and its variations in their parts of the MUTCD. Jim Pline of the Edit Committee had received a letter from the Attorney General of the State of Washington questioning numerous instances of the word safe in the MUTCD and expressing concern for the liability which is implied when the manual states, in its Standard, Guidance and Support statements, that something be done in a safe manner or that safety will result with the use of a traffic control device.

The logic behind the review is that the organization having jurisdiction over the design and operation of the roadway component cannot, by its own actions, make the highway “safe.” Webster’s dictionary defines “safe” as “free from harm or risk.” While completely safe and complete safety is a worthwhile goal, these cannot be achieved in the real world. The effectiveness of traffic control devices is dependent upon the road user observing, understanding, and reacting to various traffic control devices and road conditions in a timely and appropriate manner. These road user reactions have a significant influence on safety.

A word search was performed on the current Signals Technical Committee (STC) version of Part 4 to identify instances where the word “safe” and its variations such as “safety” and “safely” are used. The STC provided this information to its members for review. The STC completed that review at the June 2006 meeting. The use of “safe” and its variations was reviewed on a case-by-case basis. In

some instances, the use of the word is recommended to be retained. In other cases, the STC recommends some text changes. In cases where revisions are recommended, the intent of the original text is retained.

The Signals Technical Committee recommends that the National Committee submit the following to sponsors for comments:

- Retain the existing text using the word “safe” and/or its variations in items 1, 3, 5, 6, 7, 8, 13, 19, & 20 listed on the following pages.
- Modify the existing text using the word “safe” and/or its variations in items 2, 4, 9, 10, 11, 12, 14, 15, 16, 17, & 18 listed on the following pages.

**COMMITTEE ACTIONS :**

See following pages for the locations where “safe” and its variations were identified in Part 4 and the action, if any, recommended by the STC.

**VOTE:**

Separate votes were taken in cases where the STC is recommending a change. The results votes taken are listed below the applicable items on the following pages.

**REFERENCE TO AFFECTED  
PAGE NUMBERS IN MUTCD:**

Various as follows:           **Section 4B.03**, Page 4B-2;  
**Section 4C.01**, Page 4C-1; **Section 4D.01**, Page 4D-1;  
**Section 4D.03**, Page 4D-2; **Section 4D.05**, Page 4D-4;  
**Section 4D.19**, Page 4D-20; **Section 4D.20**, Page 4D-21;  
**Section 4E.03**, Page 4E-1; **Section 4E.06**, Page 4E-3;  
**Section 4F.01**, Page 4F-1; **Section 4G.01**, Page 4G-1;  
**Section 4J.01**, Page 4J-01; **Section 4J.02**, Page 4J-1

## **Proposed Modifications to Part 4 Regarding the Use Of “Safe” And Its Variations**

The word “safe” and its variations, as used in the current Signals Technical Committee version of Part 4, are shown in red italics text in the following items to identify the reason for consideration of revisions to the paragraph(s). Proposed additions are shown in blue underlined text and proposed deletions are shown in ~~red double-strikethrough~~. The action recommended by the Signals Technical Committee is listed below each item.

### **1. Paragraph 3 of Section 4B.03 (Advantages and Disadvantages of Traffic Control Signals):**

Support

Traffic control signals are often considered a panacea for all traffic problems at intersections. This belief has led to traffic control signals being installed at many locations where they are not needed, adversely affecting the *safety* and efficiency of vehicular, bicycle, and pedestrian traffic.

*STC Action: The STC felt that the existing wording, including the use of “safety” was appropriate so no action was taken.*

### **2. Paragraph 2 of Section 4C.01 (Studies and Factors for Justifying Traffic Control Signals):**

Standard

**The investigation of the need for a traffic control signal shall include an analysis of the applicable factors contained in the following traffic signal warrants and other factors related to existing operation and *safety* at the study location and the potential to improve these conditions.**

*STC Action: A motion was made and approved on a 30/1/0 vote to modify the text of this paragraph as shown. The STC felt that the use of “safety” in this paragraph was appropriate so the motion included continuing its use.*

*At the January 2007 meeting, revisions were made in response to sponsor comments. The text shown above incorporates the changes and is what was approved by the National Committee Council.*

### **3. Paragraph 6 of Section 4C.01 (Studies and Factors for Justifying Traffic Control Signals):**

#### Guidance

A traffic control signal should not be installed unless an engineering study indicates that installing a traffic control signal will improve the overall **safety** and/or operation of the intersection.

*STC Action: The STC felt that the existing wording, including the use of “safety” was appropriate.*

#### 4. Paragraph 1 of Section 4D.01 (General):

##### Support

The features of traffic control signals of interest to road users are the location, design, and meaning of the signal indications. Uniformity in the design features that affect the traffic to be controlled, as set forth in this Manual, is especially important for the safety and efficiency of traffic operations.

*STC Action: A motion was made and approved on a 30/2/0 vote to modify the text of this paragraph as shown above. This change eliminates the use of “safe” in this paragraph. The use of “safety” was considered an appropriate alternative.*

#### 5. Paragraph 4 of Section 4D.03 (Provisions for Pedestrians):

##### Guidance

**Safety** considerations should include the installation, where appropriate, of accessible pedestrian signals (see Sections 4E.06 and 4E.09) that provide information in nonvisual format (such as audible tones, verbal messages, and/or vibrating surfaces).

*STC Action: The STC felt that the existing wording, including the use of “safety”, was appropriate so no action was taken.*

#### 6. Paragraph 3, Item B4(c), of Section 4D.05 (Application of Steady Signal Indications):

**Standard** (for when a steady CIRCULAR YELLOW shall not be displayed for permissive left turns unless one of four conditions occur, and (c) below is one of those conditions)

- (c) **An engineering study has determined that, because of unique intersection conditions, the conditions described in items (a) and (b) above cannot reasonably be implemented without causing significant operational or **safety** problems and that the volume of impacted left-turning traffic is relatively low, and those left-turning drivers are advised that the opposing**

traffic is not simultaneous being shown a CIRCULAR YELLOW signal indication if this operation occurs continuously by the installation near the left-most signal head of a W25-1 sign (see Section 2C.39) with the legend ONCOMING TRAFFIC HAS EXTENDED GREEN; or

*STC Action: The STC felt that the existing wording, including the use of “safety” was appropriate so no action was taken.*

## **7. Paragraph 1, Item B, of Section 4D.19 (Lateral Placement of Signal Supports and Cabinets):**

### Guidance

- B. Signal supports should be placed as far as practical from the edge of the traveled way without adversely affecting the visibility of the signal indications.

Where supports cannot be located based on the recommended AASHTO clearances, consideration should be given to the use of appropriate *safety* devices.

No part of a concrete base for a signal support should extend more than 100 mm (4 in) above the ground level at any point. This limitation does not apply to the concrete base for a rigid support.

*STC Action: The STC felt that the existing wording, including the use of “safety” was appropriate so no action was taken.*

## **8. Paragraph 5 of Section 4D.20 (Temporary Traffic Control Signals):**

### Guidance

A temporary traffic control signal should be used only if engineering judgment indicates that installing the signal will improve the overall *safety* and/or operation of the location. The use of temporary traffic control signals by a work crew on a regular basis in their work area should be subject to the approval of the jurisdiction having authority over the roadway.

*STC Action: The STC felt that the existing wording, including the use of “safety”, was appropriate.*

## **9. Paragraph 2, Item A and C, of Section 4E.03 (Application of Pedestrian Signal Heads):**

### Guidance (on when to use Ped heads)

- A. If it is necessary to assist pedestrians in ~~making a reasonably safe crossing~~ deciding when to begin crossing the roadway in the chosen direction or if

engineering judgment determines that pedestrian signal heads are justified to minimize vehicle-pedestrian conflicts;

*STC Action: A motion was made and approved on a 32/0/0 vote to modify the text of this paragraph as shown above. This change eliminates the use of "safe" in this paragraph.*

#### **10. Paragraph 2, Item C, of Section 4E.03 (Application of Pedestrian Signal Heads):**

Guidance (on when to use Ped Heads)

- C. If no vehicular signal indications are visible to pedestrians, or if the vehicular signal indications that are visible to pedestrians starting or continuing a crossing provide insufficient guidance for them to decide when ~~it is safe~~ to begin crossing the roadway in the chosen direction, such as on one-way streets, at T-intersections, or at multiphase signal operations.

*STC Action: A motion was made and approved on a 32/0/0 vote to modify the text of this paragraph as shown above. This change eliminates the use of "safe" in this paragraph.*

#### **11. Paragraph 1 of Section 4E.06 (Location and Height of Pedestrian Signal Heads):**

Support

The primary technique that pedestrians who have visual disabilities use to cross streets at signalized locations is to initiate their crossing when they hear the traffic in front of them stop and the traffic alongside them begin to move, corresponding which often corresponds to the onset of the green interval. ~~This technique is effective at many signalized locations.~~ The existing environment is often not sufficient to provide the information that pedestrians who have visual disabilities need to operate safely cross a roadway at a signalized location. ~~Therefore, many signalized locations will not require any accessible pedestrian signals.~~

*STC Action: A motion was made and approved on a 32/0/0 vote to modify the text of this paragraph as shown above. This eliminates the use of "safely" in this paragraph.*

*The above text was coordinated with and incorporated into recommended changes to Section 4E.06 approved by the National Committee Council at the June 2006 meeting as part of the Signals No. 4 item addressing various accessible pedestrian signals issues.*

**12. Paragraph 2 of Section 4E.06 (Location and Height of Pedestrian Signal Heads):**

Guidance

If a particular signalized location presents difficulties for pedestrians who have visual disabilities to cross the roadway ~~safely and effectively~~, an engineering study should be conducted that considers the ~~safety and effectiveness for~~ needs of pedestrians in general, as well as the information needs of pedestrians with visual disabilities.

*STC Action: A motion was made and approved on a 31/1/0 vote to modify the text of this paragraph as shown above. This eliminates the use of “safely” and “safety” in this paragraph.*

*The above text was coordinated with and incorporated into recommended changes to Section 4E.06 approved by the National Committee Council at the June 2006 meeting as part of the Signals No. 4 item addressing various accessible pedestrian signals issues.*

**13. Paragraph 24 of Section 4E.06 (Location and Height of Pedestrian Signal Heads):**

Guidance

Messages should not be worded in a way that seems to provide a command to the pedestrian, such as “cross Broadway Street now”. Messages should not tell users that it is “*safe* to cross.” It should always be the pedestrian’s responsibility to check actual traffic conditions.

*STC Action: The STC felt that the existing wording, including “safe” as used in this paragraph, was appropriate so no action was taken.*

*Note: This text for this item is not in the published 2003 MUTCD but has been recommended to FHWA as part of previous modifications to Section 4E.06.*

**14. Paragraph 4 of Section 4F.01 (Application of Emergency-Vehicle Traffic Control Signals and Beacons):**

Guidance

If a traffic control signal is not justified under the signal warrants of Chapter 4C and if gaps in traffic are not adequate to permit ~~reasonably safe~~ timely entrance of emergency vehicles, or the stopping sight distance for vehicles approaching on the major street is insufficient ~~to permit reasonably safe entrance of~~ for emergency vehicles, installing an emergency-vehicle traffic control signal should be considered. If one of the signal warrants of Chapter 4C is met and a traffic control signal is justified by an engineering study, and if a decision is made to install a traffic control signal, it should be installed based upon the provisions of Chapter 4D.

*STC Action: A motion was made and approved on a 30/1/1 vote to modify the text of this paragraph as shown above. This change eliminates the use of “safe” in this paragraph.*

*At the January 2007 meeting, revisions were made in response to sponsor comments. The text shown incorporates the changes and is what was approved by the National Committee Council.*

#### **15. Paragraph 6 of Section 4F.04 (Emergency Beacon):**

##### **Standard**

**Upon actuation by authorized emergency personnel, the Emergency Beacons shall display a flashing yellow signal indication, followed by a steady yellow change interval, prior to displaying two CIRCULAR RED signal indications in an alternating flashing array for a duration of time adequate for ~~safe~~ egress of the emergency vehicles. The alternating flashing red signal indications shall only be displayed when it is required that drivers on the major street stop and then proceed subject to the rules applicable after making a stop at a STOP sign. ~~until it is safe to do so.~~ Upon termination of the flashing red signal indications, the Emergency Beacons shall revert to a non-illuminated condition.**

*STC Action: A motion was made and approved on a 31/0/1 vote to modify the text of this paragraph as shown above. This change eliminates the use of “safe” in this paragraph.*

*Note: This text for this item is not in the published 2003 MUTCD but has been recommended in previous action to FHWA as a new section.*

#### **16. Paragraph 1 of Section 4G.01 (Application of Traffic Control Signals for One-Lane, Two-Way Facilities):**

##### **Support**

A traffic control signal at a narrow bridge, tunnel, or roadway section is a special signal that assigns the right-of-way for vehicles passing over a bridge or through a tunnel or roadway section that is not of sufficient width for two opposing vehicles to pass ~~reasonably safely~~.

*STC Action: A motion was made and approved on a 32/0/0 vote to modify the text of this paragraph as shown above. This change eliminates the use of “safely” in this paragraph.*



**17. Paragraph 4 of Section 4G.01 (Application of Traffic Control Signals for One-Lane, Two-Way Facilities):**

Option

At a narrow bridge, tunnel, or roadway section where a traffic control signal is not justified under the conditions of Chapter 4C, a traffic control signal may be used if gaps in opposing traffic do not permit the ~~reasonably safe~~ flow of traffic through the one-lane section of roadway.

*STC Action: A motion was made and approved on a 32/0/0 vote to modify the text of this paragraph as shown above. This change eliminates the use of “safe” in this paragraph.*

**18. Paragraph 3, Item E, of Section 4J.01 (Application of Lane-Use Control Signals):**

Guidance

E. An engineering study indicates that the safer safety and ~~more~~ efficiency of traffic operation of a reversible-lane system would be ~~provided~~ improved by lane-use control signals.

*STC Action: A motion was made and approved on a 32/0/0 vote to modify the text of this paragraph as shown. This change eliminates the use of “safe” in this paragraph. The use of “safety” was considered an appropriate alternative.*

**19. Paragraph 1, Item B, of Section 4J.02 (Meaning of Lane-Use Control Signal Indications):**

Standard

B. A steady YELLOW X signal indication shall mean that a road user is to prepare to vacate, ~~in a safe manner,~~ the lane over which the signal indication is located because a lane control change is being made to a steady RED X signal indication.

*STC Action: The STC felt that the existing wording, including the use of “safe” was appropriate so no action was taken.*

*At the January 2007 meeting, revisions were made in response to sponsor comments. The text shown incorporates the changes and is what was approved by the National Committee Council.*

**20. Paragraph 1, Item E, of Section 4J.02 (Meaning of Lane-Use Control Signal Indications):**

## Standard

- E. A steady RED X signal indication shall mean that a road user is not permitted to use the lane over which the signal indication is located and that this signal indication shall modify accordingly the meaning of ~~all~~ other traffic controls present. ~~The road user shall obey all other traffic controls and follow normal safe driving practices.~~

*STC Action: The STC felt that the existing wording, including the use of "safety" was appropriate so no action was taken.*

*At the January 2007 meeting, revisions were made to the text sent to sponsors in response to sponsor comments. The text shown incorporates the changes and is what was approved by the National Committee Council.*