PART 202—REGISTRATION OF CLAIMS TO COPYRIGHT

3. The authority citation for part 202 continues to read as follows:

Authority: 17 U.S.C. 702.

§ 202.23 [Amended]

4. Section 202.23(e)(1) and (2) are amended by removing ''$270.00'' each place it appears and adding in its place ''$365.00.''

PART 203—FREEDOM OF INFORMATION ACT: POLICIES AND PROCEDURES

5. The authority citation for part 203 continues to read as follows:

Authority: 17 U.S.C. 702; and 5 U.S.C. 552(a)(1).

§ 203.6 [Amended]

6. Section 203.6(b)(2) is amended by removing ''$7 for up to 15 pages and $.45 per page over 15.'' and adding in its place ''$15.00 for up to 15 pages and $.50 per page over 15.''.

PART 204—PRIVACY ACT: POLICIES AND PROCEDURES

7. The authority citation for part 204 continues to read as follows:

Authority: 17 U.S.C. 702; and 5 U.S.C. 552(a).

§ 204.6 [Amended]

8. Section 204.6(a) is amended by removing ''$7 for up to 15 pages and $.45 per page over 15.'' and adding in its place ''$15.00 for up to 15 pages and $.50 per page over 15.''

PART 211—MASK WORK PROTECTION

9. The authority citation for part 211 continues to read as follows:

Authority: 17 U.S.C. 702 and 908.

§ 211.3 [Amended]

10. In § 211.3(a)(1) and (2) remove ''$20.00'' each place it appears and add in is place ''$75.00.''

11. In § 211.3(a)(7), remove ''$330'' and add in its place ''$500.00.''

Dated: May 20, 1998.

Marybeth Peters,

Register of Copyright.

Approved by:

James H. Billington,

The Librarian of Congress.

[FR Doc. 98–14086 Filed 5–27–98; 8:45 am]

BILLING CODE 1410–30–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. NHTSA–98–3870; Notice 7]

RIN 2127–AG81

Federal Motor Vehicle Safety Standards; School Bus Pedestrian Safety Devices

AGENCY: National Highway Traffic Safety Administration (NHTSA), DOT.

ACTION: Final Rule.

SUMMARY: The agency is amending Standard No. 131, *School Bus Pedestrian Safety Devices,* to permit the use of additional light sources on the surface of retroreflective stop signal arms and to permit a certain amount of the retroreflective surface to be obscured by mounting hardware. It also makes minor clarifications to the standard. This responds to a petition from Transpec, Inc., a maker of stop arms.

DATES: This rule will become effective on May 28, 1998. Petitions for reconsideration of this rule must be received no later than July 13, 1998.

ADDRESSES: Petitions for reconsideration should refer to the docket number and notice number and be submitted in writing to: Administrator, National Highway Traffic Safety Administration, Room 5109, 400 Seventh Street, SW, Washington DC, 20590. Telephone: (202) 366–5267

FOR FURTHER INFORMATION CONTACT:

For technical issues: Mr. Charles Hott, Office of Crashworthiness Standards, National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, D.C. 20590 (202) 366–0247.

For legal issues: Mr. Paul Atelsek, Office of the Chief Counsel, NCC–20, telephone (202) 366–2992, FAX (202) 366–3820.

SUPPLEMENTARY INFORMATION:

1. Background

Federal Motor Vehicle Safety Standard No. 131, *School bus pedestrian safety devices* requires each new school bus to be equipped with a stop signal arm. A stop signal arm is a device, patterned after a conventional ''STOP'' sign, that automatically extends outward from the bus to alert motorists that a school bus is stopping or has stopped.

To ensure the conspicuity of a stop signal arm, Standard No. 131 specifies that the device must either be reflectorized or be equipped with flashing lamps. If reflectorization is used to comply with the standard, ''the *entire* surface of both sides of the stop signal arm'' must be reflectorized (S5.3.1, emphasis added). NHTSA has interpreted this language to mean that Light Emitting Diodes (LEDs) outlining the word ''Stop'' on the stop arm blade would not be permitted under the reflectorization option because LEDs do not meet the requirements for reflectorized material.

Transpec, Inc. (Transpec) submitted a petition for rulemaking requesting that S5.3.1 of the standard be amended to allow the use of LEDs on stop signal arms. The petition sought to amend the section to permit red LEDs on the surface of the stop arm that are ''contained within a light channel not greater than 10mm (.394 inches) wide centered within the stroke width of each letter.'' Under the requested amendment, the minimum stroke width of letters containing LEDs would be increased from 20 mm (0.79 inches) to 25 mm (0.8984 inches). The LEDs would be required to flash at the rate specified for stop arm lamps conforming to S5.3.2. The petition also sought to permit a percentage of the surface area of the stop arm to be obscured by mounting brackets and other necessary components, with the aggregate area obscured by the LEDs and other components not to exceed 7.5 percent of the surface area of the stop arm.

2. The Notice of Proposed Rulemaking (NPRM)

On August 6, 1997, the agency published a NPRM proposing to amend the standard in most ways as requested by Transpec. It proposed to permit light to be emitted ''from the surface of each letter or from the area immediately surrounding each letter'' in the legend ''STOP.'' Lamps on the surface of the letter would have to be located on the centerline of each letter, or outline each letter of the legend. The lamps on the surface of the stop arm would have to flash in the same manner as specified for the lamps in non-reflectorized stop arms. The net stroke width (i.e., the stroke width minus the width of the legend lamps) of each letter containing lamps was proposed to be at least 15 mm, to assure that an acceptable amount of white letter reflectorized surface would be provided.

Rather than limit the permitted light sources to LEDs, the agency was more flexible than requested, proposing to permit almost any type of light source in the legend lamps. It proposed to permit white lamps as well as red lamps, but not both colors simultaneously, on the assumption that

white lamps might better illuminate the white letters. It also proposed amending S6.2.2.1 to eliminate the word ''filament,'' in order to permit other non-filament light sources to be used in the legend lamps. It also clarified that a requirement on the ''off'' cycle time of gaseous discharge lamps applied only to xenon short-arc discharge lamps.

The agency proposed to permit ''mounting brackets, bolts, or other components necessary to the mechanical or electrical operation of the stop signal arm'' to obscure up to 7.5 percent of the total surface area of either side of the stop arm, and up to 10 percent of the white border.

Finally, the NPRM clarified that when two stop arms are installed on the same side of a bus, the forward side of the rearmost stop signal shall not be reflectorized. This was done to avoid confusing drivers in the lanes of opposing traffic as to where they should stop relative to the school bus.

The agency also requested comment on a wide range of issues, including: (1) comments and test data about the effectiveness of LED-equipped stop signal arms as a means of enhancing stop arm conspicuity, (2) the use of other light sources, such as miniature incandescent and neon light sources, and their effectiveness, and the possibility of confusion from mixed light sources, (3) whether to allow use of either red or white LEDs or other light sources, or to allow only one color of emitted light, (4) whether 7.5 percent, the percentage of permitted obscuration requested by Transpec, is an appropriate amount, (5) what, if any, intensities and test procedures should be required for lamps used on stop arms. In addition, the agency noted that the Society of Automotive Engineers' standards referenced in FMVSS 131 are not current and asked if it would be useful to update some or all of these to the latest versions and if there would be any burden associated with making such changes, (6) whether light sources should be allowed to outline each letter rather than be centered on each letter, and (7) whether an immediate effective date is appropriate.

3. Summary of Comments

Comments were submitted by sixteen State departments of education or school districts, Mr. Harry Gough, P.E., and two stop arm manufacturers, Transpec and Specialty Manufacturing. Six of the school district comments were forwarded by Transpec. Two national student transportation organizations commented, the National School Transportation Association (NSTA) and the National Association of State Directors of Pupil Transportation Services (NASDPTS).

The Florida Department of Education conducted a comparative test program involving school buses and three stop arm designs: standard reflective stop arms with incandescent lights; stop-arms using strobe lights; and Transpec LED-equipped stop arms. Fifteen different Florida school districts tested the three stop arm designs for 20 school days each. Although the results were not statistically significant, the Florida study concluded that the LED and the strobe lighted stops were ''no less effective'' at stopping traffic than the incandescent lighted stop arms Florida currently uses. The study also concluded that the raw data tend to indicate ''some improvement'' at stopping traffic by both the strobe and the LED type stop arms over the incandescent lighted stop arm. The strobe lighted stop arm had a ''small advantage'' over the LED stop arm at stopping traffic.

All other commenting States and school districts that had conducted pilot tests liked the Transpec LED stop arm. Most stated that it reduced the number of illegally passing motorists and was more visible than the ''standard'' stop arm, although it was not always clear what they were comparing it to.

Most commenters that addressed the issue supported the idea of allowing other light sources. Transpec stated that NHTSA should establish performance requirements for other light sources, but that NHTSA's consideration of other light sources should not delay the implementation of LEDs.

No commenters objected to the use of other light sources. Transpec submitted the only comment to address the potential for confusion caused by the LEDs and other light sources. It stated that the potential confusion would not be so great as the confusion caused between the flashing lights and reflectorized versions already allowed by the standard.

A number of commenters expressed the opinion that only red lights should be permitted in or around the legend. NSTA, Transpec and Specialty all commented that these lights should be red because red is the color that is currently used in all traffic lights that denote that the motorist must stop. Transpec stated that white lights do not create in a driver the same sense of urgency as red lights. In addition, Transpec stated that white lights introduce a third lighting color (i.e., red, amber, and white) to the school bus that could detract from the ''STOP'' message.

Two commenters were concerned about the intensity of LEDs. Specialty believed that LEDs were less visible when viewed from an angle (as when viewed across multiple lanes) and that side angle viewing should be studied. It also believed that LEDs are less visible when viewed in direct sunlight. In contrast, a school district that had pilot tested the LED stop arm believed that LEDs were more effective than the incandescent lights in bright sunshine. Specialty provided test results showing that LEDs do not pass the light specifications for incandescent lamps in Society of Automotive Engineers Recommended Practice J1133, School Bus Stop Arms. Mr. Gough also stated that, based on testing, LEDs produce only one third the intensity of light as incandescent lamps. He stated that NHTSA should establish minimum intensity levels for LEDs.

Transpec indicated that it had developed a prototype LED-equipped stop arm with the LEDs outlining the word stop, but that the design was flawed because it had a ''Christmas tree'' effect (i.e., appearing as a random field of lights distracting the observer and resulting in diminished readability). Transpec urged NHTSA not to allow such a configuration of lights unless further testing was conducted.

The only commenter to address the appropriateness of allowing obscuration of up to 7.5 percent of the retroreflective surface of the stop arm was Specialty. Specialty stated that the proposed 7.5 percent figure was too great, and that obscuring more than 2 or 3 percent of the retroreflective material would significantly reduce the effectiveness of the stop arm because the retroreflective material does the work of alerting the motorist.

Comment was mixed on the appropriateness of obscuring up to 10 percent of the white border of the stop arm. Specialty believed that limiting the border obscurement to 10 percent may cause some difficulty in mounting because some stop arms would have to be positioned farther outward, which it believes would cause them to protrude so far out from the side of the school bus that the bus would exceed the maximum width under some State laws. Some states have laws that limit the distance a stop arm can extend from the side of a school bus. Requiring that no more than 10 percent of the border be obscured would lead to additional tooling cost for manufacturers. However, the NSTA stated that 10 percent was an appropriate maximum.

4. Discussion

A. Stop Arm Effectiveness

NHTSA agrees with the commenters who stated that effectiveness should be the prime consideration in whether or not to amend the standard. NSTA expressed doubt that adding lights would solve the problem of illegally passing motorists, but both it and the NASDPTS stated that NHTSA should base its decision on ultimate effectiveness. All field testing indicates that the Transpec stop arm is at least as effective as other stop arms that the agency permits in preventing motorists from illegally passing. The agency found the Florida study to be the most helpful because it was the largest study to provide comparative data.

Although statistically significant data would be preferable, the agency is not constrained from acting without it. The reactions to the field tests of the LED-equipped stop arm were positive, and NHTSA considers this a sufficient basis on which to act. The Clark County (Nev.) School District, for example, has employed over 230 school buses equipped with the LED stop arm over the past five months and feels they are superior. Considering the positive test results, the agency has decided to permit LED-equipped stop arms.

B. Alternative Light Sources

The agency agrees with Transpec that the standard should not prevent other light sources from being used in the legend of the stop arm. No commenter opposed other light sources. The agency notes that Standard No. 131 is a design standard only to the extent that it promotes uniformity. The agency did not propose to allow only LEDs as additional light sources, as Transpec's comment implies. Any light source that meets the performance requirements of this rule is permitted.

C. Intensity of Lights in the Legend

Specialty and Mr. Gough expressed concern over the lower intensity of LEDs and the inability to see them at angles or in bright sunlight, and encouraged the agency to set intensity requirements. Transpec also suggested that NHTSA set performance standards for light sources other than LEDs. However, at this time there are no industry standards for the intensity of lights used in the legend of school bus stop arms.

As stated above, the primary consideration is effectiveness. In the field testing, the LEDs that are currently used in the legend of stop arms did not appear to have a negative effect on a driver's ability to see the extended stop arm. Therefore, the agency does not believe there is currently a need to set intensity requirements. NHTSA will monitor the situation closely. Should manufacturers offer excessively dim lights that do not adequately substitute for the light ''lost'' by obscuring the retroreflective material, or excessively bright lights that interfere with the drivers' of other vehicles ability to see, the agency will consider developing intensity requirements.

D. Color of Light Sources

The agency finds persuasive the arguments of NSTA, Transpec and Specialty that lights in the legend should be red and not white. Red is the color that is currently used in all traffic lights that denote that the motorist must stop (e.g., brake lights, traffic lights, railroad crossing lights). Therefore, the rule has been modified from the proposal to state that red is the only light color that is acceptable in the legend of school bus stop arms.

E. Amount of Retroreflective Surface That May Be Obscured

Only Specialty commented on the amount of surface area and white border that could be obstructed on a school bus stop arm. The NPRM proposed that no more that 7.5 percent of the total surface area be obstructed. Specialty questioned whether 7.5 percent was needed, stating that no more than 2–3 percent of the total surface area of current stop arm designs will be obstructed by the wires and support clips running to surface mount lamps. Specialty also suggested that permitting the obscuration of 7.5 percent of the reflective surface could have a safety impact. It stated that the more retroreflective material that is obscured, the less noticeable the stop arm becomes. It concluded that obscuring more than 2–3 percent of the retroreflective material would significantly reduce the effectiveness of the stop arm.

During a May 7, 1998 telephone conversation with Specialty's Engineering Manager, Specialty revised its position on this issue. It referred to an industry-wide market survey of current stop arms showing that mounting brackets currently obscure up to 6.3 percent of the retroreflective material. Since a small amount of additional retroreflective material might be obscured by bolts and other necessary components, Specialty now takes the position that permitting up to 7.5 percent obscuration is appropriate, since it is needed by the industry for current designs, and would not significantly reduce the effectiveness of the stop arm.

Ultimately, there was no opposition to permitting 7.5 percent obscuration. The market survey referred to by Specialty adds support for the proposed amount by indicating that current stop arm designs require this provision. Therefore, the proposed 7.5 percent obscuration permitted for brackets, bolts, or other components is retained in the final rule.

F. Amount of White Border That May Be Obscured

The amount of white border that may be obstructed proved to be more controversial. The NPRM proposed allowing up to 10 percent of this border be obstructed. Specialty argued that more of the border should be allowed to be obstructed for two reasons.

First, Specialty attempted to define the role of the white border. It argued that the purpose of the white border is to provide a clear border definition and an enhanced contrast between the retroreflective material and the background (i.e., the area behind the stop arm). Specialty concluded that ''the border does not alert [the] motorist to the stop arm, the retroreflective material does that.''

This argument is not persuasive because, as stated in NHTSA's November 1, 1995 interpretation to Specialty, the ''entire surface'' of the stop arm is required to be reflectorized, including the white border. Since the white border is retroreflective, it contributes to the light returning to the drivers of other vehicles, while the area that NHTSA is allowing to be obstructed does not. As Specialty noted, the white border also provides contrast. Therefore, NHTSA also considers the border to be important in attracting the motorist's attention.

Second, Specialty argued that stop arms require mounting brackets to mount the stop arm to the school bus and the mounting brackets may obscure part of the border, and that requiring no more than 10 percent of the border to be obscured would lead to additional tooling costs for manufacturers to devise methods for putting the stop arm blades further outboard without violating State laws.

This argument is persuasive. It was not the intent of the NPRM to change the way existing stop arms are mounted on school buses. The intent was to provide a basis for the amount of white border that could be obstructed by mounting and operational hardware. Some obscuration is a practical necessity for mounting the stop arm blade in a cost-effective manner. Specialty did not offer the percentage of white border that is obstructed on

current stop arms. Agency staff looked at various models of stop arms and concluded that, at most, 15 percent of the white border is obstructed by mounting hardware. Therefore, S5.1.2 has been changed to permit 15 percent obscuration of the white border.

G. Outlining Versus Centering the Lamps in the Legend

Transpec was the only commenter to address the issue of placement of the lights in or around the legend. Its recommendation against placement on the border of the legend was based on its desire to avoid a ''Christmas tree effect'' it found in one of its prototypes. As stated in NHTSA's November 1, 1995 interpretation letter to Specialty, widely spaced lights ''could appear as a random field of lights (like a Christmas tree), distracting the observer and resulting in diminished readability.'' Transpec therefore recommends restricting light placement to a location ''centered'' within the letters.

The agency notes that this ''Christmas tree effect'' is caused more by excessive spacing between adjacent lights than by their placement relative to the legend. The effect can also be caused by lights centered in the legend's letters, if the spacing between the lights is too great. Conversely, the effect can be avoided with lights placed around the perimeter of the legend's letters if the lights are located close enough together.

The option for placing the lamps around the border is being retained in the final rule. The agency does not believe it is currently necessary to regulate the spacing of the lights in or around the legend. The optimum spacing might vary according to the lamp intensity, lamp size, and legend letter size. NHTSA will monitor the products being offered and will consider specifying light spacing if it finds stop arms being produced with LEDs that impair the effectiveness the stop arm, regardless of whether they are centered in, or arranged around the border of, the letters.

H. Effective Date

Some commenters urged delaying the effective date. Specialty recommended that the effective date of these amendments be delayed until extensive testing is conducted, out of a concern that pushing untested, potentially nonbeneficial technologies quickly to market would not be in the interest of the general public. The NSTA, the NASDPTS, Mr. Gough, and a few other commenters also encouraged NHTSA to conduct extensive testing before promulgating the rule.

Other commenters, notably Transpec and some States and school districts that liked Transpec's stop arm, urged an immediate effective date. The primary reason given was that to delay implementation would perpetuate confusion and ambiguity over Transpec's LED-equipped stop arm and delay arrival of a beneficial technology in the market.

The agency concludes that an immediate effective date is warranted. Field testing indicates that the Transpec stop arm is at least as effective as existing stop arms in stopping motorists from illegally passing stopped school buses. The commenters who encouraged more extensive testing did not have the benefit of the results of the Florida study and may not have realized the large number of smaller pilot test programs being conducted by the other States and school districts when they composed their comments. The agency considers this field testing to be sufficient.

This amendment is permissive only, so there is no burden associated with an immediate effective date. Since the LED-equipped stop arms seem effective, there is no reason to delay their entry into the marketplace.

I. Miscellaneous issues

There was no comment on several aspects of the proposal, and these elements are maintained in the final rule. These include: (1) the proposal to use a diminished ''net stroke width'' of the letters in the legend to account for the width of the lights centered within them; (2) the removal of the word ''filament'' in S6.2.2.1 to remove the restriction against non-filament light sources; (3) the addition of the words ''xenon short arc'' clarification that the requirements of S6.2.2.2 apply only to that type of gaseous discharge lamp; and (4) the addition of a requirement in S5.3.1.3 that the forward side of the rearmost stop signal not be reflectorized if there are forward and rearward stop arms.

Regulatory Analyses and Notices

A. Executive Order 12866 (Federal Regulation) and DOT Regulatory Policies and Procedures

This notice was not reviewed under Executive Order 12866, because the Office of Management and Budget determined that it is not significant within the definitions of the Executive Order. NHTSA has analyzed this rulemaking and determined that it is not significant within the meaning of the Department of Transportation regulatory policies and procedures. The agency has determined that the economic effects of the amendment would be so minimal that a full regulatory evaluation is not required. Since the amendment would impose no new requirement but simply would allow for an alternative design, there are no cost impacts. Because stop arms with legend lamps are optional, the agency assumes those companies availing themselves of the option would be maximizing benefits with respect to any added costs associated with legend lamps.

B. Regulatory Flexibility Act

In accordance with the Regulatory Flexibility Act, NHTSA has evaluated the effects of this rulemaking on small entities. Based on this evaluation, I certify that the amendment will not have significant economic impact on a substantial number of small entities. Accordingly, a regulatory flexibility analysis has not been performed.

The following is NHTSA's statement providing the factual basis for certification (5 U.S.C. 605(b)). Because Standard No. 131 applies to vehicles rather than stop arms as items of motor vehicle equipment, the rule applies primarily to school bus manufacturers. The school bus industry is dominated by two companies that are not small entities, but there are a few school bus manufacturers that are small entities. All school buses are required to be equipped with stop arms. However, this rule imposes no requirements, but merely allows school bus manufacturers to have more choice in the stop arm designs they order. The rule is thus beneficial to vehicle manufacturers, and has no negative economic impact.

All stop arm manufacturers known to the agency are small entities. They might be affected in the sense that market share might shift among them if school bus manufacturers choose to purchase stop arms with legend lights. Transpec is the only company known by the agency to produce stop arms with legend lamps. However, NHTSA does not know if Transpec's design will be widely accepted in the marketplace, either by school bus manufacturers for installation on new buses, or in the aftermarket. In addition, this rule provides flexibility for other manufacturers to produce their own legend lamp-equipped stop arm designs. Therefore, the agency does not view this rule as either conferring a competitive advantage or imposing a negative impact on any stop arm manufacturer.

C. Federalism Assessment

This action has been analyzed in accordance with the principles and criteria contained in Executive Order

12612. NHTSA has determined that the rulemaking does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment. This rule does not impose any unfunded mandates on State, local, or tribal governments as defined by the Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1532–38).

D. Civil Justice Reform

This rule has no retroactive effect. Under 49 U.S.C. 30103, whenever a Federal motor vehicle safety standard is in effect, a State may not adopt or maintain a safety standard applicable to the same aspect of performance which is not identical to the Federal standard, except to the extent that the state requirement imposes a higher level of performance and applies only to vehicles procured for the State's use. 49 U.S.C. 30161 sets forth a procedure for judicial review of final rules establishing, amending or revoking Federal motor vehicle safety standards. That section does not require submission of a petition for reconsideration or other administrative proceedings before parties may file suit in court.

List of Subjects in 49 CFR Part 571

Imports, Motor vehicle safety, Motor vehicles, Rubber and rubber products, Tires.

In consideration of the foregoing, 49 CFR part 571 is amended as follows:

PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS

1. The authority citation for part 571 continues to read as follows:

Authority: 49 U.S.C. 322, 30111, 30115, 30117, and 30166; delegation of authority at 49 CFR 1.50

2. Section 571.131 is amended by revising S5.2.1, S5.2.2, S5.3.1, S6.2.2.1, and S6.2.2.2, and by adding S5.3.1.1, S5.3.1.2, and S5.3.1.3 to read as follows:

§ 571.131 Standard No. 131, School Bus Pedestrian Safety Devices.

* * * * *

S5.2.1 The stop signal arm shall have a white border at least 12 mm (0.47 inches) wide on both sides, except as provided in S5.2.3. Mounting brackets, clips, bolts, or other components necessary to the mechanical or electrical operation of the stop signal arm may not obscure more than 15 percent of the border on each side of the stop arm. The portion of the border that may be obscured is in addition to that portion which may be obscured by the two red lamps specified in S5.3.2.

S.5.2.2 The stop signal arm shall have the word ''STOP'' displayed in white upper-case letters on both sides, except as provided in S5.2.3. The letters shall be at least 150 mm (5.9 inches) in height. The letters shall have a stroke width of at least 20 mm (0.79 inches), except as provided in S.5.3.1.1.

* * * * *

S5.3.1 Except as provided in S5.3.1.1, S5.3.1.2, or S5.3.1.3, the entire surface of both sides of each stop signal arm shall be reflectorized with Type III retroreflectorized material that meets the minimum specific intensity requirements of S6.1 and Table I.

* * * * *

S.5.3.1.1 The legend of the retroreflective stop arm may be illuminated in a manner such that light is emitted from the surface of each letter or from the area immediately surrounding each letter. Only red lamps may be used. They shall form the complete shape of each letter of the legend, and shall be affixed to all letters (or to the areas immediately surrounding all letters) in the legend. The shape of each letter shall remain constant and, if the lamps are contained within each letter, the net stroke width (stroke width minus the width of the lamp(s)) of each letter of the legend, specified in S5.2.2, shall not be less than 15 mm (0.59 inch). When the stop arm is extended, the lamps shall flash at the rate specified in S6.2.2, with a current ''on'' time specified in S6.2.2.1. All lamps shall be positioned in one of the two following ways:

(1) centered within the stroke of each letter of the legend, or

(2) outlining each letter of the legend.

S5.3.1.2 Nonreflectorized mounting brackets, clips, bolts, or other components necessary to the mechanical or electrical operation of the stop signal arm shall not obscure more than 7.5 percent of the total surface area of either side of the stop signal arm.

S5.3.1.3 When two stop signal arms are installed on a school bus, the forward side of the rearmost stop signal arm shall not be reflectorized.

* * * * *

S6.2.2.1 Lamps, except those subject to S6.2.2.2, shall have a current ''on'' time of 30 to 75 percent of the total flash cycle. The total current ''on'' time for the two terminals shall be between 90 and 110 percent of the total flash cycle.

S6.2.2.2 Xenon short-arc gaseous discharge lamps shall have an ''off'' time before each flash of at least 50 percent of the total flash cycle.

* * * * *

Issued: May 22, 1998.

Ricardo Martinez,

Administrator.

[FR Doc. 98–14110 Filed 5–22–98; 3:07 pm]

BILLING CODE 4910–59–P