



State of New Jersey

DEPARTMENT OF EDUCATION

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**Proposal Level
May 3, 2017**

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Governor

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KIMBERLEY HARRINGTON
Acting Commissioner

TO: Members, State Board of Education

FROM: Kimberley Harrington
Acting Commissioner

SUBJECT: N.J.A.C. 6A:27-7.13

REASON
FOR ACTION: Notice of proposed substantive changes

AUTHORITY: N.J.S.A. 39:3B-26

SUNSET DATE: February 18, 2021

The Department of Education (Department) proposed amendments to N.J.A.C. 6A:27 on October 17, 2016, at 48 N.J.R. 2091(a), to establish rules implementing Abigail's Law (P.L. 2015, c. 266; N.J.S.A. 39:3B-26). The proposed rules will effectuate the law, which requires school buses manufactured on or after July 17, 2016, to be equipped with a sensor "to determine the presence of objects in the front or back of the bus." The 60-day public comment period closed December 16, 2016.

Via a notice of proposed substantive changes, the Department is proposing a number of changes to the amendments and new rules in response to comments received. A summary of only the comments that prompted the changes and the agency responses are provided in the attached comment-response form, which will serve as the notice.

If approved by the State Board for publication in the N.J. Register, only the new amendments being proposed in this notice will be subject to public comment for 60 days.

After the 60-day comment period is over, the Department plans to present to the State Board the comments received regarding the notice of proposed substantive changes and the Department's responses. The comments and responses related to the notice will be presented to the State Board along with all comments received during the 60-day comment period on the initial proposal (48 N.J.R. 2091(a)), including comments not captured in the attached notice. The combined materials will be presented to the State Board at adoption level.

**STATE BOARD OF EDUCATION
ADMINISTRATIVE CODE
COMMENT/RESPONSE FORM**

Topic:	Student Transportation	Meeting Date:	May 3, 2017
Code Citation:	N.J.A.C. 6A:27-7.13	Level:	Proposal of Notice of Proposed Substantive Changes
Division:	Finance	Completed by:	Office of School Finance

The Department of Education (Department) proposed amendments to N.J.A.C. 6A:27 on October 17, 2016, at 48 N.J.R. 2091, to establish rules implementing Abigail’s Law (P.L. 2015, c. 266; N.J.S.A. 39-3B-26). The proposed rules will effectuate the law, which requires school buses manufactured on or after July 17, 2016, to be equipped with a sensor “to determine the presence of objects in the front or back of the bus.” The public comment period closed December 16, 2016.

The Department is proposing a number of substantial changes to the amendments in response to comments received. A summary of only the comments that prompted the changes and the agency responses are provided below.

Summary of Comments and Agency Responses

The following is a summary of the comments received from the public and the Department’s responses. Each commenter is identified at the end of the comment by a number that corresponds to the following list:

1. Pete Kallgren, Vice President of Sales and Marketing
Rostra Precision Controls Inc.
2. Joe Labonte, Chairman
School Bus Manufacturers Technical Council

1. COMMENT: The commenter stated the definition of “sensor system” proposed in N.J.A.C. 6A:27-7.13(a)2 should not be limited to a specific technology, and suggested that any system meeting the performance requirements should be permitted. **(2)**

RESPONSE: The Departments agrees. The Department proposes in the definition for “sensor system” at N.J.A.C. 6A:27-7.13(a)2 to add “technology such as, but not limited to” after “means a system utilizing.” The proposed amendment will permit the use of additional technologies that meet the other criteria specified in the section. Please see the response to Comment 2 for the full rule text.

2. COMMENT: The commenter suggested proposed N.J.A.C. 6A:27-7.13(a)2 should define a minimum height and shape of the person(s) or object(s) the system must be designed to detect. The commenter recommended the criteria in the National Highway Traffic Safety Administration (NHTSA) Federal Motor Vehicle Safety Standard (FMVSS) 111 (49 CFR Part 571.111) be used for the front sensor (a 12-inch high by 12-inch diameter cylinder), and the Final Rule for FMVSS 111 Rear Visibility be used for the rear sensor (a 32-inch high by 12-inch diameter cylinder). **(1, 2)**

RESPONSE: The Department agrees the dimensions need to be defined. The Department proposes a new rule at N.J.A.C. 6A:27-7.13(a)2i to require the system to be able to detect a person or object as measured by the placement of a 12-inch high by 12-inch diameter cylinder in the front and rear of the school bus.

The proposed dimensions are based on the criteria found in FMVSS 111 (49 CFR Part 571.111) and would apply to both the front and rear sensor areas. The Department proposes adopting the criteria in this standard rather than the Final Rule for FMVSS 111 Rear Visibility because the Final Rule is extremely limited in its focus and application (i.e. it applies only to small vehicles and video-only sensors). The FMVSS 111 provides a more stringent standard than the one found in the Final Rule (requiring the detection of a 12-inch high cylinder, as opposed to a 32-inch high cylinder) and would be more consistent and universal in its application (i.e. more easily adapted for use on all sizes of school buses, as well as sensor systems using different types of technology).

The proposed amendment at N.J.A.C. 6A:27-7.13(a)2 is:

“Sensor system” means a system utilizing technology such as, but not limited to, radar, video, sound, or infrared technology [[to detect]] that shall be capable of detecting the presence of a person(s) or object(s) as measured by the placement of a 12-inch high by 12-inch diameter cylinder within a minimum [[of a 10-foot radius in the front and rear of the school bus.]] area defined as follows:

3. **COMMENT:** The commenter recommended the Department define in N.J.A.C. 6A:27-7.13(a)2 the specific detection area of the sensor system. (2)

RESPONSE: The Departments agrees and proposes N.J.A.C. 6A:27-7.13(a)2i and ii to define the required detection area of the sensor system for vehicles with a GVWR of 10,000 pounds or less, and for vehicles with a GVWR over 10,000 pounds, respectively.

- i. **For vehicles with a GVWR of 10,000 pounds or less, five feet laterally to each side and extending 10 feet frontward from the center of the vehicle’s front bumper, and five feet laterally to each side and extending 10 feet rearward from the center of the vehicle’s rear bumper; or**
- ii. **For vehicles with a GVWR over 10,000 pounds, 10 feet laterally to each side and extending 10 feet frontward from the center of the vehicle’s front bumper, and 10 feet laterally to each side and**

extending 10 feet rearward from the center of the vehicle's rear bumper.

4. **COMMENT:** The commenter requested clarification at N.J.A.C. 6A:27-7.13(a)2 to specify whether the sensor system must detect stationary or moving objects. (2)

RESPONSE: The Department agrees that clarification is needed. The proposed amendments and new rules at N.J.A.C. 6A:27-7.13(a)2, shown above, include language that requires the sensor system to detect “the presence of a person(s) or object(s)” of a specific dimension within the specific area of detection. The inclusion of “the presence of” clarifies the system must detect any person or object meeting the criteria regardless of whether the person or object is stationary or moving.

5. **COMMENT:** The commenter stated the requirement at N.J.A.C. 6A:27-7.13(c) for an audible or visual alert to be used in addition to a video monitor system is unnecessary and suggested it be removed. The commenter cited the NHTSA research and conclusions in the Final Rule for FMVSS 111 Rear Visibility, which indicates that video-only systems without an audible alert consistently outperform sensor-only systems. (2)

RESPONSE: The Department’s original proposal would have required an audible alert to be used with a video monitor system to alert the driver’s attention in case his or her attention is diverted from the screen. Based on NHTSA’s research and conclusions summarized by the commenter, the Department proposes amendments at N.J.A.C. 6A:27-7.13(c) and (c)1 to remove the requirement for a video monitor system to include an audible alert.

(c) **The sensor system shall include an audible and visual alert signal placed in the driver’s compartment to alert the driver when a person(s) or object(s) is detected within the sensor’s designated [[range]] area or a video monitor [[with an audible alert]] placed in the driver’s compartment relaying the image of the [[area within the]] sensor’s designated [[range]] area.**

1. **The audible alert signal for the sensor shall be a sound [[unique to the system]] that is distinctive from all other audible alert signals on the bus.**

2 **The alert signal shall identify for the driver the location near the vehicle in which the person(s) or object(s) is detected, except when a video monitor is used.**

6. **COMMENT:** The commenter requested clarification at N.J.A.C. 6A:27-7.13(d) regarding the sensor system's activation and deactivation protocols: specifically, when the rear detection system must be activated and deactivated in relation to the other vehicle safety systems and the front detection system. The commenter stated the requirement for the front system to be activated in conjunction with one of the other vehicle safety systems may not be adequate because there may be circumstances where the sensor system should be activated but not the other systems. Lastly, the commenter expressed concern that activation of both the front and rear systems at the same time may confuse the driver as to the location of the person(s) or object(s) in relation to the school bus. (2)

RESPONSE: The Department agrees the sensor system's activation and deactivation protocols need to be clarified and that separate requirements for the front and back sensors are necessary. In response, the Department proposes amendments at N.J.A.C. 6A:27-7.13(d) to require the rear detection system to be activated only when the transmission is in the reverse gear and to be deactivated in any gear other than reverse. The Department also proposes new rules at N.J.A.C. 6A:27-7.13(e), (e)1 and 2, and (e)2i and ii to differentiate the requirements for the front sensor system.

The Department proposes amendments to clarify the front sensor system must activate "every time any passenger entrance door opens." The Department further proposes to add minimum requirements for the delay of the front sensor system's deactivation: whenever the set vehicle speed reaches a minimum of 10 miles per hour or a minimum time delay of 10 seconds.

Because both the front and rear sensors will not be activated at the same time, there should be no confusion concerning the location of the person(s) or object(s) in relation to the bus.

(d) The rear sensor system shall only and always activate with the engagement of reverse gear and [[also activate simultaneous with the activation of at least one of the vehicle safety systems set forth in N.J.A.C. 13:20-50B, including, but not limited to: warning lights or alarms, as specified in N.J.A.C. 13:20-50B.23(f) or 50B.3; crossing control arm, as specified in N.J.A.C. 13:20-50B.9; stop signal arm, as specified in N.J.A.C. 13:20-50B.38; or]] shall deactivate when the reverse gear is disengaged.

(e) The front sensor system shall activate in any gear other than reverse gear every time any passenger entrance door opens. The front sensor system shall deactivate;

1. **[[with]] With the [[disengagement]] engagement of reverse gear; [[or on a delay from the deactivation of one of the vehicle safety systems in this subsection based upon]] and**
2. **When in any gear other than reverse, after all passenger entrance doors are closed and:**
 - i. **The vehicle has reached a speed of 10 miles per hour; or [[a set period of time]]**
 - ii. **Ten seconds have elapsed after closure of the passenger door(s).**

7. **COMMENT:** The commenter suggested N.J.A.C. 6A:27-7.13(d)1 prohibiting dual-technology systems be removed. The commenter stated certain technologies (e.g. sensor fusion systems) that are more accurate and reliable than technologies operating with a single technology system may eventually be developed. (2)

RESPONSE: The Department agrees, and proposes to delete the prohibition of dual technology systems at N.J.A.C. 6A:27-7.13(d)1.

[[1. The sensor system shall not include a dual-technology system that requires the triggering of more than one technology before an alert is activated.]]

Summary of Agency-Initiated Changes:

1. The Department proposes at N.J.A.C. 6A:27-7.13(b)1, which states the subsection shall not be construed to prohibit the equipping of a school bus with a sensor system to determine the presence of a person(s) in the side areas of the school bus in addition to the front and rear of the bus, to add “or object(s)” after “person(s)” for consistency and clarity.
 1. **This subsection shall not be construed to prohibit the equipping of a school bus with a sensor system to determine the presence of a person(s) or object(s) in the side areas of the school bus, in addition to the front and rear of the bus.**
2. The Department proposes an amendment at N.J.A.C. 6A:27-7.13(c), which requires the sensor system to include an audible and visual alert system to alert the driver when something is detected in the “sensor’s designated range,” to replace “range” with “area” to use more accurate terminology.

(c) **The sensor system shall include an audible and visual alert signal placed in the driver’s compartment to alert the driver when a person(s) or object(s) is detected within the sensor’s designated [[range]] area or a video monitor [[with an audible alert]] placed in the driver’s compartment relaying the image of the [[area within the]] sensor’s designated [[range]] area.**

3. The Department proposes an amendment at N.J.A.C. 6A:27-7.13(b) to correct the date after which all vehicles must comply with the new rules. The current proposal requires every school bus, as defined in the section, manufactured after July 17, 2016 to be equipped with a sensor system. However, it is not possible for school districts and bus manufacturers to comply with the specific requirements of the sensor systems defined in the proposed rules until after the rules are adopted. Therefore, the Department proposes to replace the proposed deadline with “six months after the effective date of this section.” The Department also proposes to replace the description of the sensor system with a reference to the sensor system “as defined in this section” for clarity.

(b) **Every school bus, as defined in this section, manufactured six months after [July 17, 2016] the effective date of this section shall be equipped with a sensor system [[to detect the presence of a person(s) or object(s) in the front and rear of the bus]] as defined in this section.**

4. The Department proposes an amendment at N.J.A.C. 6A:27-7.13(c)1, which requires the audible alert signal to be a sound “unique to the system,” to add “for the sensor” after “audible alert signal.” The Department also proposes to replace “a sound unique to the system” with “a sound that is distinctive from all other audible alert signals on the bus” to clarify the sound does not have to be unique to all other systems but must be distinctive from the other alert signals on the bus.

1. **The audible alert signal for the sensor shall be a sound [[unique to the system]] that is distinctive from all other audible alert signals on the bus.**