

ENDING STUDENT FATALITIES RESULTING FROM STOP ARM VIOLATIONS

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This paper makes the case for a two-pronged approach to ending student fatalities resulting from stop arm violations. The first is student training. A standardized approach is needed along with renewed efforts to make sure that the State Board of Education policy requiring school bus safety training is being carried out. Secondly, at the bottom of this whitepaper is a concept proposal that will be submitted by DPI Transportation Services to the Governors Highway Safety Program. DPI is looking for **one or more LEAs** to be committed partners in this project for their entire fleet (or perhaps a portion of their fleet (depending on size). The intent is to make equipment modifications and get school bus drivers involved in protecting the lives of student passengers during the process of getting on and off the school bus.

1. INTRODUCTION - THE PROBLEM

STUDENT FATALITIES RESULTING FROM STOP ARM VIOLATIONS IN NORTH CAROLINA continue to occur, including TWO during the current school year. Numerous activities have taken place over the years, beginning with a project in the late 1990's sponsored by the National Highway Traffic Safety Administration. In spite of these efforts, children continue to be killed as they cross the street to board their school bus. Nearly all of the ten fatalities documented since 1999 occurred in the morning as children crossed the street to board the school bus. This paper documents recent efforts and focuses on the need to not only continue those efforts but also make new attempts to protect student passengers.

2. PAST EFFORTS

Stop Arm Cameras have proven to be effective in prosecuting violators. Projects from 1998 to 2012 have shown that these systems can yield results that can be very useful to our law enforcement partners. Experience also shows this process to be labor intensive and success depends a lot on the passion and personnel time available at the school district. This aspect of this solution keeps it from being a universally viable solution everywhere. In LEAs willing to take it on, this technology should be used and expanded.

Educational literature and banners have been produced. Interest from school districts in using these items and promoting the stop arm issue in the community has been limited. The banners featured on the NCBUS SAFETY.ORG web page can be borrowed by any LEA; however, their use has been occasional, at best.

Equipment. Brighter LED lighting and strobing red lights and stop arms are present on all new school buses for one purpose only: to help motorists see the stopped or stopping school bus.

3. A WORD ABOUT THE MOTORING PUBLIC

Historical efforts have shown that we **WILL NOT** be able to do sufficient education of the public to protect these students (without a large infusion of funding to do a “GOT MILK”-like public awareness campaign. YES – public education and awareness **MUST** continue, but this alone **WILL NOT** protect these students.

Further, the motoring public does not – and will not – understand the passenger stop sequence. They do not understand that the yellow lights mean that the reds and stop sign could be activated **AT ANY SECOND**. It is not intuitive that we tell them to stop – by activating reds and stop sign – at the exact instant that we are opening the passenger door, indicating to students that it is safe to cross.

Following is a sample of what we continue to hear from the motoring public. This person put it better than any I have heard from over the years.

*As a child and a student who rode the bus there rules were clear. The bus came to a complete stop and the stop sign extended. At this time, a student did not cross the road. There was something I had to wait for and that was for the door to open and the swing(?) on the front of the bus to extend. Once that happened, I knew I could cross the road. **The driver determined my safe crossing by not opening the door until they felt it was safe for me to cross.** The stop sign and the door were independent of each other. One signaling the drivers to stop, the other for the student to cross.*

Today, I am forty and as an adult, I am more confused about when to stop than ever. I am very aware of when you stop regarding lanes of traffic, etc. What I am unclear and frankly confused about is the sequence of stopping, because it seems those rules have changed. I am not frequently on the road to encounter buses, but when I do I first notice that the yellow lights come on. I have always slowed down, diligently watching for the stop sign so that I can stop for the bus. I wait, and wait and sometimes as I am almost crawling in the road, the bus drives right past me. I am looking for the stop sign so that I know when and where to stop. The problem is people are looking for the stop sign and it's not coming out until it's too late and the children are crossing the road. The stop sign should always be out much earlier than the door opening for the student to cross. The stop sign tells every driver, I am stopped and you need to as well. The rules have changed for busing but the public is not aware and they are still looking for the stop sign to gauge their speed and know where to stop.

Why would you throw a stop sign out at the same moment you open the door for the child to enter the roadway? That is not safe in any thought process I go through.

My suggestion: Cross arms and doors should never open simultaneously as the stop sign. Put your yellow lights out as a first line caution. Then, the stop sign should always be just that, a call to stop for all drivers so the driver has a clear point as where to stop. When the driver sees all traffic has stopped, the door opens and the cross arms are extended. This is the sign for the child to cross the road and enter the bus. Everyone is safe. I propose to you, this has to be so much safer than the practice now.

4. WHAT'S NEXT?

Given that there has been no reduction in reports of stoparm violations in 15 years of data collection, a new approach is needed. We cannot fix it by relying on the motoring public to change their actions. That leaves it up to THE STUDENTS and to THE SCHOOL BUS DRIVER.

A. STUDENTS

Initial efforts have begun in training students how to walk to and from school bus stops, including crossing the street to catch the bus.

1. The Institute for Transportation Research and Education (ITRE) has developed pedestrian safety lessons for use in elementary schools that includes safety lessons for walking to and from the bus stop.
2. Craven County's "School Bus Safety Minutes" have been made available to all LEAs.

There has been no requirement for specific kinds of training or that training be documented, even though it is required by State Board of Education policy. If we want to be sure that students receive the proper training, that training must be standardized and the training must be verified.

B. SCHOOL BUS DRIVERS

WE – the managers and policy makers of pupil transportation in North Carolina must take action and accept responsibility. In order to protect these children, we must acknowledge that the only adults that are in a position to have a direct impact on student safety *at every bus stop* are school bus drivers. Altering the equipment to allow the driver to have control over stopping traffic and requiring the driver and student to interact using a signal CAN help save lives.

Consider the following information from other states.

1. National Standards

The **National Congress on School Transportation** meets every 5 years and produces a document entitled "National Specifications and Procedures". In the 2010 document on page 369, the standard procedures for students are listed below:

Here's How to Cross the Road **SAFELY**

STAY – on your side of the road, far away from the traffic.

WAIT – for the bus to stop **and for your driver's signal to cross.**

CHECK – traffic both ways, then check again,

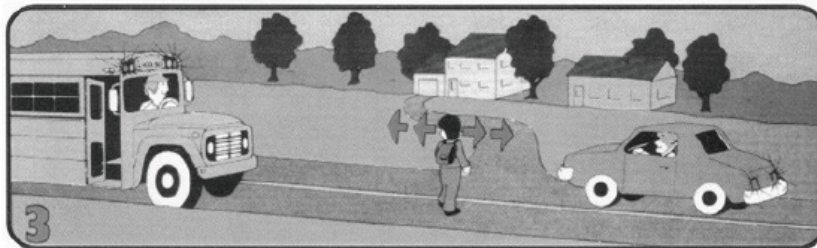
CROSS – walk directly across, checking traffic both ways.

WALK – approximately 12 feet ahead of the bumper and board the bus quickly.

2. New York's Standard Crossing Signal

In the 1980's the state of New York had 18 loading zone fatalities, 5 of which were by passing motorists and the remainder by their own bus. The Universal Loading Signal was introduced in the late 1980's. In the 1990's these numbers dropped to 6 and 2, respectively. Since 2000 – there have been only 2 fatalities due to passing motorists in New York state. Since 1998 there were 10 such fatalities in North Carolina, where we transport a third of the number of students.

LIFESAVING TIP #3 ... "WAIT FOR THE DRIVER'S SIGNAL TO CROSS"



Students cannot see through the school bus when looking back to see if cars are coming. The school bus driver, using all mirrors properly, is in a position to analyze what traffic is doing. It is only when the bus driver is convinced traffic is controlled that the driver gives the child the signal to cross the highway, using proper crossing procedures while doing so.

Use the "Universal Crossing Signal." Hold hand with palm facing the student until it is safe to cross. Then, with your thumb pointing up, index finger extended out (pointing), and remaining three fingers curled in toward the palm of the hand (like a clenched fist), the driver points at the child and slowly motions from right to left (left to right, if loading), indicating that the child should proceed across the road while following proper crossing procedures.

(NOTE: There has been some confusion about the symbolism of this signal. It is not a "pistol" signal which could evoke the violence that haunts our society. It is a TWO-PART SIGNAL. First, the "thumbs up" signal indicates that the coast is clear; then the index finger points in the direction to travel.)

3. Florida's Loading Process

The last two fatalities by motorists passing the stop arm in Florida were in 2007-2008 and 2004-2005. In 2007 the state upgraded its driver training curriculum to include a much more comprehensive loading and unloading procedure. The updated procedure includes the following:

“Driver makes eye contact with kids (if picking up), and provides them a prescribed hand and arm signal to let them know it’s OK to cross.”

School Bus Specifications / Equipment

There are different switches on Florida school buses that allow for the following process:

- a) Driver activates AMBER lights 200 feet prior to stop
- b) Once stopped, driver activates red lights, crossing arm and stop sign.
- c) Driver makes sure traffic is stopped, then opens the door.
- d) Driver makes eye contact with students and gives them a prescribed hand and arm signal to let them know it’s OK to cross (if required to cross).
- e) Once students are seated, driver turns switch off which closes door, turns off lights and retracts stop sign, crossing arm.

5. STATEWIDE TRAINING OF STUDENTS

A. ITRE CURRICULUM – The pedestrian safety curriculum being rolled out by DOT will be promoted.

B. DPI will work with the NCPTA, the Transportation Advisory Group and others to standardize student training, especially focusing on walking to and from the bus stop and crossing the street when required.

6. PROPOSAL TO THE GOVERNORS HIGHWAY SAFETY PROGRAM TO IMPROVE STUDENT HIGHWAY SAFETY THROUGH THE IMPLEMENTATION OF ENHANCED LOADING AND UNLOADING PROCEDURES.

FOR A LIMITED NUMBER OF BUSES AND DRIVERS IN ONE OR MORE NORTH CAROLINA LEAS:

- A. EQUIPMENT. Upgrading school buses in the project area with controls to allow for a loading/unloading sequence similar to that used in the state of Florida (see below).
- B. TRAINING TO SCHOOL BUS DRIVERS. Grant will provide funding for the mandatory training of school bus drivers in the project area to acquaint them with the new loading/unloading equipment/switched on their school buses and with the implementation of a standard crossing signal (either mechanical or a hand signal). The grant will provide payment for an estimated 4 hours training per driver / substitute driver.
- C. FEEDBACK. Grant will provide for survey and analysis of feedback from drivers and students.