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FILE NO.: 57136.000002
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June 2, 2000

BY HAND DELIVERY

DISTRICT OF COLUMBIA
OFFICE OF ZONING
00 JUN -2 P 2:56

Ms. Sheila Cross Reid, Chairperson
c/o Sheri Pruitt, Secretary
Board of Zoning Adjustment
441 - 4th Street, N.W.
Room 210
Washington, DC 20001

Re: BZA Application No. 16559
(Field School)

Dear Ms. Reid and Fellow Board Members:

Enclosed are the responses of the Neighbors Against Foxhall Gridlock (NAFG) to the submissions made by DPW and Gorove/Slade Associates on May 19, 2000 in this case, as permitted by the Board's timeline.

Sincerely,

Richard L. Aguglia

Richard L. Aguglia

Enclosures

By hand delivery

cc: Phil Feola, Esq.
Counsel for Applicant

Ellen McCarthy, Office of Planning

Ken Laden, DPW

BZA
Case No. 16559
Exhibit No. 442

Board of Zoning Adjustment
District of Columbia
CASE NO.16559
EXHIBIT NO.442A1

By Mail

Alan Swendiman, Esq.
Jeff Bolotin, Esq.
Eleanor Roberts Lewis, Chair, ANC 3D
Ken and Dottie Woodcock
Ed Bruce, Esq.
Lou and Sherry Nevins
Ken Doggett
Fred Hanscom
Joe Mehra
Ann Heuer, ANC 3D

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Doc #: 154413; V. 1
Doc Name: 6/2/00 ltr to Sheila Cross Reid re Field School
Author: Aguglia, Richard, 07779
Typist: Gales, Carla S, 02327
Last Edit: 6/2/00 11:05 AM

'00 JUN -2 P2:07
OFFICE OF ZONING
DISTRICT

Response to DPW Report of
May 22, 2000 to the Office of Planning

The DPW report indicates precisely why NAFG has opposed the application of the Field School for a special exception/private school at the Cafritz estate, as follows:

> The proposed site presents a potential traffic safety problem due to restricted sight lines, drivers traveling at excessive speeds, and high traffic volumes. (Emphasis supplied) (Report at 1)

Nevertheless, DPW suggests that the Field School could be accommodated at this site if certain conditions are met, including a traffic light at the school with a three car stacking lane for left turns from the north. DPW's report (as well as the Gorove/Slade report) however, fails to include important data that the southbound Foxhall Road sight distance is restricted by the vertical crest near the Kreeger/Cafritz boundary line. This crest prevents approaching motorists from seeing the proposed left turn lane in sufficient time to prevent an accident. An acute safety problem will occur when traffic attempting to enter the 3-vehicle storage bay will exceed the bay's capacity and overflow into the through lane. (Note : The original storage bay was for ten vehicles. Neither Gorove/Slade nor DPW has presented data substantiating that a three vehicle storage bay is adequate.) The problem is further aggravated by the existence of a traffic signal, which, when green, conveys the absence of any traffic conflict ahead to southbound motorists, who will see the light before they see the vehicles in the vicinity of the turn lane. Our expert analysis, including sight distance problems and proper taper lengths, prepared by Fred Hanscom is attached. Also enclosed is documentation indicating that Mr. Hanscom received an award for excellence in traffic engineering as well as a certification in traffic engineering equivalent to that submitted by Mr. Slade. Mr. Hanscom received his certification some 20 years prior to Mr. Slade.

The multiple conditions DPW suggests, which underscore the immense difficulty of making ingress and egress into the proposed school safe, are as follows:

1. Eliminating the northern entrance completely because of unsafe sight distances, Note: Since there is no access to the proposed school site from 44th Street, all incoming and outgoing vehicles must enter and exist from the revised southern entrance. This requirement will no doubt create a backup beyond the limits of the newly proposed three car stacking lane, not to mention the p.m. backup for cars traveling north on Foxhall Road, which will have to stop to allow vehicles exiting from the school, especially those turning left. Also, the impact of eliminating the northern entrance and requiring all ingress and egress for the school from the revised southern entrance will make ingress and egress from W Street and Foxboro Place, where many NAFG members reside, extremely difficult.

2. Removal of existing utility poles and street lights because of visual obstructions and to provide for road widening.

3. Widening the road to allow for development of the southbound left turn lane on Foxhall Road into the proposed Field School site, which must provide a sight distance of 305 feet for northbound traffic or 364 feet for southbound traffic. The length of the combined taper, deceleration and stacking distance must be a minimum of 474 feet, which our expert states is too short and that a 518 feet total is required. See attached letter at 2.

4. Placement of a traffic signal at the revised southern entrance to allow safe turns into and out of the school site, as well as school zone warning signs.

In reaching its recommendations, DPW relies on the Gorove/Slade traffic report for level of service findings along Foxhall Road, for both morning and afternoon peak hours, and

vehicular trip generations into and out of the schools which we submit is highly suspect. See attached response to Gorove/Slade traffic impact analysis. As we demonstrate in the attached Response to the Gorove/Slade Report of May 19, 2000, this reliance is misplaced.

To compound the situation, DPW recognizes that it does not have adequate staff to prepare neighborhood traffic studies until some time in 2001. See DPW Report at 4. Such a study was promised by the administration after approval of the expanded GW/Mt. Vernon campus very near the proposed school site and before the application of the Field School for a special exception. As such, the school's application is premature since it is being viewed in a vacuum with respect to the repercussions of the conditions suggested by DPW (beacons, traffic lights, road widenings, removal of lights and utilities) on the neighborhood, many nearby schools, and traffic flow in and around Foxhall Road in general.

Respectfully submitted,

HUNTON & WILLIAMS for NAFG

By: Richard L. Aguglia
Richard L. Aguglia

Date: June 2, 2000

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TRC TRANSPORTATION RESEARCH CORPORATION

11671 Audubon Trail
Markham, VA 22643

May 31, 2000

Richard Aguglia, Esq.
Hunton and Williams
Suite 1200
1900 K Street, N.W.
Washington, DC 2006-1109

RE: DPW May 22, 2000 Plan pertaining to the Field School Application No. 16559 Before the District of Columbia Board of Zoning Appeals

Dear Mr. Aguglia:

The May 22, 2000 DPW plan indicates a 66-foot storage bay and 88-foot left-turn bay taper. thus shortening the overall turn-lane length and placing the taper further south than originally proposed by Gorove/Slade. However, these modifications do not alter the need for motorists to have a clear view of the turn lane, allowing proper preparation for the turn. The left-turn driving task requires the redirection of a vehicle to a different lane while making multiple decisions relative to speed, available space, and time to make the turn. Because of this requirement, a sufficiently long deceleration taper is needed to accommodate necessary driver responses, including a safe and comfortable stop from the design speed of the highway if necessary. Due to the fact that a stop would occur on a 7.5 percent downgrade, a 364-foot approach taper is required rather than the 320-foot deceleration taper suggested by DPW.

Furthermore, I have specific concerns regarding (1) available Foxhall Road southbound sight distance and (2) traffic overflow from the proposed storage bay.

Available Foxhall Road Southbound Sight Distance

The DPW plan cites the southbound Foxhall Road sight distance problem and acknowledges existing sight-distance shortcomings, but it fails to require a solution to the turn-lane sight distance problem in a manner prescribed by the applicable safety regulations.

The DPW-prescribed turn bay deceleration/approach and taper lengths do not meet AASHTO approach sight distance requirements. It is important to note that AASHTO specifies that the required "deceleration" length would exclude the 8-to-1 taper, as applied by DPW. While the AASHTO guideline does permit incorporating the "deceleration" length into the "taper" where deceleration can be accomplished within the "through" lanes, this condition does not apply on southbound Foxhall Road. The reason is that for deceleration to occur in the advance "through" lane, the turn bay must be visible from the "through" lane. This condition is not met at the southbound Foxhall approach due to the sight line restriction. Therefore, a 364-foot deceleration length

would be required in addition to the 88-foot taper and 66-foot storage bay for a total of 518 feet, rather than the 474 feet proposed by DPW.

It should be further noted the approach sight distance requirement is critical due to the fact that approaching drivers must be able to see the painted taper in time to properly respond. For the driver to see this pavement marking in time to make (and execute) a stopping decision is a requirement of the *Manual on Uniform Traffic Control Devices*. The DPW report noted a 364-foot sight distance requirement in advance of the taper. In order to comply with the *Manual on Uniform Traffic Control Devices*, the entire 88-foot taper must be visible at this distance. However, the southbound Foxhall Road geometry does not permit this application, e.g., Gorove/Slade has documented a 300-foot sight distance approaching the south entrance. (The 390-foot sight distance documented by DPW for a left-turn vehicle leaving the south entrance apparently did not consider the AASHTO driver-eye-height to pavement-level sight distance criterion.)

Traffic Overflow from Proposed Storage Bay

In view of above-noted approach sight distance problem (i.e., vertical crest near the Kreeger/Cafritz boundary), an acute safety problem would exist when traffic attempting to enter the 3-vehicle storage bay would exceed the bay's capacity and overflow into the through lane. The problem is further aggravated by the existence of a green traffic signal (i.e., coming into a southbound motorist's view prior to seeing vehicles in the vicinity of the turn lane) conveying the absence of any traffic conflict ahead.

Neither the current Gorove/Slade nor PDW proposals addresses the probability of traffic demand exceeding the storage capacity afforded by the 66-foot turn bay. A number of related safety concerns are as follows.

First, a critical issue is that there are distinct a.m. time segments in which a high number of vehicle arrivals are foreseeable. Although all employees are expected to arrive by 7:30 (i.e., technically prior to the "peak period") this scheduling consideration does not address the question of how many vehicles will arrive just prior to 7:30. Nor does requiring staff to arrive before 7:30 reduce the accident consequence of a southbound motorist failing to see a stopped vehicle encroaching the through lane at the storage bay location. Although starting times are separated for various grade levels, it is nevertheless foreseeable that arrivals will likely be concentrated within certain short intervals, i.e., 270 students starting classes at 8:20 a.m.

Second, traffic engineering studies typically base the adequacy of a left-turn storage bay on an estimation of short-term vehicle arrivals (e.g., applying a Poisson arrival distribution, which assumes random arrivals within designated periods, in the

context of anticipated traffic volume levels and signal cycle lengths). However, such an analysis may not be adequate in this instance due to anticipated (non-random) arrivals within short time periods, as noted above. Nevertheless, neither the Gorove/Slade nor PDW plans addressed even the basic traffic engineering analysis noted above. Thus, the likelihood of turn bay overflow into the through lane has not been identified.

Third, when the turn bay's storage capacity is reached during any signal cycle, there is a considerable delay prior to the availability of space for additional arrivals to be accommodated in the storage area. That is, the northbound signal must go through its clearance interval, e.g., stopping the northbound traffic flow, and then additional time is required for the turn bay to empty. During this intervening period, there is a probability of both turn bay overflow and additional arrivals over the southbound vertical crest.

Summary

While the DPW plan shortened the proposed left-turn lane, this measure was not adequate to provide adequate approach sight distance. The DPW report noted a 364-foot sight distance requirement in advance of the taper. In order to comply with the *Manual on Uniform Traffic Control Devices*, the entire 88-foot taper must be visible at this distance. The southbound Foxhall Road geometry does not permit this application.

Moreover, the shortened storage bay presented the additional safety problem of likely traffic overflow. This overflow traffic would encroach the through lane, i.e., into the path of restricted sight-distance southbound traffic facing a green light, and thus not expecting a traffic conflict. The resulting situation is a foreseeable accident hazard.

Sincerely,

Fred R. Hanscom, P.E.
Director

May-28-00 10:55A Transportation Research C P.02

Institute of Traffic Engineers

Past Presidents' Award

This certificate is presented to

Fred R. Hanscom

1975 Award Recipient

in recognition of professional excellence in Traffic Engineering

Attest: Kenneth A. Sayer
Secretary

August 18, 1975

Lawrence P. Lamanville
Chairman Award Committee

Harold L. Michael
President

May-16-00 12:10P Transportation Research C P.02

STATE OF CALIFORNIA
DEPARTMENT OF
Consumer Affairs

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

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TO THE PROVISIONS OF CHAPTER 7, DIVISION 3, OF THE BUSINESS AND PROFESSIONS CODE

FRED ROBERT HANSCOM

IS DULY REGISTERED AS A

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IN

TRAFFIC ENGINEERING

IN THE STATE OF CALIFORNIA, AND IS ENTITLED TO ALL THE RIGHTS AND
PRIVILEGES CONFERRED IN SAID CODE

WITNESS OUR HAND AND SEAL

CERTIFICATE № 0371

THIS 8TH DAY OF SEPTEMBER 1976

STATE BOARD OF REGISTRATION
FOR PROFESSIONAL ENGINEERS

SECRETARY — Roy D. Johnston — PRESIDENT

THIS CERTIFICATE IS THE PROPERTY OF THE STATE OF CALIFORNIA AND IN THE EVENT OF ITS SUSPENSION, REVOCATION OR INVALIDATION FOR ANY REASON IT MUST UPON DEMAND BE RETURNED TO THE STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

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Response to the Field School
Transportation Management
Plan (TMP) dated May 19, 2000

'00 JUN -2 P2:57
OFFICE OF ZONING
DISTRICT OF COLUMBIA

Access, Circulation
and Carpool Operations

Given the DPW memo of May 22, 2000, recommending elimination of the northern entrance and a traffic light at the revised southern entrance, the TMP for turns into and out of the school and internal circulation are no longer viable.

- The TMP also needs to be revised to indicate if the site has the capacity to hold cars while waiting for a green light to exit the school, given the Board's request to preclude internal circulation near the Shugrue property and other properties, at the proposed School's southern and eastern boundaries.

Shuttle Bus Program

- The failure of the TMP to identify specific pick-up points with approval to occupy those points makes the shuttle bus proposal implausible. Hence, the OP requirement that not more than 106 vehicles turn into the site during the AM peak hour is likely to be violated without a remedy.

Parking

The requirement that student drivers bring at least 2 additional students fails to take into account new District of Columbia restrictions on drivers with passengers under age 17. Approximately 55% of the students that currently attend the Field School live in the District of Columbia. See Exh. A. (legislation) Also, recent studies have shown that teen drivers with teen

passengers are the most likely to be involved in accidents. See Exh. B. Accordingly, the proposal is unlikely to be effectuated. (A similar restriction on teenage drivers was introduced but not passed in the Maryland legislature). See Exh. C.

Safety

DPW has strongly advised against the presence of a traffic control officer for safety reasons, contrary to the TMP. Any reasonable person familiar with the entrances to the Cafritz Site on Foxhall Road would recognize the danger inherent in such a suggestion. NAFG will have a videotape demonstration at the next hearing to support this point.

The rationale supplied by Gorove Slade for flashing school warning signs (See Gorove/Slade technical appendix) is flawed in that it relates to drivers who slow down when they see children in a crosswalk, admittedly not our case here, since no crosswalks are proposed or feasible. Also, the report cited indicated that driving speeds are nonetheless still over the speed limit despite the flashing warning signs. The report also refers to another study which indicates that the flashing warning signs do not slow down drivers. See Exh. D (other report referenced in Gorove Slade report).

The significance of the installation of sidewalks for public use within the school's property with a buffer from Foxhall Road is not ascertainable. Since no students will be walking to the school, there are no crosswalks across Foxhall near the school site, and the school site is surrounded by private properties, the installation of sidewalks is meaningless for safety purposes.

Respectfully submitted,

HUNTON & WILLIAMS for NAFG

By: Richard L. Aguglia

Richard L. Aguglia

6/2/00

DATE

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Doc #: 153403; V. 1
Doc Name: Response to the Field School TMP dated 5/19/2000
Author: Aguglia, Richard, 07779
Typist: Gales, Carla S, 02327
Last Edit: 5/26/00 10:27 AM

DEC 2 4 1999

ENROLLED ORIGINAL

AN ACT

Codification District of Columbia Code 2000 Supp.

D.C. ACT 13-190

IN THE COUNCIL OF THE DISTRICT OF COLUMBIA

NOVEMBER 18, 1999

To amend the District of Columbia Traffic Act, 1925 and Chapter 1 of Title 18 of the District of Columbia Municipal Regulations to establish, a three-tiered graduated driver's license program for drivers under the age of 21, nighttime driving restrictions and passenger limits for drivers under the age of 18, and to require certified driving experience and demonstrated safe driving habits prior to the removal of driving restrictions.

BE IT ENACTED BY THE COUNCIL OF THE DISTRICT OF COLUMBIA, That this act may be cited as the "Safe Teenage Driving Amendment Act of 1999".

Amend § 40-301

Sec. 2. Section 7 of the District of Columbia Traffic Act, 1925, approved March 3, 1925 (43 Stat. 1121; D.C. Code § 40-301), is amended as follows:

(a) Subsection (a) is amended as follows:

(1) Paragraph (1) is amended to read as follows:

"(1) The Mayor is authorized to issue a new or renewed motor vehicle operator's permit, valid for a period not to exceed 5 years, to any individual 17 years of age or older subject to the following conditions and any other conditions the Mayor may prescribe to protect the public:

"(A) The applicant shall pay an application fee of $30, which may be increased by the Mayor to compensate the District for processing and evaluating the application and issuing the permit.

"(B) The applicant shall demonstrate that he or she is mentally, morally, and physically qualified to operate a motor vehicle in a manner not to jeopardize the safety of individuals or property. The Mayor shall determine whether an applicant is qualified through:

"(i) An examination of the applicant's knowledge of the traffic regulations of the District;

"(ii) A practical demonstration, or evidence acceptable to the Mayor of the applicant's ability to operate a motor vehicle within any portion of the District, except that upon renewal of an operator's permit or upon the application of an individual who meets the criteria set forth in subparagraph (C) of this paragraph, the examination and

"(B) The applicant shall have successfully passed all parts of the examination other than the driving demonstration test; and

"(C) No holder of a of a learner's permit shall:

"(i) Operate a motor vehicle except for a passenger vehicle used solely for pleasure;

"(ii) Operate a motor vehicle for compensation; and

"(iii) Operate a motor vehicle unless while under the instruction of and accompanied by the holder of a valid motor vehicle operator's permit who is 21 years of age or older, occupying a seat beside the permittee, and wearing a seat belt.".

(3) New paragraphs (2A), (2B), (2C), and (2D) are added to read as follows:

"(2A) The Mayor is authorized to issue a new or renewed provisional motor vehicle operator's permit, valid for a period not to exceed 1-year, to any individual 16 and ½ years of age or older subject to the following conditions and any other conditions the Mayor may prescribe to protect the public:

"(A) The applicant shall pay an application fee of $15, which may be increased by the Mayor for the costs of processing and evaluating the application and issuing the permit;

"(B) The applicant shall satisfy the qualification requirements set forth in subsection (a)(1)(B) of this section and:

"(i) Shall be the holder of a valid learner's permit issued at least 6 months prior to the application for a provisional permit;

"(ii) Shall not have admitted to, been found liable for, or been convicted of an offense for which points may be assessed; and

"(iii) Shall have received 40 hours of driving experience as certified by the holder of a valid motor vehicle operator's permit from any jurisdiction, who is 21 years of age or older and who has accompanied the applicant while the applicant was operating the motor vehicle.

"(C) No holder of a provisional permit shall:

"(i) Operate a motor vehicle occupied by any passengers other than one holder of a valid motor vehicle operator's permit who is 21 years of age or older, occupying a seat beside the permittee, and wearing a seat belt, and any other passenger who is a sibling or parent of the permittee; or

"(ii) Operate a motor vehicle between 11:00 p.m. on any Sunday, Monday, Tuesday, Wednesday, or Thursday until 6:00 a.m. on the following day during any month except July or August, and from 12:01 a.m. until 6:00 a.m. during July and August and on any Saturday or Sunday the rest of the year, unless driving to or from employment, a school sponsored activity, religious or an athletic event or related training session in which the permittee is a participant, sponsored by the District of Columbia, a civic organization, or another similar entity that takes responsibility for the minor, or unless accompanied by the holder of a valid

demonstration may be waived in the discretion of the Mayor. No practical demonstration shall be required for a motorized bicycle permit; and

"(iii) Any other criteria as the Mayor may establish.

"(C) An applicant under the age of 21, shall meet the following additional qualifications in addition to the qualifications in subparagraph (B) of this paragraph:

"(i) The applicant shall be the holder of a valid provisional permit issued at least 6 months prior to the application in accordance with paragraph 2A of this subsection;

"(ii) The applicant shall not have admitted to, been liable for, or convicted of an offense for which points may be assessed during the 12 consecutive month period immediately preceding the application; and

"(iii) The applicant shall have received 10 hours of nighttime driving experience, as certified by the holder of a valid motor vehicle operator's permit from any jurisdiction, who is 21 years of age or older and has accompanied the applicant while the applicant was operating the motor vehicle.

"(D) No permittee under the age of 18 shall:

"(i) Operate a motor vehicle occupied by more than 2 passengers under the age of 21, except that this restriction shall not apply to a passenger who is a sibling of the permittee;

"(ii) Operate a motor vehicle in which the permittee or any passenger fails to wear a seat belt; or

"(iii) Operate a motor vehicle between 11:00 p.m. on any Sunday, Monday, Tuesday, Wednesday or Thursday until 6:00 a.m. on the following day during any month except July or August, and from 12:01 a.m. until 6:00 a.m. during July and August and on any Saturday or Sunday the rest of the year, unless driving to or from employment, a school-sponsored activity, religious or an athletic event or related training session in which the permittee is a participant, sponsored by the District of Columbia, a civic organization, or another similar entity that takes responsibility for the minor, or unless accompanied by the holder of a valid motor vehicle operator's permit who is 21 years of age or older and who is occupying a seat beside the permitee; or

"(iv) Operate a motor vehicle other than a passenger vehicle or motorized bicycle used solely for the purposes of pleasure and not for compensation.".

(2) Paragraph (2) is amended to read as follows:

"(2) The Mayor is authorized to issue a learner's permit valid for 1-year to any individual 16 years of age or older subject to the following conditions and any other conditions the Mayor may prescribe to protect the public:

"(A) The applicant shall pay an application fee of $15, which may be increased by the Mayor for the costs of processing and evaluating the application and issuing the permit.

motor vehicle operator's permit who is 21 years of age or older, wearing a seat belt, and occupying a seat beside the permittee.

"(2B) Notwithstanding the provision of subsection (a)(1)(c), (a)(2)(B), and (a)(2A) of this section, a person under the age of 21 who holds a valid motor vehicle permit from another jurisdiction shall be eligible for a comparable District of Columbia driver's permit, provided that the permittee's operation of a motor vehicle shall be subject to the applicable restrictions set forth in subsection (a)(1)(D), (a)(2)(C), or (a)(2A)(C) of this section.

"(2C) Penalties:

"(A) Any violation of the permit restrictions set forth subsection (a)(1)(D), (a)(2)(C) or (a)(2A)(C) of this section, in addition to any other penalties that may be imposed by law, shall result in the suspension of the permits issued pursuant to subsection (a)(1)(C), (a)(2) or (a)(2A) and the addition of a period of time equal to the period of permit suspension to the requirements set forth in (a)(1)(C)(i) and (a)(2A)(B)(i) as follows:

"(i) The first offense shall result in a suspension of 30 days;

"(ii) The second offense shall result in suspension of 60 days; and

"(iii) The third and subsequent offenses shall result in a suspension of 90 days.

"(B) The Mayor shall notify, in writing, the parent or legal guardian of a permittee who is under 18 years of age and who violates subsection (a)(1)(D), (a)(2)(C), or (a)(2A)(C);

"(2D) Operator's permits subject to the provisions of this Act, including a learner's permit, provisional permit and operator's permit, shall be visually distinguishable pursuant to rules promulgated by the Department of Motor Vehicles.".

(4) Paragraph (3) is amended by striking the phrase "dual control motor vehicle at such times as such pupil" and inserting the phrase "dual control motor vehicle between the hours of 6 a.m. and 11 p.m., while the pupil" in its place.

(5) A new paragraph (3A) is added to read as follows:

"(3A) Notwithstanding the passenger restrictions set forth in subsection (a)(1)(D), (a)(C)(iii), and (a)(2A)(C)(iii) of this subsection, a permittee who is enrolled in a driver education course may operate a motor vehicle containing a greater number of passengers while the permittee is under the instruction of and accompanied by a licensed motor vehicle driving instructor provided that the other passengers are also receiving driving instruction.".

(6) Paragraph 4 is amended as follows:

(A) Strike the phrase "operator's permit or learner's permit" and insert the phrase "operator's permit, learner's permit, or a provisional permit" in its place.

(B) Strike the phrase "replacement learner's permit" and insert the phrase "replacement learner's permit, or replacement provisional permit" in its place.

(b) Subsection (d) is amended by striking the phrase "operator's permit or learner's

permit" and inserting the phrase "operator's permit, learner's permit, or a provisional permit" in its place.

Sec. 3. Chapter 1 of Title 18 of the District of Columbia Municipal Regulations (Vehicles and Traffic) is amended as follows: DCMR

(a) Subsection 100.1 is amended by inserting the phrase "provisional permits," after the phrase " learner's permits,".

(b) Subsection 102.2 is amended by striking the phrase "of sixty (60) days" and inserting the phrase "not in excess of 1 year" in its place.

(c) Subsection 102.3 is amended by striking the phrase "of sixty (60) days" and inserting "not in excess of 1 year" in its place.

(d) Subsection 102.4 is amended by inserting the phrase ", a provisional permit, "after the phrase "a learner's permit".

(e) Subsection 102.5 is amended to read as follows:

"102.5 A person holding a learner's permit shall not operate a motor vehicle except between the hours of 6 a.m. and 9 p.m., and while under the instruction of, and when accompanied by the holder of a valid driver's license who is at least 21 years of age and who shall occupy the seat beside the permittee.".

(f) A new subsection 102.14 to read as follows:

"102.14 A person holding a provisional permit shall not operate a motor vehicle between 11:00 p.m. on any Sunday, Monday, Tuesday, Wednesday, or Thursday until 6:00 a.m. on the following day during any month except July or August, and from 12:01 a.m. until 6:00 a.m. during July and August and on any Saturday or Sunday the rest of the year, except if travelling to or from employment, a school-sponsored activity, religious or an athletic event or related training session in which the permittee is a participant, sponsored by the District of Columbia, a civic organization, or another similar entity that takes responsibility for the minor, or unless accompanied by the holder of a valid driver's license who is at least 21 years of age and who shall occupy the seat beside the permittee.".

(g) Subsection 103.1 is amended by inserting the phrase ", a provisional permit, "after the phrase "a learner's permit".

(h) Subsection 103.7 is amended by inserting the phrase ", provisional permit," after the phrase "learner's permit".

(i) Subsection 104.1 is amended by inserting the phrase ", a provisional permit, "after the phrase "a learner's permit".

(j) Subsection 107.10(c) is amended by inserting the phrase "and provisional permits" after the phrase "Learner's permits".

(k) Subsection 109.1 is amended by inserting the phrase ", a provisional permit, " after the phrase "a learner's permit".

DEC 2 4 1999

ENROLLED ORIGINAL

Sec. 4. Fiscal impact statement.

The Council adopts the fiscal impact statement in the committee report as the fiscal impact statement required by section 602(c)(3) of the District of Columbia Home Rule Act, approved December 24, 1973 (87 Stat. 913; D.C. Code § 1-233 (c)(3)).

Sec. 5. This act shall apply on September 1, 2000. The graduated driver's license program, nighttime driving restrictions, and passenger limits shall apply to youths born after December 31, 1984.

Sec. 6. This act shall take effect following approval by the Mayor (or in the event of veto by the Mayor, action by the Council to override the veto), approval by the Financial Responsibility and Management Assistance Authority as provided in section 203(a) of the District of Columbia Financial Responsibility and Management Assistance Act of 1995, approved April 17, 1995 (109 Stat. 116; D.C. Code § 47-392.3(a)), a 30-day period of Congressional review as provided in section 602(c)(1) of the District of Columbia Home Rule Act, approved December 24, 1973 (87 Stat. 813; D.C. Code § 1-233(c)(1)), and publication in the District of Columbia Register.

Linda W. Cropp

Chairman
Council of the District of Columbia

Anthony A. Williams

Mayor
District of Columbia
APPROVED: November 18, 1999

8TH STORY of Focus printed in FULL format.

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November 3, 1999, Wednesday, Final Edition

SECTION: A SECTION; Pg. A01

LENGTH: 1164 words

HEADLINE: D.C. Votes To Limit Teenage Drivers; Council Sets 18 As Minimum Age For Full License

BYLINE: Vanessa Williams, Washington Post Staff Writer

BODY:

The D.C. Council adopted the strictest teenage driving law in the region yesterday, effectively pushing up the minimum age for obtaining a full-fledged driver's license from 16 years old to 18.

The new law would put District teenagers through a three-step obstacle course to receive an unrestricted license. Neophyte drivers would require supervision, particularly at night, and the number of passengers who can travel with them would be limited.

Local and national experts say teenage drivers are more prone to accidents because they lack experience behind the wheel.

Maryland, which strengthened its teenage driving law in July, requires drivers who have just turned 16 to use a learner's permit for four months, then receive an 18-month provisional license. Maryland teenagers have to be at least 17 years and 7 months old before they qualify for an unrestricted license.

In Virginia, new drivers can get a permanent driver's license at 16 if they receive a driver education certificate from a state-approved program and have held a valid learner's permit for six months.

D.C. Council member Kathy Patterson (D-Ward 3), who wrote the District's legislation and pushed for the restrictions, smiled broadly as the bill was finally approved. It will take effect Sept. 1, 2000, if it is approved by the D.C. financial control board and Congress.

"I'm pleased it was approved unanimously by the council today," Patterson said, adding that her 15-year-old does not share her enthusiasm for the new law. "All the research shows that these laws can save lives."

Some District teenagers, who had been looking forward to that important milestone on the road to adulthood, were disappointed yesterday to learn of the pending restrictions.

Danielle Brock, 17, a senior at Anacostia High School, said that some restrictions on teenagers, such as the District's recently enforced curfew, are good because they protect young people, but that the new driving restrictions don't.

"Some of us have responsibilities," Brock said as she waited in line at an ice cream truck at 18th and P streets SE. "We have jobs to get to. The Metro and the buses aren't always the best. We need to drive."

Currently, anyone 16 or older can obtain a learner's permit by passing the District's written driver's license exam. Learner's permit holders can apply to take the road test. If they pass, they will receive a full license.

Under the new legislation, a 16-year-old would still receive a learner's permit if the applicant passes a written exam. At 16 1/2, teenagers could apply for a provisional permit, which would allow unsupervised driving during the day, but require a licensed adult to be in the car at night. Provisional permit holders could have only family members as passengers.

At age 17, a provisional driver could apply for a full license with restrictions allowing the licensee to drive alone during the day but requiring supervision at night. Provisional drivers would be allowed only two passengers. The final step, full unrestricted licensure, would be bestowed on teenagers when they turned 18 and could show a clean driving record.

Lon Anderson, a spokesman for AAA Mid-Atlantic, hailed the strictness of the D.C. measure. "Maryland has a tough one, but this goes a little bit further," said Anderson, whose organization worked with Patterson to develop the legislation.

Patterson said she hoped Virginia officials would beef up their teenage driver laws to be more compatible with those in the District and Maryland.

Anderson said national figures show that 16-year-old drivers crash at nine times the rate of other drivers and that 17-year-old drivers have collisions six times as often as other drivers. Teenage drivers also are more likely to have accidents between the hours of 10 p.m. and 6 a.m., which was why Patterson pushed for nighttime restrictions.

"If only one child or one person does not lose their life because of this, I would think the legislation is worth it," said Ronald Monroe, an assistant police chief in the District. He said teenage accidents are mostly attributable to "poor judgment, lack of experience. Our hope is the legislation will make parents and young people more aware of the awesome responsibility and the importance of safe driving."

Patricia Temoney, 15, a 10th-grader at Richard Milburn Academy, said she liked the stricter law.

"I don't feel old enough to drive on my own," Temoney said, as she stood with friends in the 2100 block of Fairlawn Avenue SE. "There are too many people my age getting hurt," Temoney said, drawing nods of agreement from family members and admonishment from her teenage friends to be quiet.

The Safe Teenage Driving Amendment Act of 1999 passed with little debate, while council members saved their more emotional rhetoric for a resolution approving $ 105.5 million in revenue bonds for the American Red Cross to build a new headquarters in Foggy Bottom. The 10-story building is being opposed by residents in the Northwest community sandwiched between downtown and Georgetown.

The council grudgingly passed a resolution authorizing the bond sale to raise cash for the Red Cross, which wants to build the headquarters at 2025 E St. NW. Foggy Bottom residents have complained that the building would be too large for the site and would block their sunlight and views, but the headquarters would bring 1,200 workers from suburban offices into the District.

"I have great compassion for the Foggy Bottom community," said council member Carol Schwartz (R-At Large). "I am not proud of the vote I'm going to cast today for this bond."

The council's resolution, which passed 7 to 5, "recommends" that the Red Cross reduce the height and size of the building. But the recommendations are not binding, and Congress has warned the council not to try to attach conditions to the resolution.

Staff writer Emily Wax contributed to this report.

Licensing Phases

Under a plan passed by the D.C. Council yesterday, District teenagers would have their driving rights restricted at age 16, with privileges gradually increased until they are 18.

Learner's Permit: Drivers have to be at least 16, may drive only when accompanied by a licensed driver and must have passed written and vision tests.

Provisional Stage: Drivers ages 161/2 with no infractions for six months may drive unsupervised during the day but must be supervised by a licensed driver from 11 p.m to 6 a.m. weekdays and midnight to 6 a.m. on weekends. Drivers also must have 40 hours' driving experience certified by a parent or guardian.

Full License with Restrictions: A driver age 17, reaches this stage after completing 12 consecutive months without a moving violation and at least 10 hours of nighttime driving experience may drive from 6 a.m. to midnight unsupervised. Driver may have two passengers. At age 18 the driver may receive a full license with no restrictions.

SOURCE: D.C. Council

GRAPHIC: IG,,TWP

LANGUAGE: ENGLISH

LOAD-DATE: November 03, 1999

in the brain and spinal cord, those in the gut are naked, lacking an insulating sheath that wraps around the rest of the body's nerves. Swishing among the gut's nerves are serotonin, nitric oxide, carbon monoxide, and at least 30 other neurochemicals—the same ones sloshing around in the skull. Curiously enough, as healthy brains in the head and gut resemble each other, so too do diseased ones. Scientists have found that some Alzheimer's and Parkinson's patients accumulate the same type of tissue damage in their bowels as they do in their skulls, raising the possibility that these disorders might someday be diagnosed by routine rectal biopsy.

No-brainer. The fact that the two brains share so much of the same biology can explain why psychiatric medications have side effects in the gut. Antidepressants like Prozac, for instance, increase the presence of serotonin in the spaces where nerves talk to each other in both brains. While this neurochemical shift settles the big brain emotionally, it causes the gut to squirm, leading to side effects like abdominal cramping and diarrhea.

Many investigators are taking their cues in treating gut disorders from drugs that have worked on the brain. For example, Michael Camilleri, a gastroenterologist at the Mayo Clinic, is treating a variety of gastrointestinal disorders with Clonidine, a drug sometimes used in psychiatry. Another medication called Imitrex, customarily used to soothe the pangs of migraine headaches, has effectively healed the gut in two studies by Belgian teams. And Lotronex, the recently released treatment for irritable-bowel syndrome, came from an anti-anxiety drug.

If the arrival of Lotronex signals a new era in treatment, it also goes a long way in debunking the popular notion that IBS is "all in the head." Though IBS is a relatively common disorder, affecting as many as 1 in 5 people, it is difficult to diagnose with conventional methods. The chronic abdominal pain, discomfort, and irregular bowel movements leave no trace in the lining of the gut because such abnormalities presumably occur at the level of the nerves tucked inside the gut. This lack of physiological evidence has led many doctors to dismiss patients' complaints as psychosomatic. It's now hypothesized that the nerves lining the gut are oversensitive and overreact to gas and food passing by, thus causing pain and cramping. "Lotronex suggests that there is a mechanism that is malfunctioning either in the big brain or the little brain, or both, or someplace in between," says Wood. "IBS is not imagined." ●

Teen angels, can you hear this message?

Young drivers plus passengers equals disaster

BY JOHN S. MACNEIL

Most Americans remember earning a driver's license as one of the most empowering events of their young lives, a source of unprecedented freedom and mobility. Unfortunately, this rite of passage also marks the beginning of the most dangerous teenage years. Drivers who are 16 and 17 years old are known to run a much higher risk of being involved in an accident than older drivers. And if that weren't enough, new research now shows that the more teenage passengers in the car, the greater the risk of dying in an accident.


JOHN EASTCOTT AND YVA MOMATIUK—IMAGE WORKS

It's risky to hitch a ride with a 16-year-old driver. ● *Not stupidity, just lack of driving experience*

Although previous studies have hinted at this connection, the most recent study, published in last week's *Journal of the American Medical Association*, offers a starker picture of how risky it is to get a lift from a teenage driver. Indeed, a 16-year-old driver with three or more passengers is three times as likely to have a fatal accident as a teenager driving alone. By contrast, the risk of death for drivers between 30 and 59 decreases with each additional passenger.

The authors also found that the death rates for teenage drivers increased dramatically after 10 p.m., and especia after midnight. With passengers in t car, the driver was even more likely to in a late-night accident.

Robert Foss, a scientist at the Ur versity of North Carolina Highway Sa ty Research Center and author of an e itorial accompanying the study, sa the higher death rates for teenage dri ers have less to do with "really stupid b havior" than with just lack of drivi experience. "The basic issue," he says, that adults [who are respo sible for issuing licenses] f to recognize how complex a skilled a task driving is."

Graduated licensing. Both and the author of the stud Johns Hopkins University r searcher Li-Hui Chen, belie that the way to mitigate t problem is to have states i stitute so-called graduate licensing systems, in whi getting a license is a multista process. A graduated licen requires that a teenager fir prove himself capable of dri ing in the presence of an adu followed by a period of drivi with night or passenger r strictions, before graduati to full driving privileges.

Graduated license systen have reduced teenage dri er crashes, according to r cent studies. About half of the stat now have some sort of graduated l censing system in place, but only 1 of those states have restrictions on pa sengers. California is the strictest, wit a novice driver prohibited from carr ing any passengers under 20 (witho the presence of an adult over 25) for t first six months.

Other unpublished data are even mo dramatic, Foss adds. They show that eve if every teenager who would have bee able to catch a ride were instead to dri his or her own car, there would still b a reduction in the number of teenage dri er deaths. "Even though it may put mo drivers on the road," he says, "we'll sti get a net benefit." ●

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Carrying Passengers as a Risk Factor for Crashes Fatal to 16- and 17-Year-Old Drivers

Li-Hui Chen, PhD
Susan P. Baker, MPH
Elisa R. Braver, PhD
Guohua Li, MD, DrPH

Context Injuries from motor vehicle crashes are the leading cause of death among teenagers. Carrying passengers has been identified as a possible risk factor for these crashes.

Objective To determine whether the presence of passengers is associated with an increased risk of crashes fatal to 16- and 17-year-old drivers and whether the risk varies by time of day and age and sex of drivers and passengers.

Design and Setting Incidence study of data from the Fatality Analysis Reporting System and General Estimates System (1992-1997), as well as the Nationwide Personal Transportation Survey (1995).

Subjects Drivers aged 16 and 17 years who drove passenger cars, vans, or pickup trucks.

Main Outcome Measure Driver deaths per 10 million trips by number of passengers, driver age and sex, and time of day; and driver deaths per 1000 crashes by passenger age and sex.

Results Compared with drivers of the same age without passengers, the relative risk of death per 10 million trips was 1.39 (95% confidence interval [CI], 1.24-1.55) for 16-year-old drivers with 1 passenger, 1.86 (95% CI, 1.56-2.20) for those with 2 passengers, and 2.82 (95% CI, 2.27-3.50) for those with 3 or more passengers. The relative risk of death was 1.48 (95% CI, 1.35-1.62) for 17-year-old drivers with 1 passenger, 2.58 (95% CI, 2.24-2.95) for those with 2 passengers, and 3.07 (95% CI, 2.50-3.77) for those with 3 or more passengers. The risk of death increased significantly for drivers transporting passengers irrespective of the time of day or sex of the driver, although male drivers were at greater risk. Driver deaths per 1000 crashes increased for 16- and 17-year-olds transporting male passengers or passengers younger than 30 years.

Conclusion Our data indicate that the risk of fatal injury for a 16- or 17-year-old driver increases with the number of passengers. This result supports inclusion of restrictions on carrying passengers in graduated licensing systems for young drivers.

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MOTOR VEHICLE CRASHES are the leading cause of death among teenagers in the United States, accounting for 36% of all deaths of persons aged 15 to 19 years.[1] The fatal crash rate per million miles for 16-year-old drivers is more than 7 times the rate for drivers aged 30 to 59 years.[2] Nearly the same number of deaths occur among teenaged passengers as teenaged drivers: in 1993, two thirds of the deaths of passengers aged 13 to 19 years occurred when teenagers were driving.[3] In recent years, increased attention has been given to graduated licensing systems. The basic premise of these systems is that beginning drivers need to earn a full license step-by-step. Three stages—a supervised learner's period, an intermediate license, and a full-privilege driver's license—are the central framework for graduated licensing systems. During the learner's period, beginning drivers can drive only under supervision. For the intermediate period, restrictions vary widely by state in the United States and may include restrictions on nighttime driving and carrying passengers.[4]

Graduated licensing systems are recommended by the National Highway Traffic Safety Administration and encouraged through an incentive grant program.[5] As of January 2000, 24 states had adopted full graduated licensing systems with all 3 stages. Only 9 of these 24 states included any restrictions related to teenaged drivers carrying passengers.[4]

Although past studies[6-8] provided evidence suggesting a relationship between carrying passengers and crash risk for teenaged drivers, they had insufficient information on travel exposure patterns, driver characteristics, and passenger attributes. Knowing the circumstances associated with increased risk to teenaged drivers is useful for

For editorial comment see 1617.

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formulating graduated driver licensing programs and for advising health professionals who take care of teenagers. Our study examined the associations between crashes fatal to 16- and 17-year-old drivers and the characteristics of passengers. The following potential risk factors were examined: driver age, driver sex, number of passengers, passenger age, passenger sex, and time of day.

METHODS

Data

Data for this study were from 3 federal sources: the Fatality Analysis Reporting System (FARS),[9] Nationwide Personal Transportation Survey (NPTS),[10] and General Estimates System (GES).[11] Drivers aged 16 and 17 years who drove passenger cars, vans, or pickup trucks were the focus of the study. Some analyses included drivers aged 30 to 59 years for purposes of comparison.

FARS collects data on all fatal traffic crashes within the United States that involve a motor vehicle traveling on a public road and result in a death within 30 days of the crash.[9] Data on crashes fatal to 16- and 17-year-old drivers were obtained from FARS for the years 1992-1997.

The NPTS provides comprehensive data on transportation patterns in the United States based on a national telephone survey of 42 033 households conducted from May 1995 to July 1996. Once a household was selected, travel diaries were mailed to the household and every person within the household who was aged 14 years or older was interviewed regarding trips made on a recent preassigned day. A proxy summarized trips for children aged 5 to 13 years.[10] The 1995 NPTS was the source for estimates of the number of trips for 16- and 17-year-old drivers. We chose number of trips as the measurement of travel exposure because individual trips vary in the number and characteristics of passengers.

The GES is a probability sample of US police-reported crashes on public roads that result in property damage, injury, or death.[11] There are 60 primary sampling units in the GES, chosen to be representative of the US population, and about 54 000 crashes per year are sampled.[11] Information on crashes involving 16- and 17-year-old drivers was obtained from GES data for the years 1992-1997.

Because uninjured passengers were not fully reported in some of the primary sampling units in the GES, we excluded those units from GES data to avoid misclassification of drivers with uninjured passengers as having carried fewer passengers. This resulted in exclusion of about 5% of weighted crashes from the GES data and a corresponding 5% overestimation of deaths per 1000 crashes. These primary sampling units could not be identified within FARS because the specific locations of GES primary sampling units are confidential and thus unavailable to researchers.

Analysis

Driver deaths were studied rather than deaths among all vehicle occupants because higher occupancy increases the probability that a crash will be fatal by increasing the population at risk. Statistical software (SPSS for Windows[12] and SAS[13]) was used to calculate rates.

Risk of Death per 10 Million Trips. FARS and NPTS data were used to calculate driver deaths per 10 million trips by number of passengers, driver age and sex, and time of day. These trip-based death rates measured the likelihood of involvement in a crash fatal to a 16- or 17-year-old driver.

Crash Outcome. FARS and GES data were used to compute deaths per 1000 crashes for 16- and 17-year-old drivers, combined, by passenger age and sex (deaths per 10 million trips could not be calculated by passenger age and sex because the NPTS lacked data on characteristics of passengers who were not household members). This different type of measure, deaths per 1000 crashes, represents crash outcome rather than fatal crash incidence and reflects crash forces and other variables (eg, seatbelt use) that might be affected by driver behaviors associated with the presence of passengers.

Passengers of both 16- and 17-year-old drivers, combined, were classified in 3 age groups: aged 13 to 19 years, 20 to 29 years, and 30 years or older. Analyses showed no differences among results based on passengers aged 20, 21, 22 to 24, or 25 to 29 years; therefore, passengers aged 20 to 29 years were grouped.

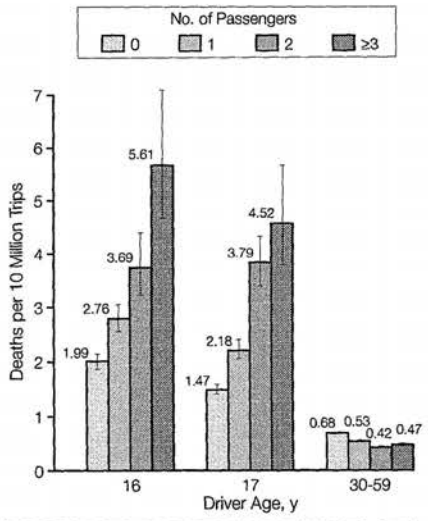
Relative Risk and Confidence Intervals. Relative risk was defined as the death rate ratio, calculated by dividing the death rate for the target group by that of the reference group. Because the GES and NPTS are data sets with multistage sampling designs, the statistical software SUDAAN[14] was used to calculate the SEs of weighted trips and weighted crashes. Ninety-five percent confidence intervals for the rates were calculated by the substitution method described by Daly.[15] Ninety-five percent confidence intervals for the relative risks were calculated based on a method described by Rothman and Greenland.[16]

RESULTS

Trip-Based Death Rates

Driver Age. Drivers aged 16 and 17 years had markedly higher risks for fatal crashes than older drivers (FIGURE, TABLE 1). Compared with driving alone, driver death rates per 10 million trips in-

Figure. Trip-Based Driver Death Rates by Driver Age and Number of Passengers



Error bars are 95% confidence intervals.

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creased with the number of passengers for drivers aged 16 or 17 years. The highest death rate (5.61 per 10 million trips) was observed among drivers aged 16 years carrying 3 or more passengers. In contrast, death rates per 10 million trips for drivers aged 30 to 59 years were lower for drivers with passengers than for those without passengers.

Driver Sex. Whether or not passengers were transported, male drivers had higher death rates than female drivers (Table 1). Carrying passengers dramatically increased the risks of 16- and 17-year-old male drivers per 10 million trips: for 16-year-old males, the relative risk was 3.48 with 3 or more passengers vs no passengers. Carrying passengers also significantly increased the fatal crash risks of 16- and 17-year-old female drivers but to a lesser extent.

Time of Day. Nighttime death rates greatly exceeded daytime death rates among 16- and 17-year-old drivers, combined (TABLE 2). For drivers aged 16 to 17 years, carrying passengers significantly increased the risk of driver deaths per 10 million trips during each of the 3 time periods analyzed. The highest driver death rate for 16- and 17-year-old drivers, 21.88 per 10 million trips, was for drivers traveling with passengers between midnight and 5:59 AM.

Crash Outcome Analyses

Passenger Age. When crashes occurred, carrying passengers aged 13 to 19 years or aged 20 to 29 years was associated with significantly increased driver fatalities per 1000 crashes for 16- to 17-year-old drivers, combined (TABLE 3). The risk of death increased with the number of passengers. Carrying passengers aged 30 years or older did not increase the driver fatality rates.

Passenger Sex. Crash-involved 16- and 17-year-old drivers, combined, with male passengers were significantly more likely to die than those with only female passengers (TABLE 4). Risk of death increased with the number of male passengers. Similar effects of male passengers were observed for male and female drivers. Driver deaths per 1000 crashes more than doubled for both male and female drivers when there were 2 or more male passengers and nearly doubled with 1 male passenger.

COMMENT

The incidence of motor vehicle crashes fatal to 16- and 17-year-old drivers increased with the number of passengers

Table 1. Trip-Based Relative Risks for Driver Deaths by Number of Passengers, Driver Age, and Sex*

	No. of Passengers											
	Male Driver				Female Driver				Overall			
	0	1	2	≥3	0	1	2	≥3	0	1	2	≥3
Age 16 y												
Deaths, No.†	831	544	231	193	443	332	106	106	1274	876	337	299
No. of trips‡												
Weighted (in billions)§	0.53	0.21	0.06	0.04	0.54	0.32	0.09	0.05	1.07	0.53	0.15	0.09
Unweighted	556	207	63	26	498	260	76	41	1054	467	139	67
Death rate‖	2.61	4.39	6.29	9.08	1.38	1.72	1.94	3.31	1.99	2.76	3.69	5.61
Relative risk (95% CI)	1.00¶	1.68 (1.44-1.97)	2.41 (1.82-3.20)	3.48 (2.53-4.79)	1.00¶	1.25 (1.06-1.46)	1.41 (1.14-1.74)	2.40 (1.78-3.22)	1.00¶	1.39 (1.24-1.55)	1.86 (1.56-2.20)	2.82 (2.27-3.50)
Age 17 y												
Deaths, No.†	1048	615	238	224	577	281	122	79	1625	896	360	303
No. of trips‡												
Weighted (in billions)§	1.07	0.37	0.09	0.05	0.77	0.32	0.07	0.05	1.84	0.69	0.16	0.11
Unweighted	1091	406	89	52	863	335	94	65	1954	741	183	117
Death rate‖	1.63	2.77	4.61	6.92	1.26	1.48	2.82	2.28	1.47	2.18	3.79	4.52
Relative risk (95% CI)	1.00¶	1.70 (1.49-1.93)	2.83 (2.33-3.42)	4.25 (3.08-5.84)	1.00¶	1.18 (1.04-1.35)	2.24 (1.85-2.72)	1.81 (1.39-2.36)	1.00¶	1.48 (1.35-1.62)	2.58 (2.24-2.95)	3.07 (2.50-3.77)
Age 30-59 y												
Death, No.†	27 362	5785	1703	1318	10 594	2897	1025	836	37 957	8683	2728	2154
No. of trips‡												
Weighted (in billions)§	49.37	12.89	4.55	4.05	43.24	14.46	6.35	3.52	92.61	27.34	10.90	7.57
Unweighted	55 040	14 829	4735	3974	52 435	17 197	7061	4097	107 475	32 026	11 796	8071
Death rate‖	0.92	0.75	0.62	0.54	0.41	0.33	0.27	0.40	0.68	0.53	0.42	0.47
Relative risk (95% CI)	1.00¶	0.81 (0.79-0.83)	0.68 (0.65-0.70)	0.59 (0.57-0.61)	1.00¶	0.81 (0.80-0.83)	0.66 (0.64-0.68)	0.96 (0.93-1.01)	1.00¶	0.78 (0.76-0.79)	0.61 (0.60-0.62)	0.70 (0.67-0.71)

*CI indicates confidence interval.
†Data from National Highway Traffic Safety Administration, *Fatality Analysis Reporting System: 1992-1997*.[9]
‡Data from Federal Highway Administration, *1995 Nationwide Personal Transportation Survey*.[10]
§Weighted to provide national estimates of trips based on probabilities of selection of households, persons, and travel days in the sample.
‖Deaths per 10 million trips, based on weighted trips.
¶Reference group.

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for both male and female drivers, during daytime and at night. In contrast, 30- to 59-year-old drivers who carried passengers had decreased death rates. Crashes are more likely to be fatal to drivers aged 16 and 17 years in the presence of male passengers, teenaged passengers, and passengers aged 20 to 29 years, findings not previously documented.

Why were there more deaths when 16- and 17-year-old drivers carried passengers? A survey of 192 high school drivers reported that dangerous driving behaviors (driving after drinking alcohol or using drugs, speeding, swerving, crossing the center line, purposely skidding, and running a red light) were strongly associated with the presence of peers.[17] When carrying passengers, drivers aged 16 to 19 years involved in fatal crashes were significantly more likely to be in single-vehicle crashes or to be coded as having made errors than when driving alone.[8]

The marked increase in fatal outcomes of crashes associated with carrying male passengers may be attributable to riskier driving behavior. A study that observed vehicles on the road found that, on average, young drivers with male passengers drove at higher speeds and followed preceding vehicles more closely than those without passengers or with female passengers.[18]

Alcohol consumption is a major risk factor for involvement in fatal crashes. Another possible explanation for passenger-related increases in fatalities is that drivers are more likely to be impaired by alcohol when carrying passengers, particularly those who can legally purchase alcohol. Unfortunately, we were unable to estimate the increased driver fatality risk associated with carrying passengers because alcohol use information was not consistently available from our data sources. Teenaged drivers are more susceptible than adult drivers to the impairing effect of alcohol: at each blood alcohol concentration, male drivers aged 16 to 19 years have higher risks of fatal crashes than older age groups.[19] The finding that carrying passengers aged 20 to 29 years increased the likelihood of fatal outcomes when 16- and 17-year-old drivers crashed suggests that a restriction on carrying any teenagers unless supervised by an adult at least 21 years old could have a negative effect if it increased the transport of passengers aged 20 to 29 years. Further study will be needed to clarify the relationship between the risk of teenaged driver crashes, carrying passengers of various ages, and alcohol use.

Driving at night is much more dangerous than driving during the daytime. The present study and previous research by Preusser et al[8] indicate that the effect of passengers is similar for

Table 2. Trip-Based Risks for Teenaged Driver Deaths by Time of Day and Passenger Presence*

	Time of Day					
	6 AM-9:59 PM Passenger Present		10 PM-11:59 PM Passenger Present		Midnight-5:59 AM Passenger Present	
	No	Yes	No	Yes	No	Yes
Deaths, No.†	1976	2069	348	424	550	573
Trips, No.‡						
Weighted (in billions)§	2.66	1.57	0.18	0.11	0.06	0.04
Unweighted	2757	1573	181	105	70	34
Death rate‖	1.24	2.20	3.26	6.37	14.20	21.88
Relative risk (95% CI)	1.00¶	1.77 (1.65-1.91)	1.00¶	1.95 (1.67-2.29)	1.00¶	1.54 (1.21-1.95)

*CI indicates confidence interval. Drivers were aged 16 and 17 years.
†Data from National Highway Traffic Safety Administration, *Fatality Analysis Reporting System: 1992-1997*.[9]
‡Data from Federal Highway Administration, *1995 Nationwide Personal Transportation Survey*.[10]
§Weighted to provide national estimates of trips based on probabilities of selection of households, persons, and travel days in the sample.
‖Deaths per 10 million trips, based on weighted trips.
¶Reference group.

Table 3. Teenaged Driver Deaths per 1000 Crashes by Passenger Age and Number of Passengers*

		Age of Passengers, y					
		13-19		20-29		≥30	
	No Passengers	1 Passenger	≥2 Passengers	1 Passenger	≥2 Passengers	1 Passenger	≥2 Passengers
Deaths, No.†	2899	1460	910	150	16	77	6
Crashes, No‡							
Weighted§	2 007 221	700 859	369 193	42 203	4103	49 688	4297
Unweighted	14 755	5612	3078	352	36	382	28
Death rate‖	1.44	2.08	2.46	3.55	3.90	1.55	1.40
Relative risk (95% CI)	1.00¶	1.45 (1.30-1.60)	1.71 (1.50-1.94)	2.47 (2.12-2.86)	2.71 (1.78-4.10)	1.08 (0.91-1.26)	0.97 (0.59-1.60)

*CI indicates confidence interval. Drivers were aged 16 to 17 years.
†Data from National Highway Traffic Safety Administration, *Fatality Analysis Reporting System: 1992-1997*.[9]
‡Data from National Highway Traffic Safety Administration, *General Estimates System: 1992-1997*.[11]
§Weighted to provide national estimates of crashes based on probabilities of selection of geographic areas, police agencies, and crashes in the sample.
‖Deaths per 1000 crashes, based on weighted crashes.
¶Reference group.

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Table 4. *Teenaged Driver Deaths per 1000 Crashes by Sex of Driver and Passengers**

	No. and Sex of Passengers					
		Female		Male		
	None	1	≥2	1	≥2	Both Sexes
Male Driver						
Deaths†	1879	242	78	931	473	331
Crashes‡						
Weighted§	1 145 262	149 932	33 272	331 871	145 077	105 129
Unweighted	8460	1214	295	2660	1237	890
Death rate‖	1.64	1.61	2.34	2.81	3.26	3.15
Relative risk (95% CI)	1.00¶	0.98 (0.87-1.11)	1.43 (1.20-1.69)	1.71 (1.53-1.92)	1.99 (1.74-2.26)	1.92 (1.66-2.22)
Female Driver						
Deaths†	1020	405	140	211	80	194
Crashes‡						
Weighted§	861 436	265 230	103 248	118 570	28 218	94 583
Unweighted	6293	2062	820	983	246	767
Death rate‖	1.18	1.53	1.36	1.78	2.84	2.05
Relative risk (95% CI)	1.00¶	1.29 (1.15-1.45)	1.15 (0.99-1.33)	1.51 (1.33-1.70)	2.40 (1.98-2.89)	1.74 (1.51-1.99)
Overall#						
Deaths†	2899	647	218	1142	553	525
Crashes‡						
Weighted§	2 007 221	415 162	136 900	450 441	173 295	199 724
Unweighted	14 755	3276	1117	3643	1483	1658
Death rate‖	1.44	1.56	1.59	2.54	3.19	2.63
Relative risk (95% CI)	1.00¶	1.08 (0.97-1.20)	1.11 (0.96-1.26)	1.76 (1.58-1.95)	2.22 (1.95-2.51)	1.83 (1.60-2.06)

*CI indicates confidence interval. Drivers were aged 16 to 17 years.
†Data from National Highway Traffic Safety Administration. *Fatality Analysis Reporting System: 1992-1997.*[9]
‡Data from National Highway Traffic Safety Administration, *General Estimates System: 1992-1997.*[11]
§Weighted to provide national estimates of crashes based on probabilities of selection of geographic areas, police agencies, and crashes in the sample.
‖Deaths per 1000 crashes, based on weighted crashes.
¶Reference group.
#The overall numbers for both sexes are slightly greater than the totals for males and females because the sex of the driver was unknown in some instances.

both daytime and nighttime driving. Nighttime driving restrictions are especially appropriate but cannot substitute for passenger restrictions, since more than half of the fatal crashes of teenaged drivers with passengers occur during daylight hours.

Graduated driver licensing has reduced teenaged driver crashes in Canada,[4] New Zealand,[20] and Florida.[21] Current graduated licensing systems in the United States either do not have passenger restrictions or have restrictions that are of short duration, permit up to 3 passengers, or do not specify passenger age.[4] The results of our study indicate that restrictions on carrying passengers should be considered for inclusion in graduated licensing systems for young drivers. Health professionals should advise parents of teenagers of the risks associated with the transport of passengers by young drivers.

Funding/Support: This work was supported by the Insurance Institute for Highway Safety and by grant R49 CCR 302486 from the Centers for Disease Control and Prevention to the Johns Hopkins Center for Injury Research and Policy.
Disclaimer: The opinions, findings, and conclusions expressed in this publication are those of the authors and do not necessarily reflect the views of the sponsors.
Acknowledgment: We thank Charles M. Farmer, PhD, of the Insurance Institute for Highway Safety for providing statistical advice.

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JAMA
CURRENT ISSUE AUTHOR INDEX PAST ISSUES
Vol. 283 No. 12, March 22/29, 2000
Table of Contents

PDF OF TABLE OF CONTENTS

This Week in JAMA
Original Contributions
Brief Report
Special Communication
Clinical Crossroads
Clinical Crossroads Update
Editorials
Letters
News and Analysis
The Cover
Poetry and Medicine
JAMA 100 Years Ago
Contempo Updates
Books, Journals, New Media
JAMA Patient Page
Reader Service

THIS WEEK IN JAMA

Highlights of selected articles
FULL TEXT | PDF

ORIGINAL CONTRIBUTIONS

Correlation Between Elevated Levels of Amyloid β-Peptide in the Brain and Cognitive Decline
Jan Näslund; Vahram Haroutunian; Richard Mohs; Kenneth L. Davis; Peter Davies; Paul Greengard; Joseph D. Buxbaum
JAMA. 2000;283:1571-1577
ABSTRACT | FULL TEXT | PDF

Carrying Passengers as a Risk Factor for Crashes Fatal to 16- and 17-Year-Old Drivers
Li-Hui Chen; Susan P. Baker; Elisa R. Braver; Guohua Li
JAMA. 2000;283:1578-1582
ABSTRACT | FULL TEXT | PDF

Comparison of Ciprofloxacin (7 Days) and Trimethoprim-Sulfamethoxazole (14 Days) for Acute Uncomplicated Pyelonephritis in Women
A Randomized Trial
David A. Talan; Walter E. Stamm; Thomas M. Hooton; Gregory J. Moran; Thomas Burke; Abdollah Iravani; Jonathan Reuning-Scherer; Deborah A. Church
JAMA. 2000;283:1583-1590
ABSTRACT | FULL TEXT | PDF

Rates of and Factors Associated With Recurrence of Preterm Delivery
Melissa M. Adams; Laurie D. Elam-Evans; Hoyt G. Wilson; David A. Gilbertz
JAMA. 2000;283:1591-1596
ABSTRACT | FULL TEXT | PDF



This Week in JAMA

Original Contributions

Brief Report

Special Communication

Clinical Crossroads

Clinical Crossroads Update

Editorials

Letters

News and Analysis

The Cover

Poetry and Medicine

JAMA 100 Years Ago

Contempo Updates

Books, Journals, New Media

JAMA Patient Page

Reader Service

BRIEF REPORT

Preparticipation Cardiovascular Screening for US Collegiate Student-Athletes
Glen C. Pfister; James C. Puffer; Barry J. Maron
JAMA. 2000;283:1597-1599
ABSTRACT | FULL TEXT | PDF

SPECIAL COMMUNICATION

Guidelines for Medical and Health Information Sites on the Internet
Principles Governing AMA Web Sites
Margaret A. Winker; Annette Flanagin; Bonnie Chi-Lum; John White; Karen Andrews; Robert L. Kennett; Catherine D. DeAngelis; Robert A. Musacchio
JAMA. 2000;283:1600-1606
ABSTRACT | FULL TEXT | PDF

CLINICAL CROSSROADS

An 82-Year-Old Woman With Mood Changes Following a Stroke
Robert G. Robinson
FULL TEXT | PDF

CLINICAL CROSSROADS UPDATE

A 43-Year-Old Woman Coping With Cancer, 1 Year Later
Richard A. Parker; Erin E. Hartman
FULL TEXT | PDF

EDITORIALS

The Origins of Alzheimer Disease
A Is for Amyloid

This Week in JAMA

Original Contributions

Brief Report

Special Communication

Clinical Crossroads

Clinical Crossroads Update

Editorials

Letters

News and Analysis

The Cover

Poetry and Medicine

JAMA 100 Years Ago

Contempo Updates

Books, Journals, New Media

JAMA Patient Page

Reader Service

Dennis J. Selkoe
FULL TEXT | PDF

Reducing Fatal Crash Risk Among Teenaged Drivers Structuring an Effective Graduated Licensing System
Robert D. Foss
FULL TEXT | PDF

LETTERS

Tube Feeding in Patients With Advanced Dementia
Valery Portnoi; Bruce E. Robinson; John L. Udell; Anna M. Timell; Thomas E. Finucane; Colleen Christmas
FULL TEXT | PDF

Privacy of Electronic Medical Information
Bruce Wilder; James G. Hodge, Jr; Lawrence O. Gostin; Peter D. Jacobson
FULL TEXT | PDF

Abortion and Unplanned Pregnancy
Sara Eapen; Matthew J. Bulfin; John H. Shale; Gail Matthews Wingert; David A. Grimes
FULL TEXT | PDF

Chronobiology of Recombinant Leptin Therapy
Gema Frühbeck; Alberto Díez-Caballero; Javier Salvador; Javier Alvarez-Cienfuegos; Steven B. Heymsfield
FULL TEXT | PDF

Prostacyclin and Thromboxane and the Development of Preeclampsia
Ariela Benigni; Giuseppe Remuzzi; R. M. F. van der Weiden; F. M. Helmerhorst; James L. Mills; Richard J. Levine; Jason D. Morrow
FULL TEXT | PDF

Is Miss America an Undernourished Role Model?
Sharon Rubinstein; Benjamin Caballero
FULL TEXT | PDF

NEWS AND ANALYSIS

MEDICAL NEWS & PERSPECTIVES

International Plan Focuses on Eradication of Polio and Containment of the Virus
Charles Marwick
FULL TEXT | PDF

Lords of the Fly Decode *Drosophila* Genome
Joan Stephenson
FULL TEXT | PDF

US Effort to Eliminate Syphilis Moving Forward
Mike Mitka
FULL TEXT | PDF

Miscellanea Medica
FULL TEXT | PDF

QUICK UPTAKES

New Guidance on PSA Testing
Rebecca Voelker
FULL TEXT | PDF

Building a Better X-ray
Rebecca Voelker
FULL TEXT | PDF

Risk of Tobacco Sickness
Rebecca Voelker
FULL TEXT | PDF

The Last Resort
Rebecca Voelker
FULL TEXT | PDF

FROM THE HEALTH CARE FINANCING ADMINISTRATION

Promoting Prevention
Nancy-Ann De Parle
FULL TEXT | PDF

FROM THE CENTERS FOR DISEASE CONTROL AND PREVENTION

Role of Victims' Services in Improving Intimate Partner Violence Screening by Trained Maternal and Child Health-Care Providers—Boston, Massachusetts, 1994-1995
FULL TEXT | PDF

Storm-Related Mortality—Central Texas, October 17-31, 1998
FULL TEXT | PDF

THE COVER

Edtaonisl (Clergyman)
M. Therese Southgate
FULL TEXT | PDF

POETRY AND MEDICINE

What Grown-ups Do
Cortney Davis
FULL TEXT | PDF

Someone in the Bed Is Now Gone
Cortney Davis
FULL TEXT | PDF

JAMA 100 YEARS AGO

THE HOSPITAL PATHOLOGIST.
FULL TEXT | PDF

SUICIDES.
FULL TEXT | PDF

CONTEMPO UPDATES

The Impact of the Polymerase Chain Reaction in Clinical Medicine
J. Christopher Post; Garth D. Ehrlich
FULL TEXT | PDF

BOOKS, JOURNALS, NEW MEDIA

The Angry Genie: One Man's Walk Through the Nuclear Age
Reviewed by Lynn H. Ehrle
FULL TEXT | PDF

The Curse: Confronting the Last Unmentionable Taboo: Menstruation
Reviewed by Leslie Hartley Gise
FULL TEXT | PDF

Is Menstruation Obsolete?
Reviewed by Elizabeth Barrett-Connor
FULL TEXT | PDF

Books, Journals, New Media Received
FULL TEXT | PDF

JAMA PATIENT PAGE

Urinary Tract Infections
PDF

READER SERVICE

CORRECTION

Correction: Recommended Childhood Immunization Schedule—United States, 2000
FULL TEXT | PDF

OBITUARY LISTING

FULL TEXT | PDF

CONTINUING MEDICAL EDUCATION

March 22/29, 2000
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SENATE BILL 404

File Code: Vehicle Laws - Licensing and Registration
Prior Year Introduction As: SB 597/99 - JPR

Sponsored By:
Senators Dyson, Kelley, Lawlah, Teitelbaum, Colburn, Hooper, and Ruben

Entitled:
Vehicle Laws - License Restriction for a Minor - Prohibition Against Minors as Passengers

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Synopsis:

Requiring the Motor Vehicle Administration to impose a restriction on the original driver's license of a minor which prohibits the minor from transporting individuals under a specified age; requiring the restriction to be in effect for a specified time period; exempting specified passengers from the provisions of the Act; authorizing a police officer to enforce the Act only as a secondary violation; and providing that a violation of the Act is a moving violation for the purpose of awarding points against a driver's license.

History by Legislative Date

Senate Action

2/3
First Reading Judicial Proceedings
2/9
Hearing 2/17 at 1:00 p.m.
3/23
Unfavorable Report by Judicial Proceedings

House Action

No Action

Sponsored by:

Senator Roy P. Dyson, District 29
Senator Richard F. Colburn, District 37
Senator J. Robert Hooper, District 35
Senator Delores G. Kelley, District 10
Senator Gloria Lawlah, District 26
Senator Ida G. Ruben, District 20

Senator Leonard H. Teitelbaum, District 19

Bill indexed under the following Subjects:

DRIVERS' LICENSES
LAW ENFORCEMENT -see also- STATE POLICE, DEPARTMENT OF
MINORS -see also- AGE OF MAJORITY; YOUTH
MOTOR VEHICLE ADMINISTRATION
TRAFFIC REGULATIONS
TRANSPORTATION -see also- AIRCRAFT; AIRPORTS; BOATS; etc

Bill affects the following Statutes:

Transportation
(*16-113* , *16-113* , *16-113*)

Documents:

Bill Text (Displayed in Rich Text Format): First Reading, Third Reading, Enrolled

Fiscal Note (Displayed in WordPerfect 8 Format): Available

Amendments: None offered

Top | Sponsors | Title | Synopsis | History | Sponsor List | Subjects | Statutes | Documents | Up to the Minute | Another Bill

School Zone Flashers— Do They Really Slow Traffic?

BY BENJAMIN E. BURRITT, RICHARD C. BUCHANAN, AND ERIC I. KALIVODA

School crossing controls in Arizona are among the most restrictive in the nation. At official Arizona school crossings, a temporary speed limit of 15 miles per hour (mph) is imposed on motorists by portable signs that are placed in the roadway during approved school hours (see Figure 1). The undisputed success of Arizona's school crossing program over the past 30 years is largely attributable to the restrictive controls and their rigorous enforcement by police agencies throughout the state.

Flashing beacons, or flashers as they are commonly known, are not a part of the official control plan for Arizona's school crossings. However, school jurisdictions often request that flashers be installed to augment the already stringent controls. Over the years, the Traffic Engineering Section of the Arizona Department of Transportation (ADOT) has aggressively fended off such requests to use flashers on state highway system crossings. Their position is based on the fact that when flashers are installed in locations where they are not warranted, they soon lose much, if not all, of their effectiveness. More important, improper usage greatly reduces the effectiveness of other flashers installed in areas where there is a real, demonstrated need.

The case history that follows began with a request in 1986 for the installation of flashers at two existing school crossings on a state highway within the city limits of Tucson. Flashers have become standard installations at school crossings on arterial streets within Tucson. However, flashers had never before been installed at school crossings on state highways within Arizona—regardless of the political jurisdiction.

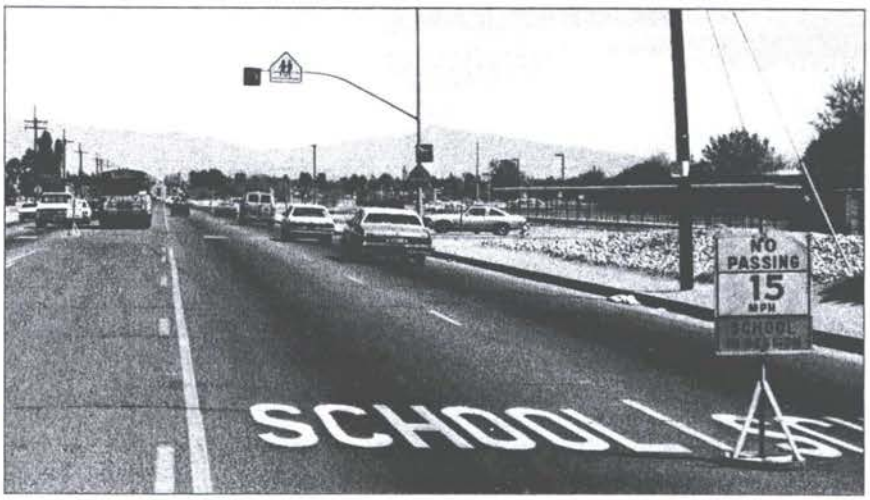


Figure 1. A portable sign indicating a temporary 15-mph speed limit is placed in the roadway as part of the school crossing program in Arizona.

The request led to a comprehensive study by ADOT in January 1987, which resulted in a recommendation that flashers not be installed.[1] Despite the study findings, the flashers were installed and became operational in April 1987. During the one month remaining in the school year after the flashers were activated, ADOT undertook an evaluation to determine the flashers' effects on traffic speeds.

Evaluation

The evaluation was based on the analysis of speed samples collected before and after the installation of flashers. Speeds were sampled at each school crosswalk during the last week of May 1987. These samples were compared with similar size samples collected during December 1986, before the flashers were installed.

Vehicular speeds were first sampled during non-school hours, when the standard Arizona school crossing traffic controls were not in place. These samples were collected for comparison with before period samples to determine whether base conditions, i.e., operating speeds, had changed. The results are presented in Table 1.

The data in Table 1 clearly indicate that operating speeds had not changed significantly since December 1986. This fact established that no significant

Table 1. Average Speeds (mph)—Non-School Hours

School	Speed Limit	Before Installation: Average Speed	Before Installation: Sample Size	After Installation: Average Speed	After Installation: Sample Size	Difference	Significant Change[a]
Mary Lynn	45	40.10	226	40.75	228	+0.65	No
Hollinger	35	33.60	238	33.71	220	+0.11	No

Installation = Installation of Flashers. [a]95% Confidence Level, Student's *t*-Test

Table 2. Average Speeds (mph)—School Hours

School	Speed Limit	Before Installation: Average Speed	Before Installation: Sample Size	After Installation: Average Speed	After Installation: Sample Size	Difference	Significant Change[a]
Mary Lynn	15	16.13	207	20.33	208	+4.20	Yes
Hollinger	15	14.86	299	16.71	198	+1.85	Yes

Installation = Installation of Flashers. [a]95% Confidence Level, Student's *t*-test

Table 3. Violation Rates—Non-School Hours

School	Speed Limit	Before Installation (%)	After Installation (%)	Significant Change[a]
Mary Lynn	45	13.3	15.8	No
Hollinger	35	33.6	36.8	No

Installation = Installation of Flashers. [a]95% Confidence Level, Student's *t*-test.

Table 4. Violation Rates—School Hours

School	Speed Limit	Before Installation (%)	After Installation (%)	Significant Change[a]
Mary Lynn	15	57.0	78.4	Yes
Hollinger	15	39.1	54.0	Yes

Installation = Installation of Flashers. [a]95% Confidence Level, Student's *t*-test.

changes in base conditions had occurred. The only change in conditions was the addition of flashing beacons, which are operational only during school crossing periods. Therefore, any significant change in traffic speeds during school periods could be directly attributable to the flashers. A two-tailed *t*-test was used in the evaluation. The *t*-test was employed because it is particularly well suited to large sample sizes where the data are approximately normally distributed.

Vehicular speeds were next sampled during school hours, when the school crossing traffic controls were in place. These samples were collected for comparison with period samples taken prior to the use of the flashers to determine the effects of the flashers on traffic speeds. The results are presented in Table 2.

The data show that a significant increase in operating speeds occurred *after* the flashing beacons were added to the standard school crossing controls.

Violation rates (the percentage of all vehicles traveling above 15 mph) for the after period were computed and compared with the before period violation rates. A comparison of the violation rates during the non-school hours is presented for both the before and after periods in Table 3.

The data in Table 3 indicate that the violation rates in the before and after periods were quite similar. The rates changed less than 4 percent, and the changes were not statistically significant at the 95 percent confidence level.



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Eric I. Kalivoda *is an assistant traffic engineer with the Arizona Department of Transportation. He received a B.S.C.E. degree from Louisiana State University and an M.S. degree in civil engineering from the University of Arizona. Kalivoda is an Associate Member of ITE.*

Violation rates during school hours for the after period were also computed. A comparison between the before and after violation rates is presented in Table 4.

The results of this analysis clearly show that a statistically significant increase in the violation rate occurred *after* the flashing beacons were installed.

Conclusion

From this analysis, it is concluded that flashing beacons at school crossings in Tucson, Arizona, fail to reduce vehicle speeds and the number of violations of the 15-mph speed limit. On the contrary, it is apparent that, when flashing beacons are used, operating speeds and the number of violations increase significantly. While the driver psychology behind this documented phenomenon can only be hypothesized, the study indicates that there is a 95 percent probability that the changes are not due to random variation. Any device that causes such a pronounced disregard for the standard Arizona school crossing controls certainly cannot be viewed as an enhancement to pedestrian safety at schools.

Reference

1. Arizona Department of Transportation. *Traffic Engineering Study—State Route 86 (Ajo Way), Mary Lynn and Hollinger Schools*. Phoenix, Ariz.: ADOT, 1987. ▮

MEMBERSHIP ADMISSIONS AND TRANSFERS

This list represents membership admissions and transfers that occurred between October 1 and October 31, 1989.

Transfers to Fellow

The Institute of Transportation Engineers is proud to recognize the following members, who recently attained the distinguished status of Fellow in the Institute.

Ronald H. Dunn, P.E.; Fairfax, VA
Harvey Friedson, P.E.; Tempe, AZ
Peyton N. Joyner, P.E.; Raleigh, NC
James W. Lee, P.E.; Winter Park, FL
Robert M. Lee, P.E.; Concord, NH
Manuel Mateos-de-Vicente, P.E.; Madrid, Spain

Transfers to Member

Ernest G. Athanailos; Long Island City, NY
Thomas R. Biggs, Jr., P.E.; Winter Park, FL
Mohammad A. Hameed, P.Eng.; Gloucester, ON Canada
Gary N. Hansen; Stockton, CA
Thomas P. Kaeser, P.E.; Chicago, IL
Walter P. Kilareski, P.E.; State College, PA
Yat-Sin T. Kwok; Hong Kong
Neal K. Liddicoat, P.E.; Pasadena, CA
Santos V. Murillo, Jr., P.Eng.; Ventura, CA
Bryan Pearl, P.E.; Creve Coeur, MO
Dennis G. Perkinson; San Antonio, TX
Lazaro Rivera; Daytona Beach, FL
Andrzej B. Tomecki, P.E.; Pretoria, South Africa
Norris T. Zucchet, P.Eng.; Toronto, ON Canada

New Members

Vincent M. Chan, P.E.; Shatin, N.T. Hong Kong
Gordon M. Chancey, P.E.; Virginia Beach, VA
Russell L. Clairmont, P.E.; Jacksonville, FL
James D. Crutcher, P.E.; Lexington, KY
John N. Dowden; San Francisco, CA
Gregory P. Dreyer; Orland Park, IL
Thomas A. Hall; Hollywood, FL
William A. Hange, Jr., P.E.; Greeley, CO
Tracy L. Hill, P.E.; Charlotte, NC
James T. Jarzab; Arlington Heights, IL
Robert S. Kamm; Merritt Island, FL
Ronald L. Larson, P.E.; Bradenton, FL

Transfers to Associate

Charles W. Abel; Charlotte, NC
Nouman Ali; Halifax, NS Canada
Martin A. Amundson; Hacienda Heights, CA
Bijan Behzadi; Jacksonville, FL
Cheryl A. C. Bennett; St. Michael, Barbados
Kuang-Hsun Chen; Arcadia, CA
Gary A. Davis; Minneapolis, MN
Michael A. Feeney; Baltimore, MD
Kenneth L. Frink; Tampa, FL
Ravi Gadiraju; Washington, DC
Rob Gibbard; Edmonton, AB Canada
Eric D. Hildebrand, P.Eng.; Montville, NJ
Noordian Moeloek; Jakarta, Indonesia
Geoffrey K. Noxon; Ottawa, ON Canada
Moshe Oved; Thornhill, ON Canada
Muhammad S. Qureshi; Alexandria, VA
C. Leon Vicars, P.E.; Tucson, AZ
Christine Wagstaffe; Waterloo, ON Canada
Joseph F. Weesner; Evanston, IL

New Associate Members

Sean B. Abram; London, ON Canada
Jeanne M. Acutanza, P.E.; Washington, DC
Javier F. Alonso; Alhambra, CA
Masoud Atefi; Santa Monica, CA
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New Institute Affiliate

Jeremy S. Graham; Tampa, FL ▮

Are You Ready to Move Up?

If you have been an Institute Affiliate or Associate Member of the Institute for three years or more, or if you have been a Member of the Institute for five years or more, you may be eligible for a higher grade of membership. All you need to apply for transfer are a current resume, five references (preferably ITE members), and the appropriate application form.

For an application form and further information, contact Christine S. Troxell, Membership Coordinator, at ITE, 525 School St., S.W., Suite 410, Washington, DC 20024-2729 USA (telephone: 202/554-8050; FAX: 202/863-5486).

Response to Foxhall
Accident Data Summary submitted by Gorove/Slade

It is unclear why the report stops at July of 1999. We do know that in the first three months of 2000 alone, there was one fatality (See Exh. A) and at least three other accidents on Foxhall Road. See Exh. B. This information was readily obtainable from the local police precinct.

Respectfully submitted,

HUNTON &WILLIAM for NAFG

By: Richard L. Aguglia

Richard L. Aguglia

6/2/00

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Author: Aguglia, Richard, 07779
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