

Wednesday, May 13, 2015

Hearing on Senate Bill 694

Representative Caddy McKeown, Chair of House Committee on Transportation and Economic Development and Distinguished Members of the Committee:

Lane sharing, it is definitely a different approach to motorcycle rider safety. There are some seeming conflicts with some long held beliefs regarding motorcycle riding. These beliefs are not only held by the public in general, but are also within the law enforcement and the traffic or highway safety communities. I completely understand these conflicts within the law enforcement and traffic safety community because I too once believed in these same conflicts because my work history includes both of these areas. Almost 14 years of my little less than 25 year law enforcement career in Southern California was as a motorcycle traffic officer. After my retirement from law enforcement I went to work as a highway safety specialist for the National Highway Traffic Safety Administration, NHTSA, in the region 9, Western Region Office. One of my assigned areas of expertise was motorcycle rider safety and I worked with the NHTSA Western Region states on their motorcycle rider safety programs. So I too once had the same worries the law enforcement and highway safety professionals have today about lane sharing. It was these very worries that led me to research lane sharing as a traffic safety measure for motorcycle riders.

If I may explain; when I was a motorcycle officer because motor-officers handled all of the major and fatal crashes within our jurisdiction we were also required to be collision reconstructionist. I have in fact been a collision reconstruction expert for 30 years now. Through my collision reconstruction training I realized that in order to be a more effective collision reconstructionist I needed more basic understanding of the collision reconstruction methods and vehicle/motorcycle dynamics. So, I returned to college and received a Bachelor of Science Degree in Physics with a minor in mathematics. Given my understanding of the dynamics of motorcycle motion along with physics of collisions I realized that in heavy traffic conditions where rear end collision are the most common collision (NHTSA data) it was safer to move a motorcycle out of being in line with another vehicle path of travel. I also realized that keeping the motorcycle at a low speed along the side of vehicles in heavy traffic conditions give riders the best opportunity to use the motion dynamics of a motorcycle to avoid and/or stay upright in a lane changing contact. I further realized that the "incomplete contact" forces of a sideswipe contact from a lane changing vehicle into a motorcycle were far less than the "complete contact" forces of a vehicle rear-ending a motorcycle in heavy traffic. In other words, when a

collision does occur a lane sharing motorcycle will experience a far less severe collision than being struck on the rear while stopped in traffic.

However, this knowledge about motorcycle crashes and dynamics conflicted with my law enforcement and highway safety experiences. So I did what I was trained to in law enforcement, in highway safety and through my education; investigate and research.

My research and investigation into crash data and other available information showed me that lane sharing in heavy traffic conditions was the safest thing a rider could do. This supported the physical dynamics evidence and information I already had from my training and experience as a collision reconstructionist and my education in physics. I also discovered that there was no information or data to support the conflicts I had based on my law enforcement and state traffic safety experience. I published two papers on what I had discovered in my research and investigation into lane sharing in *Motorcycle Consumer News*, October 2011 and October 2012. And in August 2014, after reviewing two years of data taken specifically at motorcycle crashes throughout California, the University of California at Berkeley released a paper that supported all of the conclusions that I had reached through my investigations and research three years prior. That is, lane sharing does reduce the number of crashes for motorcycles in heavy traffic, and there are less severe injuries when a crash does occur.

It is very important to note that this paper from the University of California at Berkeley HAS NOT been rescinded. Additionally, this paper is about data obtained from a motorcycle specific questionnaire that was filled out by law enforcement at motorcycle crashes. In other words, it is a hard data driven paper.

Also, the safety of lane sharing actually has an extended history. James Ouellet one of the original authors of the 1980 *Hurt Report* on motorcycle rider safety re-evaluated lane sharing related crashes from their original 900 crash investigation done in 1976-1977, and authored the paper *Lane Splitting on California Freeways*. He found that the Hurt report crash data on lane sharing corresponded with the crash data from 900 crash investigations obtained for the MAIDS report out of Europe over 20 years later. It is also important to note that lane sharing is a common practice for motorcyclists in Europe. In the conclusions section of his lane sharing report, Mr. Ouellet stated "If the intent of banning motorcycle lane splitting is to protect motorcyclists, the data presented here fail to support that justification. In fact, these data suggest that lane splitting is safer than maintaining a normal lane position." In other words, all of the various crash study reports from 1980 through 2014, a period of 34 years, find that lane sharing is not a hazardous practice; rather it is a rider safety practice.

Moving Ahead for Progress in the 21st Century, MAP-21, the current federal traffic safety reauthorization requires traffic safety programs using federal money to be data driven programs. With respect to Oregon SB694, the converse of this should be considered. What data, research or published information can be presented by the public, law enforcement or the traffic safety community that shows lane sharing as allowed by this bill will be a hazard to motorcycle riders, the driving public or to the State of Oregon? Or more precisely, what information can be provided by any person that disputes 34 years of motorcycle crash research from both the United States and the European Nations which shows motorcycle lane sharing in a manner consistent with Oregon SB694 is hazardous?

Additionally, regarding MAP-21, since the current research and data shows that lane sharing is a data driven safety measure for motorcyclists, driver awareness programs about lane sharing could qualify for federal funds. Furthermore, a recent study from the Federal Highway Administration shows that the freeway signs can modify driver behavior, United States Department of Transportation, Federal Highway Administration, Traffic Safety Facts July 2014, *Effectiveness of Safety and Public Service Announcements Messages on Dynamic Message Signs*, FHWA-HOP-14-015. In other words, necessary pieces are in place for a driver education program about a motorcycle lane sharing law in Oregon.

Thank you for your time.

Respectfully Submitted,
Steven M. Guderian
Motorcycle Safety Consulting

attachments: Resume for Steven Guderian

Steven M. Guderian

MOTORCYCLE SAFETY CONSULTING

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Education

California State University San Bernardino

Graduated 12/00 Bachelor Science Degree in physics, minor degree in mathematics.

Specialized Training & Study

September 2014 Southwestern Association of Technical Accident Investigator (SATAI)

October 2013, International Motorcycle Safety Conference, Orlando Florida

April 2012 Human Factors in Automobile Crashes

Over 2000 hours of specialized training in all types of collision reconstruction and traffic crash investigation issues. Trained and extensively study issues related to low speed collision biomechanics, as well as motorcycle fatality information and statistics. This includes the Hurt Report on motorcycles crashes in the United States, and the MAIDS Report on motorcycle crashes in Europe. Portions of my specialized training came from the following institutions;

Northwestern University

Texas A&M University

University of California at Riverside

North Florida University, Institute of Police Technology and Management (IPTM)

California Peace Officer Standards and Training (CA POST) certified training.

EMPLOYMENT

April 2009 to present

Motorcycle Safety Consulting

Owner and Operator

Owner and a service provider in this expert motorcycle collision reconstruction and motorcycle rider safety consultancy. Court qualified Motorcycle Rider Safety Expert and Collision Reconstructionist, also does research into the human factors aspects of motorcycle riding. Clients have included major insurance companies, parts manufacturers and attorneys.

- Coauthored a book with Pat Hahn called "MAXIMUM CONTROL, How to Safely Ride Your Big Bike" that has been published by motor books international. This is the first book of its kind. It offers drills and skills practice taken from the unique perspective on vehicle control from law enforcement trained motorcycle riders.
- Sourced and coordinated a large pool of test subjects for an eye tracking motorcycle safety study. Subjects represented both sexes and a range of ages and experience levels. Worked in close collaboration with other collision reconstruction experts, physicists, mechanical engineers and human factors specialists. Uncovered significant weaknesses in typical driving habits. Papers published by Transportation Research Board (TRB) and other peer reviewed publications

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- Authored two papers on lane sharing as a motorcycle safety measure that were published in national publication, with a third paper awaiting publication
- Fact Sheet for FMVSS 218, Motorcycle Helmets

November 2009 to October 2014

San Francisco Municipal Transportation Agency

Transportation Safety Specialist

Principal SFMTA representative and investigator regarding collisions that involve pedestrians, bicyclists and motor vehicles (including motorcycles) with city transport vehicles such as LRV's, Historic Transit Rail Cars, Cable Cars and all types of buses. Recruited to the position due to specialized expertise in rubber-tire based collision reconstruction, physics and human factors. Responsibilities include the investigation and/or reconstruction of collisions, derailments and injury events involving all vehicle types, as well as audits of the operational and maintenance procedures associated with these vehicles within the agency.

- Personally manage the busiest bus division for the city of San Francisco. Lead safety specialist for approximately 2500 rubber tire vehicles that are part of the San Francisco Municipal Transportation Agency fleet of vehicles.
- Analyze factors ranging from vehicle positions, video footage, damage, tire marks, fluids, brake damage, shoe scuffs and debris fields for an average of 30 crashes a month. Formulate estimates for collision reconstruction based on available data.
- Serve as the team's specialist in motorcycle traffic safety issues.
- The go-to person in regards to speed estimation, with extensive experience using video surveillance tools to calculate vehicle speeds.

January 2012 to May 2013

California American Brotherhood Aimed Toward Education

State Safety Officer and Elected Member to Board of Directors

Official representative to any activities for the California Motorcycle Safety Program (CMSP) and other safety related motorcycle rider safety activities. Also responsible for coordinating with both government agencies and private agencies to invent, develop and assist with any program or idea that might be beneficial to motorcycle rider safety. I also advise local safety officers and the Board of Directors on issues of safety, and write a month safety article for The Bailing Wire.

January 2006 to January 2011

Cycle Lloyds

CMSP/MSF Rider Coach

I served as a certified rider coach for the California Motorcycle Safety Program/Motorcycle Safety Foundation. I taught the 15 hour Basic Riders course as well as the Advanced Rider course, which included the training sessions in the classroom and on the riding range providing riders the basic mechanics, operating procedures and traffic principles for safe motorcycle riding.

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October 2001 to November 2009

National Highway Traffic Safety Administration (US DOT)

Highway Safety Specialist

Hired to bring a traffic safety and law enforcement background to this Federal safety organization. Managed traffic safety programs of motorcycle safety, occupant protection, police traffic services, speed and aggressive driving. Oversaw the \$50 Million Federal Click-It or Ticket program in the South West United States. Assigned to the NHTSA Region 9 Office which is responsible for the traffic safety programs in the states of Arizona, California, Hawaii, and the American Territories of American Samoa, Commonwealth of the Northern Mariana Islands and Guam. Oversaw all of the traffic safety related programs, evaluations, reviews and administrative tasks for the State of Arizona.

- Launched the Click-It or Ticket program as a pilot program in Nevada in 2002. Helped to increase a 72% seat belt use rate to 82%.
- Managed more grants of federal money than any other safety specialist in the National Highway Safety Administration Region 9 Office.
- Ensured that program expenditures were made in accordance with grand guidelines. Oversaw the distribution and use of grants money by state agencies.
- Led program evaluations and compliance reviews of DUI, pedestrian and motorcycle traffic safety programs.
- Served as a motorcycle safety expert within the Arizona, California, Hawaii, Nevada and the territories.
- Led rider trainings, share the road programs, motorcycle safety assessments and program evaluations. Served as a member of the California Motorcycle Safety Program, CMSP, advisory board. Worked closely with community traffic safety groups involved with motorcycle safety such as MADD, AAA Safety Foundation and different Motorcycle Rights Organizations (MROs).
- Identified, documented and prosecuted fraud and compliance issues with the NHTSA Cash Allowance Rebate System (CARS) program, also known as the Cash for Clunkers, as a Compliance and Fraud Investigator. Coordinated paperwork audits, vehicle tracking and program reviews at car dealerships and salvage yards in the Western United States.

September 1988 to October 2001

Professional Collision Analysis

Business Owner/Collision Reconstruction Expert

Founded and managed this collision reconstruction and collision investigation consultancy. Offered expertise to insurance companies, public entities and attorneys regarding all aspects of collision reconstruction and investigation. Testified as an expert in collision reconstruction and biomechanics in over 60 court cases across the nation and in federal court.

February 1979 to August 2000

Ontario Police Department

Motor Officer/Collision Investigator

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Assigned to uniform patrol where for approximately 14 years of my career I worked in the traffic division as a motorcycle officer. My responsibilities were motorcycle traffic enforcement and the investigation and reconstruction of all major injury and fatal traffic collisions involving motorcycles and all other vehicles within the city. I also identified, investigated and prosecuted fraudulent collisions. My investigations and reconstructions resulted in my testimony as an expert in a number of murder and other serious criminal trials involving vehicles.

- Investigated/reconstructed hundreds of cases/collisions ranging from violent crimes to traffic tickets.
- Investigated various rail incidents that occurred within the city on any of three rail lines running through Ontario, CA; Union Pacific, Southern Pacific and Santa Fe Railroads. These incidents included grade crossing crashes, suicides and other train verse person events.

February 1977 to February 1979

Whittier Police Department

Patrol Officer

Assigned to uniform patrol, responsible for general police work throughout the city.

ADDITIONAL TOPICS

Teaching & Speaking

Lecturing and instruction regarding all types of traffic safety matters to audiences and groups ranging from 30 people to over 650 people all over the nation.

Taught collision investigation and collision reconstruction at various police academy's and training institutions throughout Southern California.

Nov 2012, South Lake Tahoe, California, lectured at the California Association of Accident Reconstructionists, CAARs, on Motorcycle Rider Safety.

Nov 2012, Las Vegas, Nevada, lectured at the Nevada State Highway Safety convention on Motorcycle Rider Safety.

Books, Papers and Articles

Author of a monthly motorcycle safety article for the MT. Diablo HOG Chapter Newsletter.

Author a monthly motorcycle safety piece for the Bailing Wire, the monthly newspaper for the California State ABATE (American Brotherhood Aimed Toward Education).

Co-authored the book MAXIMUM CONTROL, How to Safely Ride Your Big Bike, with Pat Hahn.

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Authored SPEED FROM SKID THE MOTION PICTURE a paper published in the SOARCE (the Society of Accident Reconstructionists) monthly newsletter.

Press releases and media interviews in different states across the nation.

Research

One of five principle researchers in a first ever of its kind study of motorcycle rider perception, reaction and response patterns. Obtained approximately 300 gigabytes of data which used to author multiple papers in peer reviewed publications. Including *Glancing and Stopping Behavior of Motorcycle and Car Drivers at Intersections*, Transportation Research Record, Journal of the Transportation Research Board, No. 2265.

Author of two research papers published in a national magazine on Lane Sharing as a motorcycle crash countermeasure.

Professional Organizations

Southwestern Association of Technical Accident Investigators (SATAI)

International Network of Collision Reconstructionists (INCR)

Personal

Happily married for over 38 years. Wife is a motorcyclist, son-in-law works for the Nevada Highway Patrol currently assigned as a motorcycle officer, previously assigned to the Northern Nevada MAIT team, two daughters work for the Nevada Department of Public Safety, one as a parole and probation officer, the other as a Nevada Highway Patrol dispatcher. Another son-in-law works for the Douglas County Nevada Sheriff's Office as a deputy sheriff. Third daughter is a junior high school science teacher, and the third son-in-law is an actor.