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June 12, 2013

The Honorable Mark DeSaulnier, Chair
Senate Transportation and Housing Committee
State Capitol, Room 5035
Sacramento, CA 95814

Re: Redflex Opposes AB 612 (Nazarian)
Hearing Date: June 18, 2013

Dear Senator DeSaulnier:

I am writing on behalf of Redflex Traffic Systems to express its opposition to AB 612.

AB 612 would mandate local governments to increase arbitrarily the duration of a yellow light by one second beyond the times determined by traffic safety engineers and published in the California Manual on Uniform Traffic Control Devices. Arbitrarily increasing the time would, according to a nationally-known traffic safety engineer, result in more crashes.

Redflex has been a leader in road safety technology since 1987, working with local governments to reduce collisions and save lives. Because of its commitment to traffic safety, Redflex opposes AB 612. Accordingly, it retained Richard Retting to analyze the probable effects of the bill.

Mr. Retting is the Director of Safety/Research and General Manager of the Washington, D.C. office of Sam Schwartz Engineering. He has more than 30 years of traffic engineering and research experience, and is a widely recognized expert in traffic safety. He has authored more than 100 research papers, published in scientific journals and conference publications. He was Deputy Assistant Commissioner for Traffic Safety Programs with the New York City Department of Transportation. He served 18 years as Senior Transportation Engineer with the Insurance Institute for Highway Safety.

Mr. Retting concludes that, "Providing excessive yellow signal timing as mandated under Assembly Bill No. 612 violates established engineering practice. This would encourage drivers to enter intersections further into the yellow phase and could disrupt the flow of vehicles from intersection to intersection, ultimately creating a risk of increased crashes."

Mr. Retting will testify in opposition to AB 612 during the Committee hearing. A synopsis of Mr. Retting's analysis of AB 612 is attached.

The result of AB 612 would be to increase crashes, contrary to the assertions of the bill's proponent, a community activist with no engineering training or experience. The timing of signal lights should be left to trained engineers, not to community activists, no matter their intentions.

The California Manual on Uniform Traffic Control Devices is the product of trained engineers and reflects years of study and research. No sound basis exists for arbitrarily changing it. Accordingly, we ask you to vote "NO" on AB 612.

Sincerely,

Gene Livingston

GL:lk

Attch.

cc: The Honorable Adrin Nazarian
The Honorable Members, Senate Transportation and Housing Committee
Erin Riches, Consultant, Senate Transportation and Housing Committee
Ted Morley, Principal Consultant, Senate Republican Caucus

SAM SCHWARTZ
ENGINEERING

May 22, 2013

Gene Livingston
Greenberg Traurig
1201 K Street, Suite 1100
Sacramento, CA 95814

Re: California Assembly Bill No. 612

Dear Mr. Livingston:

Attached please find a synopsis of my professional insights and concerns regarding Assembly Bill No. 612. Please let me know if I can be of further assistance.

Sincerely,

Richard Retting
Vice President
Sam Schwartz Engineering

Enclosure

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Yellow Signal Timing

The purpose of the yellow traffic signal is to provide adequate warning to traffic of an imminent change in the signal indication from green to red. The amount of time that the yellow signal is displayed is referred to as the yellow change interval. The duration of this interval is based on the driver's perception-reaction time and deceleration rate, the approach speed, and the approach grade. The duration of the yellow change interval should allow, at a minimum, for a driver to comfortably decelerate to a stop prior to entering the intersection. Several national publications have served as references for the timing of yellow change intervals. These include the Manual on Uniform Traffic Control Devices, the ITE Traffic Engineering Handbook, the Manual of Traffic Signal Design, the Traffic Control Devices Handbook, and the Traffic Signal Timing Manual. Engineers in California and across the U.S. agree the duration of the yellow interval should be based on engineering criteria and applied consistently. Failure to set the yellow change interval in accord with these guidelines can create safety issues, driver confusion, and liability concerns for State and local transportation agencies.

California Assembly Bill No. 612 would require the minimum yellow light change interval for all movements at an intersection at which there is an automated enforcement system in operation to be established at one second beyond the yellow light change intervals relating to designated approach speeds provided in the California Manual on Uniform Traffic Control Devices. This proposed law would contradict the longstanding and widely supported practice of basing the duration of yellow intervals on engineering criteria, applied consistently.

The purpose of Assembly Bill No. 612 is ostensibly to reduce red light running crashes.

- If reducing red light running crashes is indeed the motivation for this bill, and there is scientific evidence to support the claim that arbitrarily extending yellow timing by one second reduces crashes, why not require longer yellow intervals at all signalized intersections in California rather than just the relatively small number of locations with red light cameras?

- Results from Ohio and Georgia were cited claiming that longer yellow timing in those States reduced crashes, but we can find no studies supporting this claim. We welcome the opportunity to examine any such studies.

- It was claimed that a study by the Texas Transportation Institute found that crashes were reduced by 40 percent when yellow signals were extended, but the studies we are

familiar with do not support this conclusion. We welcome the opportunity to examine that study.

In his testimony regarding Assembly Bill No. 612, Jay Beeber claimed that extending yellow intervals by one second "gives drivers the extra time they need" to stop at red lights. The fallacy of this argument is that existing engineering procedures that set the duration of yellow intervals based on a kinematic formula already provide adequate warning to drivers of an imminent change in the signal indication from green to red. Adding one second goes beyond the "need" and simply encourages drivers to enter the intersection rather than stop on red.

Mr. Beeber also provided data from Fremont, CA showing that red light violations declined after yellow intervals were extended by 0.7 seconds as a result of Caltrans engineering studies showing that yellow intervals did not meet Caltrans standards. It is important to recognize the yellow signal timing changes referred to resulted from engineering studies and the application of Caltrans standards – NOT arbitrarily extending yellow intervals by one second as would be mandated under Assembly Bill No. 612.

A number of studies have shown that when the duration of yellow intervals is extended to comply with engineering standards, red light running is reduced. It is important to set yellow intervals according to engineering guidelines, commonly referred to as the ITE formula, to allow for drivers to comfortably decelerate to a stop prior to entering the intersection. However, these research studies DO NOT show the same results for arbitrarily extending yellow intervals beyond engineering guidelines.

Effects of Yellow Signal Timing on Crashes

A limited number of studies have examined effects of yellow signal timing changes on crashes. The studies report a range of crash effects, reflecting differences in research methods, outcome measures, settings, the specific type of modification to change interval timing, and other factors. It appears from these studies that setting change interval timing to values associated with ITE guidelines is associated with reduced risk of total crashes, injury crashes, and/or right-angle crashes, although the reported crash reductions are relatively small, and not always statistically significant. However, no studies show any similar reduction in crashes for arbitrarily extending yellow intervals. In my opinion based on more than 30 years of experience in traffic engineering, arbitrarily extending yellow intervals may increase crashes,

especially given evidence of increased risk of rear-end crashes when yellow interval duration is increased, reflecting the increased exposure of motorists to this decision period.

- Benioff et al. (1980) conducted a systematic and comprehensive review of the literature on crash intervals. The review concluded excessively long yellow intervals "definitely are hazardous".
- Findings of potential crash increases were supported by Retting et al. (2002), who found a 12 percent increase in rear-end crashes as part of a large-scale traffic signal change interval retiming project.

Conclusion

Reflecting its ideologically-based opposition to red light cameras, Safe Streets L.A. has provided false and misleading information regarding the effects of red light cameras on safety. Safe Streets L.A. claims that red light cameras reduce safety for motorists and pedestrians, when in fact the preponderance of scientific evidence from U.S. cities and around the world shows the opposite to be true. Red light cameras have saved hundreds of lives and prevented thousands of serious injuries.

Mr. Beeber claims that extending yellow intervals by one second "gives drivers the extra time they need" to stop at red lights. The fallacy of this argument is that engineering procedures to set the duration of yellow intervals based on kinematic formulae already provide adequate warning to drivers of an imminent change in the signal indication from green to red.

A number of studies have shown that when the duration of yellow intervals is extended to comply with engineering standards, red light running is reduced and, to a lesser extent, crashes. These research results and engineering practices do not show similar benefits for arbitrarily extend yellow intervals beyond engineering guidelines. In my opinion, arbitrarily extending yellow intervals could have adverse crash effects.

Providing excessive yellow signal timing as mandated under Assembly Bill No. 612 violates established engineering practice. This would encourage drivers to enter intersections further into the yellow phase and could disrupt the flow of vehicles from intersection to intersection, ultimately creating a risk of increased crashes.