



UNITED STATES SIGN COUNCIL FOUNDATION
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Interrelated projected research studies - 2007

1.) Sign Illumination and Relationship to Traffic Safety.

On-Premise signs are increasingly subjected to regulation involving lighting restrictions, particularly internal or neon sourced illumination. This regulation either eliminates or substantially restricts the lighting of on-premise signs, and has the effect of negating one of the primary functions of signs in the nighttime environment, which is to provide the information and direction necessary to promote traffic safety, rather than to simply provide ordinary ambient light. The study is intended to measure the degree to which proper sign illumination is necessary to provide equal legibility to daylight conditions, and to determine the effect on traffic safety if established detection and legibility factors are restricted by regulation enacted without regard for the critical functioning of an on-premise sign system.

2.) On-Premise Signs – Function as Primary Directional / Locational Detection Devices and Relationship to Traffic Safety

Although it is commonly accepted that on-premise signs provide critical navigational information it is frequently asserted by regulatory agencies that they are not necessary, particularly with drivers already familiar with an environment. This presumption, unsupported by science, has nonetheless resulted in enactment of restrictive sign codes which have the effect of reducing the visibility of on-premise signs, and reduced safety as a consequence.

The study is designed to test motorist use of on-premise signs in finding locations in real world driving conditions. Sophisticated eye tracking cameras, hidden in the test vehicles driven by the subjects, will be used to determine the effectiveness of on-premise signs in facilitating the wayfinding, directional, and locational awareness of motorists, and provide the scientific basis necessary to establish their value as primary and critical traffic safety enhancing devices, and to call into serious question sign codes that restrict adequate size, height, and location of on-premise signs, the minimum standards of which have been established by previous research.

3.) On-Premise Signs; Aesthetic Quality and Relationship To Size and Traffic Safety

Increasingly, the concept of aesthetics is advanced (and frequently accepted as valid by many courts) as a reason for regulating the size and height of on-premise signs. This is usually done as a justification to limit sign size and height yet there is no scientific evidence to suggest that there is any relationship between size and height and aesthetic quality. Since size and height have a relationship to legibility, limitations of either that cannot be justified on aesthetic grounds are likely to diminish, rather than to improve, traffic safety.

Reliable evidence now exists indicating a clear correlation between human eye pupil dilation and pleasurable stimulus. This correlation can now be extended to the viewing of objects or situations in which aesthetics have been introduced as the prime pleasure inducing variable. In the case of on-premise signs, this would involve principles of design, structure and placement traditionally considered to be either more or less aesthetic.

Subjects would view a large series of signs falling into each category under laboratory and field conditions, but without knowledge of the actual purpose of their participation, or even of their observation. Remote camera equipment, using eye pupil dilation software would record reactions to the series of sign views. A determination would then be made regarding the role of aesthetics, if any, in preferences, and/or if that role has any relationship to sign size or height. With additional resources, the study may also be configured to determine the relationship between sign amount and placement and perceived aesthetic quality.