

September 5, 2025

**BY EMAIL**

Sean Duryee, Commissioner  
California Highway Patrol  
SDuryee@chp.ca.gov

**Re: Appeal - Petition to Set Maximum Intensity for Vehicle Warning Lamps**

Dear Sean Duryee,

On August 2, 2025, the Soft Lights Foundation and Mark Baker jointly submitted a Petition to Set Maximum Intensity for Vehicle Warning Lamps ("Petition") to the California Highway Patrol ("CHP") pursuant to Cal. Gov. Code § 11340.6. The petition was denied by the CHP on August 28, 2025, asserting that the petition lacks technical specificity and fails to satisfy California Government Code §§ 11340.6(a) – (c). We disagree with the CHP's reasoning for the denial and submit this request for reconsideration pursuant to Cal. Gov. Code § 11340.7(c).

The Petition stated, "To ensure the safety of first responders and the public, the Petitioner requests that the CHP amend California Code of Regulations Title 13, Division 2, Section 2, Article 22, Section 817 – Photometric Test Requirements by changing the text "NOTE: Maximum anywhere in yellow shall not exceed 4,000 cd over any area larger than that generated by a radius rotated 0.25 deg." to say "NOTE: Maximum luminance of the emitting surface of a flashing warning lamp shall not exceed 20 candela per square meter."

**Petition Requirements**

Government Code 11340.6 states that a Petitioner must state the following clearly and concisely: (a) The substance or nature of the regulation, amendment, or repeal requested. (b) The reason for the request. (c) Reference to the authority of the state agency to take the action requested. The CHP denial letter does not explain how the Petitioner's request does not meet the requirements of § 11340.6

- (a) Substance: Set a maximum luminance for flashing warning lamps.
- (b) Reason: To ensure the safety of first responders and the public.
- (c) Authority: Cal. Veh. Code § 2402 provides the authority of the CHP to promulgate rules.

Therefore, the Petitioner meets all three requirements for § 11340.6.

Cal. Code Regs. Title 1 § 16 states that regulations must meet clarity standards.

- (a) A regulation shall be presumed not to comply with the "clarity" standard if any of the following conditions exists:

(1) the regulation can, on its face, be reasonably and logically interpreted to have more than one meaning – 20 candela per square meter cannot be interpreted to mean anything other than 20 candela per square meter.

(2) the language of the regulation conflicts with the agency's description of the effect of the regulation – There is no conflict with the agency's goal of protecting public safety.

(3) the regulation uses terms which do not have meanings generally familiar to those "directly affected" by the regulation, and those terms are defined neither in the regulation nor in the governing statute – Luminance is the standard term for intensity for an LED source.

(4) the regulation uses language incorrectly. This includes, but is not limited to, incorrect spelling, grammar or punctuation – There is no incorrect use of language.

(5) the regulation presents information in a format that is not readily understandable by persons "directly affected;" – The restriction of 20 candela per meter for luminance is readily understandable.

(6) the regulation does not use citation styles which clearly identify published material cited in the regulation – There are no issues with citation styles.

Therefore, the Petitioner's request meets all Cal. Code Regs. Title 1 § 16 clarity standards.

### **CHP Regulations**

The last time the CHP updated Cal. Code Regs. Title 13 §§ 810-818 was November 25, 2002. This update was prior to the widespread adoption of LED flashing light technology. Title 13 § 817 provides photometric requirements for warning lamps. Table I establishes minimum luminous intensity requirements for steady-burning warning lamps and flashing warning lamps which alternate between on and off by electrically controlling the current supplied to the lamp. LED flashing lights turn on and off by controlling the voltage, and therefore it's debatable whether Table I even applies to LED warning lamps.

However, if we presume that Title 13 § 817 Table I includes LED warning lamps, then the LED warning lamps must meet the minimum candela specified in Table I. LEDs, however, emit extremely intense light from a small surface area. The human eye has a bi-convex lens that recreates the source intensity on the retina. The metric for this source intensity is called luminance and is measured in candela per square meter or nit. On the other hand, the metric luminous intensity that is used in the current regulations does not account for the lens of the eye, and thus luminous intensity is not a valid metric for determining the impacts of the LED flashing lights on vision, perception, glare, or neurological reactions. Therefore, Title 13 § 817 must be updated to include a minimum luminance value that ensures that the warning lamp is visible, and a maximum luminance value that ensures that the warning lamp is not excessively bright. Since LED warning lamps are indicators, not meant for the purpose of illumination, it is our contention that references to luminous intensity (candela) should be replaced with luminance (candela per square meter).

Federal law 49 C.F.R. 571.108(S6.2.1) states, "No additional lamp, reflective device, or other motor vehicle equipment is permitted to be installed that impairs the effectiveness of lighting equipment required by this standard." The enforcement of this regulation is left to the states. In California, the CHP is authorized by the California Legislature to establish vehicle lighting regulations. The CHP, therefore, must define the term "impairs the effectiveness" within Title 13 §§ 810-818. An

excessively bright warning lamp or a light that flashes too quickly will violate federal law 49 C.F.R. 571.108(S6.2.1). Therefore, the CHP must establish minimum and maximum luminance values and flashing characteristics to ensure that any additional lamp does not violate 49 C.F.R. 571.108(S6.2.1).

Individuals with disabilities are especially susceptible to flashing lights. LED flashing lights can trigger seizures, migraines, and panic attacks, and can impair vision and cognitive functioning. The CHP must set the maximum luminance level low enough such that individuals with disabilities are not discriminated against. 28 C.F.R. § 35.130(7)(i) states, “A public entity shall make reasonable modifications in policies, practices, or procedures when the modifications are necessary to avoid discrimination on the basis of disability, unless the public entity can demonstrate that making the modifications would fundamentally alter the nature of the service, program, or activity.” Thus, the CHP, as a public entity, is required to modify its policies, practices, and procedures to avoid discrimination. An update to Cal. Code. Regs. Title 13 §§ 810-818, which is the result of an analysis of the impacts of auxiliary vehicle warning lamps on individuals with disabilities, would meet the requirements of 28 C.F.R. § 35.130(7)(i).

Cal. Cod Regs. Title 13 § 812 defines five categories of warning lamps. Class A: High-intensity, concentrated beam lamp; Class B: Moderate-intensity, wide-beam lamp; Class C: High-intensity, wide-beam lamp; Class D: Motorcycle front warning lamp; Class E: Revolving, oscillating, or gaseous discharge lamp. However, the CHP does not define “high-intensity”, “moderate-intensity” “concentrated beam”, or “wide-beam” with any measurable metrics. There are thousands of LED warning lamp products, and yet there is no method for knowing which class the flashing light product falls into. The classification is critical for compliance with Table I in Title 13 § 817. The CHP must define Class A, Class B, and Class C with luminance boundaries and with beam angle boundaries.

The result of the lack of regulation of luminance and flashing characteristics of LED flashing lights has been widespread injury to individuals, and a marked increase in risk of injury or death to first responders and the public. Therefore, it is imperative that the CHP promptly update Cal. Code Regs. §§ 810-817 to properly address the issues associated with LED flashing light technology.

The Petition requests a maximum luminance of 20 candela per square meter. This request is based on the research listed in Appendix B of the Petition. It is possible that a lower luminance value is necessary, but it seems unlikely that a higher luminance value would be safe. Therefore, as a precautionary measure to ensure public health, safety, and civil rights, the CHP should set 20 candela per square meter as the maximum luminance value, or other value based on scientifically-sound evidence.

### **CHP Findings**

The CHP’s findings in the Petition denial letter lack evidentiary support. An administrative agency such as the CHP must “must render findings to support their ultimate rulings”. *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal 3<sup>rd</sup> 506, 510. In its denial of the Petition, the CHP provided only a 2-page summary with no evidentiary findings whatsoever. The CHP’s decision to deny the Petition must be based on the “substantial evidence” test. (*Id*, 510). Instead, the CHP based its decision on no evidence at all.

In rendering its decision, the CHP must “set forth findings to bridge the analytic gap between the raw evidence and ultimate decision or order.” (*Id*, 515). The Petitioner provided the raw evidence as Appendices A, B, and C in the Petition. The 2-page summary denial contained only the ultimate decision and did not provide the CHP’s findings based on the raw evidence. “A findings requirement serves to conduce the administrative body to draw legally relevant sub-conclusions supportive of its ultimate

decision; the intended effect is to facilitate orderly analysis and minimize the likelihood that the agency will randomly leap from evidence to conclusions.” (*Id.*, 516).

California Code of Civil Procedure § 1094.5 states, “Abuse of discretion is established if the respondent has not proceeded in the manner required by law, the order or decision is not supported by the findings, or the findings are not supported by the evidence.” Therefore, since the CHP’s decision to deny the Petition is not supported by the findings, because there were no findings at all, the CHP has abused its discretion, in violation of Cal. Code Civ. Proc. § 1094.5.

### **Conclusion**

The Petitioner therefore requests that the CHP review the Petition in accordance with the Cal. Code Civ. Proc. § 1094.5 and approve or deny the Petition by providing substantial evidence to support the CHP’s findings.

Sincerely,

/s/ Mark Baker  
Individual

/s/ Mark Baker  
President

Soft Lights Foundation  
[mbaker@softlights.org](mailto:mbaker@softlights.org)