

Comments of Evolutionary Markings, Inc.
to the
United States Department of Transportation, Office of the Secretary
Docket No. DOT-OST-2019-0165
Request for Comments on
Non-Traditional and Emerging Transportation Technology (NETT) Council
December 19, 2019

Evolutionary Markings, Inc. (“EMI”) respectfully submits these comments in response to the Notice of Proposed Rulemaking (NPRM) in this docket, published at 84 Federal Register 65214 *et seq.* (November 26, 2019).

In this docket the Office of the Secretary of Transportation requests comments on matters relevant to the work of the Non-Traditional and Emerging Transportation Technology (NETT) Council, an internal body at the U.S. Department of Transportation (USDOT) that focuses on issues concerning new transportation technologies, including federal transportation laws or regulations that inhibit innovation by creating barriers to the advancement of transportation technologies.

EMI’s comments relate to regulatory roadblocks found in the Manual on Uniform Traffic Control Devices (MUTCD) that create a significant barrier to the development of innovative, new technology that can promote safety. It does this by imposing restrictions on the use of patented and proprietary products. These restrictions are not required by statute, but were administratively developed decades ago when the importance of new technology to improving highway safety was not as well understood.

Our company has directly experienced negative effects from the MUTCD’s ban on the use of patented products. In late 2018, the FHWA denied the Idaho Transportation Department’s (ITD) official request under the MUTCD to experimentally test EMI’s patented technology that shows promise of providing additional, dramatic, life-saving improvements over existing practices for preventing wrong way collisions and accidents.

EMI is a small, but highly innovative, business incorporated in Idaho in 2014 to develop next generation marker technology to greatly improve visibility and highway safety. Our mission statement from the beginning has been to “develop new, and improve existing, highway marking products to save lives of families and friends around the world.” EMI’s founders formed EMI because they recognized that transformative solutions would be needed to improve roadway safety with the advent of new emerging technologies (such as autonomous vehicles), the need for vehicle to infrastructure (VTI) products and the ongoing goal of the USDOT to deploy Intelligent Transportation Systems (ITS). EMI’s technology and product development has been funded, in part, by a \$300,000 state of Idaho IGEM grant to the University of Idaho for the development of core technology, as well as private funding by EMI founders and investor stakeholders. There are multiple in-road applications for the use of EMI’s patented advances in transportation technology, including signal integration, wrong way warnings, rural railroad crossing warnings and excessive speed warnings. To date, EMI’s wrong way warning solutions have garnered the most support.

Many state DOTs are particularly interested in EMI’s products that help deter wrong-way collisions. Wrong-way crashes are considered the most serious type of traffic collision because of their head-on nature and because they are often caused by impaired or confused drivers (who are challenged to

recognize and react to less effective warnings). There is also a growing national interest in combating wrong-way collisions. Significant federal funding was approved in 2018 for a new National Cooperative Highway Research Program (NCHRP) project in this area, which likely would have resulted in multiple states testing EMI products as a component part of wrong way systems to be tested, if allowed by FHWA. NCHRP addresses issues integral to state DOTs and transportation professionals at all levels of government and the private sector.

The first official state DOT request for experimentation under the MUTCD to test EMI “smart” markers and light strips was filed by ITD on November 1, 2018, for the acquisition and evaluation of supporting data, characteristics, and functionality of an EMI innovative product as part of a larger warning system. ITD’s request to test EMI’s products was denied by FHWA on December 21, 2018. The chief reason for the denial appears to be that EMI’s products are a patented/proprietary and therefore not allowable for testing or deployment under the MUTCD, which currently includes restrictions on the testing and use of patented and proprietary products. FHWA’s denial advised “*Although we could not approve this request, we are confident that nonproprietary traffic control device solutions can be deployed for safety or operational matters and are happy to assist you in that regard*”. In other words, EMI must waive its patent rights as a condition to a state obtaining FHWA approval to even test its innovative products, much less deploying them long term.

Patent protection is necessary to protect innovation and provide a return on investment limited to the life of the patent. Private sector inventors, like EMI and others in the industry, seek patents to protect their significant capital investment of time and money to develop innovative transportation technologies and to prevent China (and other competitors) from reverse engineering proprietary technology to produce their own unauthorized knock-offs. EMI cannot simply waive its patent rights as now required by FHWA, without committing business suicide.

The current MUTCD restrictions on patents and proprietary products constitute an entry barrier, with a chilling effect upon the advancement of new transportation technologies. The regulatory policy of the FHWA forces inventors to abandon their patent rights (give their technology away for free so that it can be in the “public domain”) and currently is the only way for them to be eligible for testing¹ and use² under current regulations.

The FHWA’s policy prohibiting patented products further contradicts our country’s constitutionally mandated patent system that provides “*The Congress shall have the power ...To promote the Progress of Science and useful Arts, by securing for limited times to Authors and Inventors the exclusive Rights to their respective Writings and Discoveries.*”³ American ingenuity has always been recognized and valued. The marketplace should be the ultimate decision maker of what is best, rather than unconditional governmental regulation.

Recently, the FHWA filed a NPRM in docket FHWA-2018-0036, published at 83 Federal Register 56758 *et seq.* (November 14, 2018) concerning the FHWA’s long standing procurement rule against the use of proprietary and patented materials in public works projects⁴. After considering public

¹See MUTCD Section 1A.10, Guidance paragraph E that provides that the concept of a traffic control device cannot be protected by a patent or copyright for testing, which is inclusive as currently interpreted and enforced by FHWA.

² See the Introduction to the MUTCD, latest version (2009), on the first page where Standard (04) that provides: “Any traffic control device design or application provision contained in this Manual shall be considered in the public domain. Traffic control devices contained in this Manual shall not be protected by a patent, trademark, or copyright, except for the Interstate Shield and any items owned by FHWA.”

³ See Article 1, Section 8, of the United States Constitution.

⁴ 23 CFR 635.411 (“Rule”) that was repealed earlier this year in 2019.

comments and the overwhelming support for the elimination of this outdated rule, the FHWA finally ended its regulatory ban on the use of patented and proprietary products in construction and maintenance activities this year.⁵ While that rule change provides state DOTs with greater flexibility to use proprietary and patented materials in federal aid projects, any such increased flexibility does not permit new patented and proprietary products to be tested or used in the roadways under the MUTCD. Revision of the MUTCD is needed so that state DOTs and other transportation agencies get the opportunity to use new and innovative technology that is patented and proprietary, because FHWA now acts as a gate keeper under current MUTCD regulations to prevent such technology from ever being tested or deployed. This is a formidable regulatory roadblock and entry barrier to the testing, use and development of new transportation technologies and innovative products that can and will promote safety.

The USDOT's report on significant rulemakings indicates that FHWA plans to issue a NPRM to update the MUTCD (which will be the first update in more than a decade).⁶ It is important that any such NPRM address the issue of MUTCD restrictions on the use of patented and proprietary products by proposing to delete the restrictions or, at the least stating in the notice that FHWA is considering the elimination of these restrictions and seeks public comments on this change. In short, the same policy and approach utilized to eliminate the restrictions on the use of patented and proprietary products in construction and maintenance should be followed in connection with the upcoming NPRM for the MUTCD. Failure to undertake such action will simply maintain the status quo (perhaps for another decade), stagnating technological development and killing innovation at a time when rapid change in technology already makes it impossible to accurately predict the future needs of our nation's roadways. Change in policy and the application of policy is needed now to advance safety on our roadways.

Conclusion

When FHWA issues a notice with proposed MUTCD updates, those updates should include elimination of the MUTCD's restrictions on the use of patented and proprietary products. At a minimum, the notice should invite comment on whether restrictions on the use of patented and proprietary products should be deleted from the MUTCD. To the extent that a draft NPRM on the MUTCD provided to the Office of the Secretary does not include those elements, the Office of the Secretary should take corrective action before the notice is issued.

Federal transportation policy should be enforced to promote innovation, enhance public safety and maximize the efficiency of traffic operations in our state and federal highways. Private stakeholders should be motivated to create the innovative new solutions we need to ensure the safety and economic competitiveness of our nation's transportation system.

We thank you for this opportunity to comment and the USDOT's consideration of the needs of the public and industry to take actions that support innovation and safety.

⁵ See 84 Federal Register 51023 et seq. (September 27, 2019), amending 23 CFR 635.

⁶ FHWA also previously announced in an October 5, 2018 press release that it is preparing updates to the MUTCD and will publish proposed changes to the MUTCD and invite comment.