



February 25, 2014

Dear Mayor Mueller and Council,

On behalf of the Arizona Optics Industry, we'd like to express concern about allowing electronic (digital) outdoor advertising signs in Sierra Vista. Please protect the resource of dark skies which makes this area both special and economically valuable. The Arizona Optics Industry Association, Inc. (AOIA) represents hundreds of Arizona optics and astronomy companies and professionals, with combined economic impact to Arizona of approximately \$2.5 billion per year. The University of Arizona's Eller College of Management identified that over \$250 million of that is contributed by astronomy. Arizona optics has its roots in astronomy, with over 100 years of history here.

Our state has long recognized the economic advantages of our dark skies and that good lighting codes promote smart, efficient lighting practices, and are good business. Arizona's outdoor lighting codes minimize wasted light which unnecessarily increases sky glow. Digital signs, by their nature, contribute many times more to sky glow than conventional, properly shielded, outdoor signs and even many times more than an equal amount of light sent straight up..and in Arizona, we try not to send light straight up. We do not advocate harming decades of preservation by now allowing light from digital signs. We recognize that Sierra Vista's task force tried to identify a few measures to mitigate the damage such signs would cause, but even if these measures could mitigate the harm, enforcing them for signs has proven difficult even for jurisdictions with greater resources to devote to enforcement.

Cochise County's successful preservation of dark skies has given it an important role. Recognizing the danger presented by near-earth objects (NEOs) such as the asteroid which exploded in Feb. 2013 over Chelyabinsk, Russia, releasing more energy than a large atomic bomb, NASA funds the Catalina Sky Survey (CSS). Since its '04 inception, the CSS has made the majority of NEO discoveries; in'08, the CSS was the first ever to discover an earth-impacting NEO before it entered our atmosphere. Impact time and location (Sudan) was accurately predicted; it exploded with a 1 kiloton force before it hit ground. Though the telescope is on Mt. Lemmon, **observatories in Cochise County provide crucial follow-up observations** from which asteroid orbits are determined. Many observatories were established in Cochise County because of the environment which, unfortunately, would be degraded by light emanating from digital signs.

Our state's astronomy sector capitalizes on Arizona's unique strengths and supports related, high-tech industries like our optics cluster and military missions. Many Arizona military installations, including Ft. Huachuca, conduct night training, operations, and

equipment testing which would be compromised by increased sky glow. It would be very unfortunate if the fort had to relocate some of its missions and commands elsewhere.

Just two years ago, the state of Arizona considered whether to allow digital billboards on our highways. Governor Brewer recognized "Arizona's unique position as a national leader in astronomy and stargazing, thanks to our dark skies" and citing the potential negative economic impact electronic outdoor advertising posed to our economy, she stated, "I simply refuse to place all of this in jeopardy." She asked for a compromise and the one which was made maintained the ban on electronic outdoor advertising in the north and south of our state where most of our observatories are located. Our astronomy industries have already compromised. We ask Sierra Vista not to undo the remaining protection by allowing on-site digital signs to proliferate in these carefully protected areas of our state.

As our economy evolves, we need to work together to capitalize on our region's strengths and leverage areas where we currently have natural advantages, protecting hard fought, economic gains.



Robert Breault
Chairman, AOIA