

January 26, 2010

The Honorable Joe Rice
Chair of the Business Affairs and Labor Committee
Colorado House of Representatives

RE: Public hearing regarding HB10-1085

Dear Mr. Rice:

My name is Gene Kooper, a professional land surveyor licensed continuously for the past 25 years in Colorado. I am the past Executive Director of the Professional Land Surveyors of Colorado (PLSC) and an affiliate faculty member at Metropolitan State College of Denver (MSCD). My appearance today is as a private land surveyor representing no one's views but my own.

I would like to preface my remarks by assuring the chair and committee members of my long-term commitment to education and its importance to any professional entrusted with protecting the public health, safety and welfare. I hold a Bachelor of Science in Geological Engineering and a Professional Degree in Hydrogeology, both from the Colorado School of Mines. In the last six years, I have presented five 8-hour workshops and six 4-hour workshops on mineral survey retracements and map projections at state and national land surveyors' conferences. As an affiliate faculty member of MSCD, I am currently responsible for the distance learning courses: "Route Surveying", "Geodesy I" and "Map Projections and Coordinate Systems" that are part of Metro's Surveying and Mapping degree program. For three years starting in 2005, I administered the McComber Mentoring program in Denver. This program was designed to introduce and expose survey technicians to the many topics of land surveying and hopefully instill in them a desire to seek additional education on their own. Largely based on my involvement with the mentoring program, I received a "PLSC Appreciation" award in 2005 and the PLSC's highest award, "Surveyor of the Year" in 2006.

Despite my commitment to education, I am here today to voice my opposition to HB10-1085. In particular, I am opposed to the new educational and experience requirements defined in Section 1. I ask this committee to consider removing Section 1 in its entirety from the introduced bill. The proposed legislation is not well thought out and there are numerous inconsistencies concerning the equitable treatment of applicants seeking to be licensed under the various provisions of C.R.S. 12-25-215 2(b) and 4(b).

For example, section 12-25-215 2(b)(III) allows an applicant to be admitted to the examination if they, "graduated from a board-approved two-year

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surveying curriculum or from a four-year engineering curriculum which included the equivalent of twenty-four semester hours in surveying course work as approved by the board." This legislation seeks to add subsections (IV) and (V) to 12-25-215 2(b). Under subsection (IV), an applicant with a Bachelor's degree in a nonsurveying curriculum must, "have completed board-approved credit hours in geodesy, boundary law, and survey computations". The number of credit hours is not specified (as in subsection (III)) and it appears that the AES Board's only responsibility is setting the required number of credit hours. There is no requirement for the courses themselves to be approved by the Board. Using the courses taught at MSCD as an example, the three specified courses in geodesy, boundary law, and survey computations would only total nine semester hours, whereas an applicant seeking to be qualified under subsection (III) would need a total of twenty-four semester hours of unspecified surveying courses. The experience requirements in subsections (III) and (IV) are the same, that being six years. Subsection (V) continues with the inconsistencies by requiring the applicant to, "have completed a minimum number of college credit hours, as specified by the Board from a Board-approved curriculum, in geodesy, boundary law and survey computations"; and "have twelve years of progressive land surveying experience...". Subsection (V)(A) gives the Board the discretion to set the number of credit hours and require that the courses are Board-approved. Finally, Section 12-25-215 4(b) in my opinion arbitrarily inflates the years of experience from ten years to twenty years. I believe that the proposed increase is arbitrary because no rationale is provided as to why an applicant with no collegiate education must obtain twenty years of progressive experience to protect the public.

In addition to the inconsistencies between the current C.R.S. and those proposed in Section 1 of HB10-1085, the proposed required courses of "Survey Computations" and "Geodesy" are not necessary to establish a minimally competent land surveyor. Requiring a course in "Survey Computations" is unnecessary because the applicant must also pass the NCEES administered examinations that cover the fundamentals of surveying, and the principles and practices of surveying. If an applicant is not knowledgeable in survey computations, they will not pass the examinations.

Before, I mentioned that I teach the MSCD course, Geodesy I. It is my professional opinion that nothing presented in this theoretically oriented course is necessary for a land surveyor to be knowledgeable of. Currently, a student wishing to take Geodesy I must have a twenty-nine semester hours of prerequisite courses. These prerequisites include three sophomore-level courses in surveying, Calculus I and Calculus II, and two courses in

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calculus-based physics, which include the laboratories. To my knowledge, MSCD is the only in-state school that currently offers a geodesy course. Westwood College offers a two-year associate degree in surveying (which meets the requirement under (III)), but they offer no course in geodesy. MSCD will not seek to renew the ABET accreditation for their Surveying and Mapping program in September 2010 so there is a potential that the AES Board will not approve MSCD surveying courses after September.

To support the position that courses in geodesy and survey computations should not be specifically required, I have noted that the AES Board will occasionally require a land surveyor to take remedial courses to meet the conditions of a disciplinary action. The only collegiate-level courses that I have seen the Board impose are boundary law classes and surveying ethics classes. To my knowledge, the Board has never required a land surveyor to complete a course in geodesy as part of an agreement, stipulation, final agency order, or board order.

The inconsistencies in Section 1 of HB10-1085 with the existing subsections in 12-25-215 as noted previously and what I regard as a slap dash attempt of arbitrarily selecting surveying courses that are not required to demonstrate minimal competency as a land surveyor support my suggested remedy to strike Section 1 in its entirety from the bill. I believe that the best legislative vehicle to deal with increasing the requirements for initial licensure is to wait until the next sunset legislation in 2013. During the sunset review process, a comprehensive evaluation can be made of what combined levels of education and experience are deemed appropriate to protect the public health, safety and welfare. The determination and perpetuation of land boundaries is not an exercise in how precisely a land surveyor can measure. The land surveyor's knowledge of how to evaluate the evidence found in the field, apply the law, and professionally present his/her conclusions on a land survey plat are the primary reasons that land surveyors are licensed. It is my hope that any future proposed legislation will emphasize this instead of stressing the technical arcana of **how** to make measurements.

If you have any questions, I will be happy to answer them now. I would like to thank the committee for this opportunity to present my concerns.

Respectfully submitted,



Clark E. (Gene) Kooper, PLS