

June 10, 2009

The Geo-Institute of the ASCE
1801 Alexander Bell Drive
Reston, VA 20191-4400

Attention Geo-Institute Board of Governors

The Oregon ASCE Geotechnical Technical Section Committee appreciates the opportunity to comment on the Draft Engineering and Geology Practice Guidelines (guideline) document. Only California has a longer history than Oregon in recognizing the need to regulate the practices of geotechnical engineering and engineering geology for the benefit of the public. The members of the Oregon ASCE Geotechnical Technical Section Committee have been actively involved in this process for over 30 years, and understand the difficult task that the Joint Task Force on Areas of Practice (JTFAP) has undertaken. We commend the JTFAP for their effort to summarize the differences between the Bodies of Knowledge (BOKs) further than prior efforts and we hope that this process can lend clarity to what continues to be a difficult issue in Oregon.

For clarity, and conforming to the terminology used in the JTFAP, the nomenclature for Professional Engineer (PE), Professional Geotechnical Engineer (PGE), Professional Geologist (PG), and Professional Engineering Geologist (PEG) has been adopted throughout this letter.

As a preamble, we are establishing our model of professional practice based on the “three legs” of professional practice. In order to ensure the safety of the public, the governance of professional practice (including engineering and geology) is based on three important components: 1) education and mentoring, 2) accreditation, and 3) registration or licensing. Our discussion below is framed in the concept that all three components are important and required of the professional practitioner, because individually, each can be imperfect. Accordingly, all “three legs” are required to truly establish competence.

With these concepts in mind, we want to acknowledge JTFAP’s efforts. However we cannot support the document in its current form. Therefore, we request your consideration of Item 1 and the revisions presented in Items 2 through 4 below respectively.

1. The guideline provides disclaimers relating to its eventual use that are intended to limit its application as an instrument to regulate the industry through legislation or administrative policy. However, in Oregon, it has been our experience that agencies, especially city and county governments, use such guidelines for exactly what the disclaimers warn against. Experience in Oregon has demonstrated that such adoption has been at the detriment of the public and the engineering community. We encourage the JTFAP to treat guidelines as if they are to be adopted in code and engaged in legal arguments. Therefore, we recommend that great care be exercised to ensure each word, sentence, and paragraph is accurate and properly formulated in language. Further, we recommend that tools be developed to assist ASCE and G-I Sections and Branch Groups to educate local and state

agencies regarding appropriate use of the guidelines to characterize and create boundaries within the field of engineering and geologic practice.

2. Section 3.3.1 and 3.3.2 work well to frame the BOKs of the various professions, with the following exceptions:
 - **Civil Engineering/Geotechnical Engineering:** In Oregon (and California) where issues related to the practice of Geotechnical Engineering have been of concern for decades, we have addressed the differences between PEs and PGEs and the need for additional education and training for PGEs through the use of specialty registration. Specifically, Oregon's administrative rules are clear: geotechnical engineering work should be completed by licensed PGEs ([OAR 820-040-0040](#)). We strongly encourage other states to pursue PGE licensing.
 - **Geologists:** No comment
 - **Engineering Geologist:** The BOKs listed for the accreditation and licensing of PG/PEGs are inconsistent with those listed for PE/PGEs. Practitioners of all the cited professions and the JTFAP agree that PEGs have acquired a BOK that provides a valuable contribution to collaborative efforts and products. While each professional is bound to practice within their code of ethics, it is the "three legs" of professional practice which ultimately (and appropriately) qualify and limit the practice of an individual. The primary disconnect with PEGs providing engineering design is the lack of that profession adopting clear engineering education, accreditation, and licensing requirements. The academic, BOKs, and licensing requirements included in Appendix A clearly show that the engineering requirements of PEGs are not equivalent to the standards of PEs or PGEs.

Oregon statutory code embraces this concept of accreditation and licensure by requiring that, in addition to special PGE requirements, all PGEs must have a PE license. Initially, these concepts were embraced within Oregon's Memorandum of Understanding (MOU) while attempting to address the "overlap" issues. However, through unilateral action by the PEGs (identified as CEGs in Oregon), the Oregon State Board of Geologists Examiners (OSBGE) endorsed the concept that PEGs "[can complete geotechnical investigations, analysis and design as part of their engineering geology practice, and complete geotechnical reports.](#)" This unilateral action points out the issues associated with attempting to create a "handshake deal" between the two professions. Ultimately, what is necessary is increased awareness and education relative to the professional backgrounds and training of the relative professions...as well as embracing and endorsing all "three legs" of professional practice.

3. The Matrix (*Overlapping Areas of Practice Matrix*) provided in Section 4.2 is an extremely difficult format to accurately and completely clarify the "three legs" and overlapping areas of professional practice. Further, it distracts from the BOK summary and presentation in Section 3. One solution would be to complete the final document without this matrix. Barring that, we suggest that additional effort, and potentially a different format, is necessary to address the overlap areas. Components of the matrix which are inaccurate or confusing in our opinion include:
 - PEGs performing analysis and design. As embraced by the JTFAP, without the combination of engineering education, accreditation and licensing, the PEG should not be providing engineering analysis and design. Specifically, we agree with the position (stated in Section 3.3.2 of the JTFAP) that the PEG contribution includes: "*those factors affecting the planning, design,*

construction, operation, and maintenance of engineering structures (fixed works) are adequately recognized, interpreted, and presented for use in engineering and related practices”; for use by engineers. Likewise, the JTFAP acknowledges in Section 4.2 that there is a “...*strong distinction between the engineer’s focus on design-level activities and the geologist’s focus on field observational and testing data...*” However, the matrix includes PEG analysis and design, which are not consistent with the BOKs of Section 3.3.2.

- The exclusion of PGEs from Landslide Hazards Recognition and Mapping is not consistent with the BOKs of PGEs.
 - The categories relative to the field classification of soil and rock is confusing and inconsistent. PGEs should not be excluded from field rock classification (from a foundation materials perspective) any more than PEGs should be excluded from field soils classification. Both of these tasks fall within the routine practice of each profession and are addressed in the BOKs.
 - The matrix fails to resolve the primary question facing building officials and other interested parties in Oregon. Namely, who should (and who should not) be completing foundation and soils investigation reports that contain design parameters. The matrix (if retained) needs to clearly document that the development of foundation design parameters and other design elements is within the practice of PGEs and is not within the practice of PEGs. This position is consistent with the remainder of the guidance and is supported by the text cited above.
4. Appendix A of the document attempts to identify the BOKs of the various professions. In our opinion, the BOKs as currently presented in Appendix A are confusing and unnecessary, and distract from the very worthwhile discussion of BOKs in Section 3. At a minimum, Appendix A needs to be rewritten to accurately reference the education and accreditation background (see discussion below) of the professions.
- The BOKs need to reference authentic accreditation such as ABET programs.
 - The requirements for PEs and PGEs consists of a well-documented list of broad academic-, licensed-, and experience- based BOKs (the “three legs”) whereas the BOKs for the PEG/PGs appears to be more experience and task based. These requirements are not of equivalent weight and if remain, must be acknowledged as such.
 - We strongly challenge the appropriateness of including A.4.5, k, l, m, and n and A.4.6, j as BOKs of PEGs as these elements are inherently design-based and as such should not be included.

Our fundamental and overriding conclusion is that to practice engineering, PEGs must establish accredited engineering education and licensing requirements that meet engineering requirements or adopt dual licensure that include a PE and, where available, PGE. The process has been initiated by the Geological Society of London which provides clear accreditation requirements for geology and engineering geology programs. Likewise, engineering geology should not be practiced by PEs and PGEs without the appropriate accreditation and licensing. Finally, it is our opinion that as a representative of ASCE, the Geo-Institute should not endorse a document that promotes engineering analysis and design by individuals who do not have an engineering license.

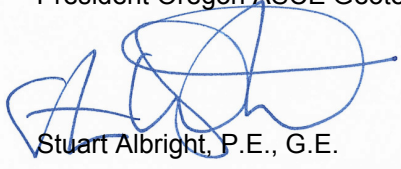
Thank you for the opportunity to provide our comments. This letter has been prepared by a committee of the ASCE Oregon Geotechnical Technical Section. The committee is comprised of active members of ASCE.

Please do not hesitate to call or e-mail with questions. We would be happy to provide additional comments upon your request.

Best regards,



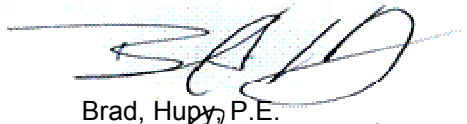
Jason Butler-Brown, P.E.,
President Oregon ASCE Geotechnical Technical Section



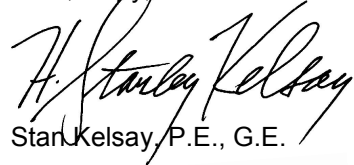
Stuart Albright, P.E., G.E.



Randall Hill, P.E.



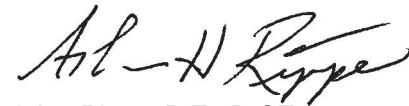
Brad Hupy, P.E.



Stan Kelsay, P.E., G.E.



Marvin Pyles, Ph.D., P.E., G.E.



Arlan Rippe, P.E., D.GE



George Saunders, P.E., G.E.