



LEGISLATIVE
COUNSEL
BUREAU

July 22, 2011

Honorable Mimi Walters
Room 3082, State Capitol

PROFESSIONAL ENGINEERS: FIXED WORKS - #1101097

Dear Senator Walters:

You have asked whether a licensed professional engineer who is not licensed as a civil engineer may be in responsible charge of designs, plans and specifications, and engineering reports for a project that has components involving fixed works as described in Sections 6731 and 6731.1 of the Business and Professions Code.

By way of background, the Professional Engineers Act (Ch. 7 (commencing with Sec. 6700), Div. 3, B.& P.C.)¹ establishes the Board for Professional Engineers, Land Surveyors, and Geologists (hereafter the board) within the Department of Consumer Affairs and provides for the licensure and regulation of professional engineers² by the board. In order to safeguard life, health, property, and public welfare, the act requires a person who practices, or offers to practice, civil, electrical, or mechanical engineering in this state to submit evidence

¹ All section references are to the Business and Professions Code, unless otherwise indicated.

² Section 6701 defines the term "professional engineer" for purposes of the act, as follows:

"6701. 'Professional engineer,' within the meaning and intent of this act, refers to a person engaged in the professional practice of rendering service or creative work requiring education, training and experience in engineering sciences and the application of special knowledge of the mathematical, physical and engineering sciences in such professional or creative work as consultation, investigation, evaluation, planning or design of public or private utilities, structures, machines, processes, circuits, buildings, equipment or projects, and supervision of construction for the purpose of securing compliance with specifications and design for any such work."

that he or she is qualified to practice and requires the person to be licensed by the board as a civil, electrical, or mechanical engineer (Sec. 6730). The act makes it unlawful for a person other than a licensed professional engineer to stamp or seal any plans, specifications, plats, reports, or other documents with the seal or stamp of a professional engineer or to use specified titles without a license (Sec. 6732). The act also makes it a crime for a person to practice or offer to practice civil, electrical, or mechanical engineering in this state without legal authorization (Sec. 6787).

Section 6702 defines the term “civil engineer” for purposes of the act, as follows:

“6702. ‘Civil engineer’ as used in this chapter means a professional engineer in the branch of civil engineering and refers to one who practices or offers to practice civil engineering in any of its phases.”

Furthermore, Sections 6731 and 6731.1 set forth specific practices that constitute civil engineering and provide as follows:

“6731. Civil engineering embraces the following studies or activities in connection with fixed works for irrigation, drainage, waterpower, water supply, flood control, inland waterways, harbors, municipal improvements, railroads, highways, tunnels, airports and airways, purification of water, sewerage, refuse disposal, foundations, grading, framed and homogeneous structures, buildings, or bridges:

“(a) The economics of, the use and design of, materials of construction and the determination of their physical qualities.

“(b) The supervision of the construction of engineering structures.

“(c) The investigation of the laws, phenomena and forces of nature.

“(d) Appraisals or valuations.

“(e) The preparation or submission of designs, plans and specifications and engineering reports.

“(f) Coordination of the work of professional, technical, or special consultants.

“(g) Creation, preparation, or modification of electronic or computerized data in the performance of the activities described in subdivisions (a) through (f).

“Civil engineering also includes city and regional planning insofar as any of the above features are concerned therein.

“Civil engineers registered prior to January 1, 1982, shall be authorized to practice all land surveying as defined in Chapter 15 (commencing with Section 8700) of Division 3.” (Emphasis added.)

“6731.1. Civil engineering also includes the practice or offer to practice, either in a public or private capacity, all of the following:

“(a) Locates, relocates, establishes, reestablishes, or retraces the alignment or elevation for any of the fixed works embraced within the practice of civil engineering, as described in Section 6731.

“(b) Determines the configuration or contour of the earth’s surface or the position of fixed objects above, on, or below the surface of earth by applying the principles of trigonometry or photogrammetry.

“(c) Creates, prepares, or modifies electronic or computerized data in the performance of the activities described in subdivisions (a) and (b).

“(d) Renders a statement regarding the accuracy of maps or measured survey data pursuant to subdivisions (a), (b), and (c).”

(Emphasis added.)³

Thus, under Sections 6731 and 6731.1, the practice of civil engineering embraces various studies and activities in connection with fixed works for irrigation, drainage, waterpower, water supply, flood control, inland waterways, harbors, municipal improvements, railroads, highways, tunnels, airports and airways, purification of water, sewerage, refuse disposal, foundations, grading, framed and homogeneous structures, buildings, or bridges. The term “fixed works” is not defined. However, the word “fixed” connotes a sense of permanency, and has been defined as settled, or established (*San Francisco Pioneer Woolen Factory v. Brickwedel* (1882) 60 Cal. 166, 173). Thus, “fixed works” as used in the act may be construed to mean permanent established works of the type set forth in Section 6731.

Section 6734 additionally guides the scope of practice of civil engineers, and subdivision (a) of Section 6735 specifies requirements regarding the preparation of civil engineering plans. These provisions read, in pertinent part, as follows:

“6734. Any person practices civil engineering when he professes to be a civil engineer or is in responsible charge of civil engineering work.”

“6735. (a) All civil (including structural and geotechnical) engineering plans, calculations, specifications, and reports (hereinafter referred to as ‘documents’) shall be prepared by, or under the responsible charge of, a licensed civil engineer and shall include his or her name and license number.”⁴

³ See Section 2 of Chapter 625 of the Statutes of 1983 for another Section 6731.1, which includes language that has the same effect as subdivisions (a) and (b) of Section 6731.1 set forth above.

⁴ The term “responsible charge” is defined in both statute and regulation. Section 6703 provides that “responsible charge of work” means the independent control and direction, by the use of initiative, skill, and independent judgment, of the investigation or design of professional engineering work or the direct engineering control of those projects. Regulations (continued...)

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The act also defines “electrical engineers” and “mechanical engineers”; however, those practice areas are not defined to include engineering involving studies or activities in connection with fixed works (Secs. 6702.1, 6702.2, 6731.5, and 6731.6). Instead, under the act, engineering involving studies or activities in connection with fixed works is only included within the practice of civil engineering.

The board has adopted regulations pursuant to the act applicable to the practice of professional engineering. These regulations, set forth in Division 5 (commencing with Section 400) of Title 16 of the California Code of Regulations, among other things, require a professional engineer to practice and perform engineering work only in the field or fields in which the professional engineer is by education or experience fully competent and proficient (16 Cal. Code Regs. 415).

Turning now to the question presented, that is, whether a licensed professional engineer who is not licensed as a civil engineer may be in responsible charge of designs, plans and specifications, and engineering reports for a project that has components involving fixed works as described in Sections 6731 and 6731.1, we are guided by rules of statutory construction. The primary task of statutory interpretation is to ascertain the legislative intent so as to effectuate the purpose of the law consistent with the language of the statute (*Hsu v. Abbara* (1995) 9 Cal.4th 863, 871). The intent of the enacting body, whether that be the Legislature or the electorate, is the paramount consideration (*Legislature v. Eu* (1991) 54 Cal.3d 492, 505). Statutory terms are construed in accordance with the usual, ordinary import of the language employed, in harmony with the overall legislative scheme (*IT Corp. v. Solano County Bd. of Supervisors* (1991) 1 Cal.4th 81, 98). Furthermore, statutory principles of construction also apply to administrative regulations (*Duke Molner Wholesale Liquor Co. v. Martin* (1960) 180 Cal.App.2d 873, 884).

As discussed above, a person is practicing civil engineering when the person is in responsible charge of civil engineering work (Sec. 6734). Thus, to the extent a professional engineer is in responsible charge of designs, plans and specifications, and engineering reports for the fixed work components of a project, the professional engineer would be practicing civil

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adopted by the board, which further defines “responsible charge,” provide that responsible charge directly relates to the extent of control a professional engineer is required to maintain while exercising independent control and direction of professional engineering services or creative work and to the engineering decisions that can be made only by a professional engineer (16 Cal. Code Regs. 404.1(a)). For the purpose of evaluating whether an engineer is in responsible charge, the regulations require the consideration of specified factors, including whether the professional engineer who signs engineering documents is capable of answering questions asked by individuals who are licensed by the board in the appropriate branch of professional engineering relevant to the project (16 Cal. Code Regs. 404.1(b)).

engineering (Secs. 6731, 6731.1, and 6734). Furthermore, all civil engineering plans, calculations, specifications, and reports are required to be prepared by, or under the responsible charge of, a licensed civil engineer (Sec. 6735). Of the definitions of civil, mechanical, and electrical engineers set forth in the act, only civil engineering includes professional engineering work connected with fixed works (Secs. 6731 and 6731.1). Thus, reading these provisions of the act together, we believe that only licensed civil engineers may be in responsible charge of designs, plans and specifications, and engineering reports for the fixed works components of projects described in Sections 6731 and 6731.1.

However, with regard to the components of an engineering project that are not connected with fixed works, subdivision (d) of Section 404.1 of Title 16 of the California Code of Regulations provides as follows:

“(d) Portions of Projects. Nothing in this section prohibits a professional engineer from providing services for portions of or to add to or to modify an engineering project engineered under the responsible charge of another licensee as long as the professional engineer exercises the requisite extent of control and assumes responsibility for the engineering decisions as required by subdivision (a) and meets the criteria described in subdivision (b), as well as meeting the requirements of the Professional Engineers Act and Sections 411 and 415.^[5] The professional engineer need only be in responsible charge of the portions, additions, or modifications or the portion of the project affected by the addition or modification and not of the entire project. Except as provided in Sections 6735(b), 6735.3(b), and 6735.4(b) of the Code,^[6] the original licensee is not relieved of any responsibility arising from the engineering services of which he or she was in responsible charge.”

Thus, a professional engineer who is not a civil engineer may provide services for portions of, or to add to or modify, a project engineered under the responsible charge of another licensed engineer as long as the professional engineer exercises the requisite extent of control and assumes responsibility for the engineering decisions as specified in Section 404.1 of Title 16 of the California Code of Regulations. In our view, therefore, even if an

⁵ Section 411 of Title 16 of the California Code of Regulations establishes requirements relating to an engineer's seal and, as described above, Section 415 of these regulations require that an engineer shall practice only in the field in which he or she is fully competent and proficient.


⁶ These sections provide that a civil engineer, electrical engineer, or mechanical engineer is not responsible for damage caused by subsequent changes to documents prepared by, or under the responsible charge of, the respective licensed engineer if the subsequent changes or uses are not authorized or approved by the engineer, provided the engineering service rendered by the engineer who signed the documents was not also a proximate cause of the damage.

engineering project contains fixed work components, a professional engineer who is not licensed as a civil engineer may be in responsible charge of a portion of the project that does not involve those fixed work components if the criteria for the exercise of responsible charge are otherwise met.

Accordingly, it is our opinion that only a licensed civil engineer may be in responsible charge of designs, plans and specifications, and engineering reports for the fixed work components of an engineering project, as described in Sections 6731 and 6731.1 of the Business and Professions Code. However, a licensed professional engineer who is not a civil engineer may be in responsible charge of designs, plans and specifications, and engineering reports for the components of an engineering project that are not fixed works.

Very truly yours,

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