BER Case 89-1

APPROVED BY BER
October 17, 1989

Section II.2. - Code of Ethics
Section II.2.a. - Code of Ethics
Section II.2.b. - Code of Ethics
Section II.2.c. - Code of Ethics
Section III.11 - Code of Ethics

PROVIDING PRIME PROFESSIONAL AND DESIGN SERVICES

FACTS:

Engineer A is a professional engineer with a degree in mechanical engineering. For 20 years she worked for various design firms including several years with a major architectural firm. While Engineer A took no course work in architecture during her undergraduate years, she gained a significant amount of knowledge about the practice of architecture as a result of her working in the mechanical engineering area with architects in private practice and managing various design projects.

Engineer A has now established her own engineering firm which employs no architects. A developer asks Engineer A to serve as the prime professional contract holder for the design of an office building complex. Engineer A agrees and retains Engineer B to perform the structural design, Engineer C to perform the electrical design, but does not retain an architect to perform the architectural design aspects of the work. Instead, Engineer A performs those design services personally, drawing upon the knowledge gained while practicing alongside architects.

QUESTIONS:

1. Is it ethical for Engineer A to serve as the prime professional contract holder for the design of an office building?

2. Is it ethical for Engineer A to provide architectural services for the design of an office building?

REFERENCES:

Section II.2. -Engineers shall perform services only in the areas of their competence.

Section II.2.a. -Engineers shall undertake assignments only when qualified by education or experience in the specific technical fields involved.

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Section II.2.b. -Engineers shall not affix their signatures to any plans or documents dealing with subject matter in which they lack competence, nor to any plan or document not prepared under their direction and control.

Section II.2.c. -Engineers may accept assignments and assume responsibility for coordination of an entire project and sign and seal the engineering documents for the entire project, provided that each technical segment is signed and sealed only by the qualified engineers who prepared the segment.

Section III.11. -Engineers shall cooperate in extending the effectiveness of the profession by interchanging information and experience with other engineers and students, and will endeavor to provide opportunity for the professional development and advancement of engineers under their supervision.

DISCUSSION:

The obligation of engineers to perform services only in their area of competence is one of the most fundamental obligations owed by engineers. Like other professionals, engineers are educated, trained, tested and gain experience in a variety of highly technical areas. During the undergraduate years, the engineering student gains the foundation upon which further knowledge and experience are built. Later, once engaged in actual practice, the engineer draws from earlier academic years and applies the technical knowledge acquired to the facts and circumstances with which the engineer is confronted, using professional judgment and discretion to analyze the circumstances and propose solutions. Knowledge and competency, however, are not static, but constantly evolve, and hopefully improve with time. More likely however, these areas of knowledge "wax and wane" with time. Those technical areas used with the greatest degree of frequency tend to become more developed; those left unused tend to leave the engineer's knowledge base. To address this fact, all engineers should recognize their professional obligation to participate in programs which foster and enhance their professional development and competence. Again, however, formal classroom study through continuing education is certainly not the only form of knowledge enhancement. All professionals, including engineers, constantly broaden their professional competence by actually performing their professional duties and responsibilities and seeking new opportunities to further expand their professional knowledge base. In this manner, engineers find new and innovative methods of analyzing problems, overcoming difficulties and ultimately designing solutions.

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However, it must also be recognized that while there is a professional responsibility to heighten one's professional experiences through practice applications, there are practical limits beyond which an engineer must not stray, and that a reasonable balance must be struck in the area of practice competency. As the Board noted in Case 87-1, it is universally accepted that it is unprofessional for an engineer to attempt to practice in a field of engineering in which the engineer is not proficient. Indeed, most state engineering registration statutes or rules of professional conduct emphasize that conviction.

Nevertheless, as we stated in Case 87-1, while the language in Section II.2. appears plain in meaning, it is obvious that the language cannot be interpreted entirely in its literal sense. To do so could restrict an engineer's practice to a very narrow area and would not recognize that the practice of engineering is dynamic and fluid. Again, we noted there that all engineers have a "parallel obligation to expand their understanding and knowledge through broadened professional practice."

The Board has addressed the issue of practice competency in at least one earlier case. In Case 85-3, a local county ordinance required that the position of county surveyor be filled by a professional engineer. The county commissioners met and decided to appoint a professional engineer with education and experience solely in the field of chemical engineering. His duties and responsibilities would include oversight of surveying reports and highway improvement projects, but not include actual preparation of engineering and surveying documents.

In deciding that it was unethical for the engineer to accept the position as county surveyor, the Board made clear the distinction between applying the Code language to a consulting practice and applying the language in the context of any employment relationship. We noted that in the consulting setting, the firm has a good deal more discretion and flexibility and may be able to structure its work force to fit the needs and requirements of a particular job for which the firm is being retained. In the absence of any facts which would suggest otherwise, we ruled that it would be inconsistent with the Code for the engineer to act as a county surveyor when his expertise was limited to the field of chemical engineering. While under the facts, the job responsibilities of the county surveyor did not include actual preparation or approval of engineering and surveying documents, the job responsibilities did include oversight of surveying reports and highway improvement -- areas in which the engineer possessed no apparent competence. Finally, we noted that at a bare minimum, one who is serving in the role as a county surveyor must have at least some "substantive degree of background and experience" in order to accept such a position.

It appears reasonable to infer under the facts presented under the case at hand that Engineer A, a licensed professional engineer, has obtained a significant degree of experience as a design professional to enable her to serve as prime design professional contract holder for the office building. While traditionally the lead prime design professional contract holder for buildings has been the architect and not the engineer, so long as the professional engineer is acting in accordance with the laws of the state and possesses the necessary competence to perform the required functions, there would be no ethical bar to the professional engineer serving in that function. We believe that on the basis of her experience in working with architects, engineers and clients, Engineer A can demonstrate the substantive experience and background to enable her to perform the tasks required.

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Turning to the second question, we recognize that under many circumstances it may be possible for a professional engineer to engage in the incidental practice of architecture consistent with state law. The professional engineer must possess the necessary educational background, training and experience. We think that the facts described in this case do not present appropriate circumstances for the professional engineer to practice architecture. Here, Engineer A possesses no educational background or adequate training in the actual practice of architecture. While it appears that Engineer A has worked for many years alongside architects and gained a significant amount of experience about the practice of architecture, we are not convinced that such experience would be sufficient to permit Engineer A to render architectural design services for the design of a building. While there may be circumstances where an engineer may be competent to perform incidental or minor architecture in connection with an engineering design project, we do not agree that a professional engineer who has obtained experience managing projects involving architectural design personally possesses the competence to serve as the architect in the design of an office building.

In closing, we must note that the line of demarcation between engineering and architecture is frequently not bright and that a significant degree of overlap does exist between the two professions. However, professional engineers and architects must possess an ethical consciousness and be aware where their professional competence begins and ends. In addition, regardless of whether an engineer or an architect possesses the professional competence to engage in an allied area of practice, the design professional must perform those services in accordance with the laws and regulations of the state in which practice is occurring.

CONCLUSIONS:

1. It is ethical for Engineer A to serve as prime professional contract holder for the design of an office building.

2. It is unethical for Engineer A to provide architectural services beyond those which are incidental for the design of an office building.

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