Conflict of Interest—Public Health and Safety—
Design and Construction of House in Flood Area

Case No. 11-9

Facts:

First Owner wants to build a house and hires Architect A and Engineer B. Following disagreements over the location of the house due to potential flooding and drainage issues, First Owner terminates Architect A and Engineer B after paying their fee. First Owner then hires Architect C and Engineer D to design the house. After the house construction is completed, First Owner then sells the House to Second Owner. Following a heavy rain, Second Owner discovers that the house has serious flooding and drainage issues and sues First Owner. Second Owner hires Architect A and Engineer B to perform redesign services for the house. Engineer B is a fact witness and could also serve as an expert witness in the lawsuit.

Questions:

1. In light of Engineer B's concerns, did Engineer B have any ethical obligation to report to appropriate public authorities First Owner's decision to locate the house in an area subject to potential flooding and drainage issues?

2. Would it be ethical for Engineer B to perform redesign services for the house?

3. Would it be ethical for Engineer B to serve as an expert witness in connection with the litigation between First Owner and Second Owner?

References:

Section II.1.c.	-	*NSPE Code of Ethics:*	*Engineers shall not reveal facts, data, or information without the prior consent of the client or employer except as authorized or required by law or this Code.*
Section III.4.	-	*NSPE Code of Ethics:*	*Engineers shall not disclose, without consent, confidential information concerning the business affairs or technical processes of any present or former client or employer, or public body on which they serve.*
Section III.4. a.	-	*NSPE Code of Ethics:*	*Engineers shall not, without the consent of all interested parties, promote or arrange for new employment or practice in connection with a specific project for which the engineer has gained particular and specialized knowledge.*
Section III.4.b.	-	*NSPE Code of Ethics:*	*Engineers shall not, without the consent of all interested parties, participate in or represent an adversary interest in connection with a specific project or proceeding in which the engineer has gained particular specialized knowledge on behalf of a former client or employer.*

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Discussion:
Professional engineers perform a variety of professional services for both public and private clients. Professional engineers often collaborate with other professionals in the rendering of those services for the benefit of their clients. As with all professionals, professional engineers are expected to offer their best professional opinions and judgments to their clients, with the client making the ultimate decision as to whether to accept those opinions and judgments and act upon them.

The NSPE Board of Ethical Review has had occasions to examine cases where engineers offered clients their professional judgments which were not followed by their public or private clients. For example, in BER Case No. 98-9, the Board considered a case involving Engineer A, a structural designer of a large commercial building, who incorporated new and innovative design concepts into his work. After construction was complete and the building was occupied, Engineer A found an omission in his calculations that could result in the building's collapse under severe, but not unusual, wind conditions. The collapse would not only jeopardize the occupants and their immediate surroundings, but could possibly cause a domino effect threatening a much larger area. Engineer A advised the architect and client of the problem. The architect, the client, and the city engineer agreed upon remedial construction, which could be accomplished over the next few months. A storm monitoring system and contingency evacuation plan for the building and surrounding neighborhood were also developed for the time before construction was complete. Both the client and architect strongly agreed that the situation should be kept secret, with construction accomplished during the evening hours when the building was unoccupied. Engineer A was confident that the remedial construction would completely rectify any structural concerns and that the evacuation plan had a reasonable chance of success. However, Engineer B, the city engineer, had concerns for the public, especially the office workers in the building and their right to know, but the architect and the client maintained that right was superseded by the consequences of a possible public panic resulting from any notification.

In finding that it was not ethical for the structural engineer to comply with the client's and the architect's desire for secrecy, and that it was not ethical for Engineer B to maintain secrecy, the Board noted that Engineer A had an obligation to go further, noting the primary obligation of the engineer to protect the safety, health, property, and welfare of the public. The Board noted that the obligation of the engineer to refrain from revealing confidential information, data, and facts concerning the business affairs of the client without consent of the client is a significant ethical obligation. However, said the Board,

> "We further believe that matters of public health and safety must take precedence. Again, the NSPE Code of Ethics is clear on this point—Code Section I.1 employs the word 'paramount' to describe the obligation of the engineer with respect to the public health and safety."

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In BER Case No. 98-9, the Board further noted that Engineer A's actions in promptly reporting his findings to the client and providing a corrective design were both ethical and commendable. Nevertheless, the necessary repairs required months before the building's stability could be ensured. During that time, the building's occupants as well as a large area of the city remained in jeopardy, with only an untested evacuation plan protecting them from possible disaster. The Board recognized that the desire to avoid public panic was certainly a legitimate factor in deciding upon a course of action. However, withholding critical information from thousands of individuals whose safety might be compromised over a significant period of time is not a valid alternative for the conditions presented. It would seem that Engineer A should have informed the client and the architect that, while he has an obligation of confidentiality to them as clients, he has this ultimate, paramount obligation to see that the public is protected. He should have let them know that he must inform the appropriate authorities unless they, the client and the architect, immediately develop and carry out a plan to do so. Such a plan, developed in consultation with a public relations firm and legal advice, could have avoided panic and sensational media hype while protecting the public.

Later, in BER Case No. 03-3, involving different facts and circumstances, Engineer C was retained to perform an inspection of a private residence by Owner X who suspected that there was a structural problem involving the roof framing. Upon performing a cursory visual inspection, Engineer C concluded that there indeed was a structural deficiency because past modifications to the roof shingles added weight to the original structure that it was not designed to carry, thus overloading the original roof structure. Engineer C advised Owner X to make immediate repairs, and certainly before the next snowstorm, as any significant additional roof loads would likely lead to failure of the roof structure and potentially cause injury and loss of life.

Engineer C offered to provide engineering services to design, prepare plans and specifications, and file the proposed work with the municipal authorities for a reasonable fee. Owner X declined Engineer C’s offer to provide the design services and advised Engineer C via e-mail through Owner X’s attorney that Engineer C should “have no further involvement” in the project. Several weeks pass and Engineer C observed that no work has been done to correct the structural deficiency in the roof. The Board decided that Engineer C did have an ethical obligation to take further action. Commensurate with the facts of the case, the Board noted that immediate reporting of structural deficiencies to public authorities did not seem warranted; however, deliberate and reasonable steps toward addressing the situation in view of the public health, safety, and welfare should have been taken—not the least of which is to advise Owner X’s attorney of the technical, safety, and risk issues involved.

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Turning to the facts in the present case, the Board believes the facts in the present case are significantly different than the facts in BER Case Nos. 98-9 and 03-3. Cases 98-9 and 03-3 clearly involved obvious and potentially imminent dangers to the public health and safety while the facts in the present case appear to relate more to potential property damage and economic harm. Moreover, First Owner followed up his retention of Architect A and Engineer B with the retention of Architect C and Engineer D, who presumably provided professional architectural and engineering services in connection with the design and construction of the house. In light of the facts that there was no imminent danger to the public health and safety and presumably competent professionals were involved in the design and construction process, which suggested that technical issues were being appropriately addressed, the Board does not believe Engineer B has an affirmative obligation to report First Owner's actions or inactions.

Turning to the second question, it is the Board's view that Engineer B cannot ethically perform redesign services for the house for Second Owner, either independently or in collaboration with Architect A. Clearly Engineer B and Architect A had serious concerns regarding potential flooding and drainage issues in connection with the site, the placement of the house, design and construction of the house itself, or based upon other factors. While it is unfortunate that Second Owner cannot benefit from Engineer B's professional expertise in connection with this project and that Engineer B is in a sense being punished for reaching a correct technical conclusion, the mandate of NSPE Code of Ethics Sections III.4.a. and III.4.b. seems clear. Engineer B was paid for his professional services by First Owner and owes a continuing obligation not to disclose information to Second Owner gained during his service to First Owner.

It is also the Board's view that it would not be appropriate for Engineer B to serve as an expert witness in connection with the litigation between First Owner and Second Owner. NSPE Code provisions make it clear that representing an adversary interest in connection with a specific project in which an engineer has gained particular specialized knowledge on behalf of a former client is inconsistent with the NSPE Code. In passing, it should be noted that Engineer B may be called upon as a fact witness in connection with the services provided to First Owner regarding the house, another reason why it would be inappropriate for Engineer B to serve as an expert witness on behalf of Second Owner.

Conclusions:

1. Engineer B did not have any ethical obligation to report to appropriate public authorities First Owner's decision to locate the house in an area where potential flooding and drainage issues were raised.

2. It would be unethical for Engineer B to perform redesign services for the house during any active litigation over the matter.

3. It would be unethical for Engineer B to serve as an expert witness in connection with the litigation between First Owner and Second Owner.

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