Public Health and Safety
Engineer's Duty to Adhere to Codes, Standards and Guidelines

Case No. 15-11

Facts:
Engineer A, a city engineer for the city of Greenhaven, conducts a traffic study. Based upon traffic data, accident histories, engineering policies, engineering standards, and design guidelines, Engineer A develops a public works improvement program and presents the plan to the Greenhaven City Council. One of the recommendations in Engineer A's public works improvement program is for the city to purchase a right of way to expand the size of the 11-foot lanes to 12 feet in order meet current engineering standards and design guidelines. Following discussion, the Greenhaven City Council rejects Engineer A's recommendations and directs Engineer A to continue with the proposed public works improvement program but retain the present lane configuration.

Question:
What are Engineer A's ethical obligations under the circumstances?

NSPE Code of Ethics References:

Section II.1. - *Engineers shall hold paramount the safety, health, and welfare of the public.*

Section ll.1.a. - *If engineers' judgment is overruled under circumstances that endanger life or property, they shall notify their employer or client and such other authority as may be appropriate.*

Section ll.1.b. - *Engineers shall approve only those engineering documents that are in conformity with applicable standards.*

Section ll.3.a. - *Engineers shall be objective and truthful in professional reports, statements, or testimony. They shall include all relevant and pertinent information in such reports, statements, or testimony, which should bear the date indicating when it was current.*

Section ll.4. - *Engineers shall act for each employer or client as faithful agents or trustees.*

Section lll.2.b. - *Engineers shall not complete, sign, or seal plans and/or specifications that are not in conformity with applicable engineering standards. If the client or employer insists on such unprofessional conduct, they shall notify the proper authorities and withdraw from further service on the project.*

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BER Case References: 88-6; 09-4

Discussion:
Professional engineers working in the public sector have a unique role in serving as guardians of various health, safety, and welfare issues. In addition to their basic professional role in holding paramount the public health, safety, and welfare, engineers in the public sector are empowered to make recommendations and approve only those drawings, plans, and specifications that are consistent with engineering standards. In many ways, engineers in the public sector are a key line of defense in protecting the public.

An example of the critical public safety role of the engineer in the public sector was illustrated in BER Case 88-6. In that case, an engineer was employed as the city engineer/director of public works with responsibility for disposal plants and beds and reported to a city administrator. After (1) noticing problems with overflow capacity, which are required to be reported to the state water pollution control authorities, (2) discussing the problem privately with members of the city council, (3) being warned by the city administrator to report the problem only to him, (4) discussing the problem again informally with the city council, and (5) being relieved by the city administrator of responsibility for the disposal plants and beds, the engineer continued to work as city engineer/director of public works. In ruling that the engineer failed to fulfill her ethical obligations by informing the city administrator and certain members of the city council of her concern, the Board found that the engineer was aware of a pattern of ongoing disregard for the law by her immediate supervisor, as well as by members of the city council. After several attempts to modify the views of her superiors, the engineer knew, or should have known, that “proper authorities” were not the city officials, but more probably, state officials. The Board could not find it credible that a city engineer/director of public works for a medium-sized town would not be aware of this basic obligation. The Board said that the engineer’s inaction permitted a serious violation of the law to continue and made the engineer an “accessory” to the actions of the city administrator and others.

A more recent BER case involving a professional engineer and the public sector is BER Case 09-4. In that case, Engineer A worked for the US government in a defense agency for many years, rising to a fairly high managerial position in the government. Upon retirement, Engineer A accepted an executive position with SuperCom, a company producing electronic equipment for the military. Shortly after coming on board with SuperCom, Engineer A was informed by a manager in another SuperCom division that, under an existing contract with the Department of Defense, a key test on an important product was not being performed in the manner specified by the contract. According to the employee, this practice had been going on for several years and the subordinate felt very uncomfortable about it. Engineer A, who had considerable expertise with the testing technology involved, looked into the matter carefully. Engineer A found that the shorter and significantly less costly test had indeed been substituted by the company for the one

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specified under the contract. After some review and study, Engineer A concluded that SuperCom's test was actually as effective as the specified test. Nevertheless, Engineer A took his findings to SuperCom's upper executive management team and recommended that the company apply to the contracting agency for a contract change authorizing the simpler test. Following a meeting, SuperCom executives decided to continue with its current course of action. Since there were no safety or quality issues involved, and wanting to start out on the right foot with SuperCom, Engineer A decided not to pursue the matter further. In deciding that Engineer A had an ethical obligation to advise SuperCom's higher level executive team that they are compelled to contact the appropriate federal contracting officials and seek a contract change authorizing the simpler test and that failure on the part of SuperCom to take this action will require Engineer A to report their actions to the appropriate governmental authorities, the Board cited BER Case 88-6 referenced above. The Board noted that (1) Case 88-6 involved a danger to the public health and safety and (2) Case 88-6 involves a public employee who is professionally responsible for overseeing the area that is the subject of the breach.

In the present case, the Board considers those two points extremely important. Under the facts in the current case, Engineer A is charged as the city engineer for Greenhaven with overseeing the design of roadways, consistent with the public health and safety. Engineer A has an obligation to meet current engineering codes and standards, to express his views when he believes the actions being proposed by his employer or client are not consistent with applicable engineering standards, and to not sign, seal, or approve engineering documents that fail to meet those codes and standards, unless Engineer A receives appropriate exceptions. In addition to the possibility of placing the public health and safety at risk, failure to meet those standards will also place the city at risk of liability as well as noncompliance with federal and state standards and requirements.

Conclusion:

Engineer A has an obligation to advise the members of the Greenhaven City Council that failure to follow Engineer A's recommendations, which are based upon current engineering codes, standards, and other guidelines, could place the public health and safety at risk and will also put the city in noncompliance with federal and state standards and requirements.

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