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FOR ENGINEERING AND SCIENCE

Serving As Design Engineer And General Contractor -- NSPE Case No. 98- 1

Year

1998

Description

An engineer is thinking about placing a bid on a contract for a job for which, in his job at another firm, he prepared the plans.

Body

Facts

Engineer A, a principal in a local consulting engineering firm practicing as a professional corporation, who also is a principal owner in a construction contracting firm, prepared plans and specifications for the design and construction of a conventional/non-proprietary roof structure for a municipal wastewater treatment facility. The scope of his services were limited to this project only. The municipality engaged a second firm, Engineer B, to administer the bidding and construction, using the plans and specifications prepared by Engineer A. The project was advertised for public bidding, and bids were received and opened. One of the bidders was Engineer A's construction contractor firm.

Question

- Was it ethical for Engineer A to bid as the general contractor on a project Engineer A designed?

References

- *Code of Ethics* - Section III.4.a. - "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.8.a. - "Engineers shall conform with state licensure laws in the practice of engineering."

Discussion

The Board has had an opportunity to discuss the question of conflicts of interest in connection with so-called "Turnkey Procedures" on at least one other occasion. In BER Case 76-9, Engineer Jones was retained by a public agency to develop technical guidelines for an incinerator facility at a major government installation. Following submission, approval and payment to Jones for the technical guidelines, the public agency owner decided it wanted to proceed with the design and construction by a "turnkey" method of one entity providing both the design and construction. The owner requested Jones to participate in this approach through a joint venture arrangement with a construction contractor, or preferably, by performing the design function as a subcontractor to the construction contractor; or if he preferred, to bid the complete "turnkey" contract and subcontract the construction to a construction company. In any of these arrangements, the owner proposes to secure bids for the design and construction. In concluding that Jones may ethically participate in the enterprise through any of the design/construction procedures stated, the Board, addressing the question of conflict of interest noted, that it could find nothing in the Code that stands for the proposition that engineers may not engage in design/construct or "turnkey" procedures. The Board cited that the conflict of

interest provisions in the Code are not controlling by its terms because the owner not only has knowledge of the possibility of a conflict through a business relationship of the parties, but is in fact the moving party desiring the design/construct method.

In BER Case 76-9, the Board proceeded to note that there was no apparent basis under the facts to be concerned about the business relationship influencing the judgment or the quality of services of the engineer because he will jointly with the contractor have the duty to provide the owner with quality engineering services, which are basic to sound construction.

While there are obvious differences in the facts, in some respects, there are basic similarities between BER Case Nos. 79-6 and 98-1. In both cases, the engineers were involved in either the development of technical design guidelines or plans and specifications for a client on a specific project and later were offered the opportunity to lead the construction effort on the same project.

From the facts of this case, it is clear that Engineer A, by being involved in the design of the roof structure for the municipal utility system has become thoroughly knowledgeable about the plans, specifications, drawings, and financing of the project and will have a material and arguably unfair competitive advantage over other contractors who submit bids on the project. Also, although there is nothing in the facts to suggest this possibility, Engineer A could potentially be exposed to criticism that his firm designed a roof structure system that either specified or contained performance criteria that was coordinated with a potential proposal by Engineer A's construction contracting firm.

Finally, while not stated in the facts, there appears to be a possible implication based upon a reading of the facts that among the reasons why Engineer A may have been engaged for design services only was the fact that the laws of the jurisdiction in which the work is being performed precluded Engineer A from performing the work under a "design/build" arrangement and that Engineer A's "limited engagement" effectively permitted Engineer A to bid the work as the contractor through a de facto design/build arrangement (See Code Section III.8.a.). If the purpose of this arrangement was merely to serve as a subterfuge to allow Engineer A the opportunity to evade a legal restriction on design/build and provide Engineer A with a competitive advantage, the Board of Ethical Review would have serious concerns about this arrangement, since it is clear that such an arrangement

would undermine procedures at least arguably intended for the protection of the public.

On the other hand, the Board would not be less concerned if the laws of the jurisdiction permitted a design/build contracting arrangement. While design/build has become an accepted and established project delivery system that identifies single-point responsibility for design and construction services, and most of the ethical objections to design/build concerning the engineer's obligation to the client have been clarified, strict adherence to federal, state and local design/build procedures are critical to assure the protection of the public and the administration of fair and reasonable practices for designers and contractors. In this conclusion, the Board would note that many of the issues relating to conflicting loyalties and independent judgment addressed in the NSPE Board of Ethical Review decisions noted above can be addressed through full disclosure and the establishment of clear lines of communication and authority between and among the parties involved in the design/build process (See BER Case No. 95-1).

Moreover, engaging the services of an separate engineer, Engineer B, to administer the bidding and construction phase, will presumably establish a degree of objectivity and impartiality over the process and result in a ongoing independent review of the plans and specifications for the benefit of the client. Gaining the benefit of the design engineer's thorough knowledge and understanding of the plans and specifications as part of the construction team is an option a client should be able to consider.

Conclusion

It is ethical for Engineer A to bid as the general contractor on a project Engineer A designed under the facts presented, as long as the process followed was not a subterfuge to evade the requirements of state and local procurement, licensure laws, and disclosures or consent of all interested parties contained.

Board of Ethical Review:

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[NSPE Code of Ethics](#) An earlier version may have been used in this case.

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For a version of this case adapted for classroom use, see: [Serving as Design Engineer and General Contractor \(adapted from NSPE Case No. 98-1\)](#)

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