

project specifications that you have found to be unfair, annoying, and meaningless, as far as the work is concerned.

2. What basic qualifications do you believe a specification writer should possess?

3. What improvements would you like to see in specifications?

Some of the questions asked of owners and owner representatives were:

1. What is your greatest in-house problem in getting out a good set of specifications?

2. What are your particular problems with the project specifications when administering contracts?

3. Please list your recommendations for improving the quality of specifications.

Responses were received from 223 contractors and 622 owners and owner representatives. These results were compiled by the ASCE Committee on Specifications and made available to the profession in two ASCE reports ("Summary" 1978; "Summary" 1979).

The objectives are well presented throughout this paper. The next step is how to attain these objectives. Information presented in the aforementioned reports and in the book *Engineering Construction Specifications* (Goldbloom 1989) can be quite helpful in pursuing these objectives.

APPENDIX. REFERENCES

Goldbloom, J. (1989). *Engineering construction specifications*. Van Nostrand Reinhold, New York, NY, 177–351.

"Summary report of questionnaire on specifications (contractor returns)." (1978). *Report 14001*, ASCE Committee on Specifications, ASCE, New York, NY, 353–357.

"Summary report of questionnaire on specifications (owner and owner representative return)." (1979). *Report 14799*, ASCE Committee on Specifications, ASCE, New York, NY, 169–179.

Closure by J. T. O'Connor,⁵ F. Hugo,⁶ and E. M. Stamm⁷

The writers appreciate Mr. Goldbloom's interest and support of the published research.

With respect to Jellinger's definition of specifications, the writers feel it is fully adequate for the intended purposes. Mr. Goldbloom's comment pertaining to the inapplicability of the CSI format to highway or other engineering project specifications focuses on a debate not included in the scope of this article.

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The writers appreciate Mr. Goldbloom's brief overview of the ASCE Committee on Specifications' study in the mid-1970s and regret its omission.

SAFETY PROGRAMS AND THE CONSTRUCTION MANAGER^a

Discussion by Jimmie Hinze³ and Anne Kusaka⁴

The authors are to be complimented on addressing a variety of issues related to safety and the professional construction manager. The recommendation that construction managers should be proactive on safety is a most important one and deserves to be repeated.

We wholeheartedly support the recommendations drawn in this paper; however, we do take exception with the rationale on which the recommendations are made. As stated, the authors have based their conclusions on a few selected cases and it is on those cases alone that their findings are made. They state, "The supporting argument for the active role is developed through a review of standard contract documents and existing case law on decisions of liability for engineer/architects, owners, contractors, and construction managers." We contend that a more in-depth review of case law as it pertains to engineer/architects, and specifically construction managers, would show that little guidance is provided on the appropriate action to be taken by construction managers in the area of construction safety.

Having completed a fairly extensive review of existing case law, we find that no clear direction has been taken in the past concerning the liability of construction managers for construction safety. A brief overview of the findings of different court cases will make this quite apparent. Most of the cases that exist in case law are those in which a subcontractor's employee was injured or one in which a prime contractor's employee was injured. Because worker's compensation laws protect employers from an employee suit, other parties are invariably brought into the suit. It is common for owners and construction managers to be named in such suits.

One premise under which construction managers are deemed to be liable for construction safety is that construction managers owe a duty of care to insure job site safety. This liability may arise as a result of a statute interpretation or through contract provision interpretation. Several cases on record show that construction managers have been held responsible for construction safety. These cases include *Parsons, Brinckerhoff, Quade and Douglas, Inc. v. Johnson* (1982), *Mackey v. Campbell Construction Company* (1980), *Caldwell v. Bechtel, Inc.* (1980), *Simon v. Omaha Public Power District* (1972), *Riggins v. Bechtel Power Corp.* (1986), and *Hammond v. Bechtel, Inc.* (1980).

Another area in which construction managers become liable for safety on construction projects is through their actions. That is, rather than having

^aJune, 1991, Vol. 117, No. 2, by G. R. Smith and R. D. Roth (Paper 25924).

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