

# SAFETY PROGRAMS AND THE CONSTRUCTION MANAGER

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**ABSTRACT:** Safety and the coordination of safety programs have traditionally been the responsibility of the general contractor. The overall general contractor direction and coordination of safety programs is not possible in the multiple prime contract environment of construction management. With the construction management form of project management the owner has increased contact with the prime contractors and, therefore, greater liability for directing or coordinating safety programs. The construction manager, while not in a direct contract relationship with the contractor, acts for the owner relative to project management and assumes some professional liability for project safety management. The nature of this relationship to safety is not well understood by construction managers and indicates that information relevant to the function of the construction manager in safety programs has not been consolidated. This paper identifies how the owner's liability for safety is developed through the contract documents and court decisions relative to liability. Steps to reduce the potential liability for the owner and construction manager are identified as part of an active safety-management role.

## INTRODUCTION

The construction industry is concurrently recognized as a major economic force and one of the more hazardous industries. Within this environment, construction management (CM) has evolved into an effective mechanism for an owner to ensure control of complex construction processes by using a construction manager's construction expertise. However, the CM form of project organization commonly involves the use of multiple prime contractors. In multiple prime contracts the coordination requirements for safety on a project are often unclear or misinterpreted. The contract language may not explicitly define who is responsible for coordination and execution of project safety programs. Additionally, the construction managers may not be aware of how their actions develop liability for safety and that this liability is also conveyed to the owner. The owner may not be aware of this additional risk exposure and may not be prepared for the impact of claims generated from accidents.

An effective safety program may prevent many accidents on construction sites. Unfortunately, safety is often neglected on construction sites and rarely managed. Safety is often discussed in management meetings as a priority, while in reality safety takes a low priority to schedule and budget discussions.

## PURPOSE

The goal of this paper is to improve construction contract safety-management practices through a better understanding of the construction manager's

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defined and implied liability safety. The objectives are to encourage an active safety-management program for construction managers and to provide a list of recommended functions for construction manager in an active safety management role. 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.

## BACKGROUND

Accident costs are divided into direct and indirect costs. Direct costs of construction accidents are medical costs, premiums for compensation benefits, liability, and property losses. Indirect costs of accidents are more difficult to measure. Heinrich (1959) identified indirect costs associated with accidents as

1. Cost of lost time of injured employee.
2. Cost of work stoppage of other employees from
  - a. Curiosity
  - b. Sympathy
  - c. Providing assistance
3. Lost supervisory time.
  - a. Assisting injured employee.
  - b. Investigation of accident.
  - c. Rearranging work crews because of lost employee.
  - d. Hiring and training a new employee.
  - e. Preparing state accident reports and/or attending hearings before state officials.
4. Cost of time spent on the case by first-aid attendant and hospital department staff when not paid for by the insurance carrier.
5. Cost of damage to the machinery tools, or other property.

Although the foregoing list was developed for manufacturing, it describes many of the indirect costs of a construction project accident. Indirect costs are generally several times larger than the direct costs associated with an accident. Studies have shown that the ratio of indirect costs to the direct costs can range from 4 to 1 upward to 7 to 1. It is possible that these ratios are based on incomplete data and therefore the economic impact is underestimated (Robinson 1979).

Some statements indicate that safety requirements generally detract from personnel performance or productivity, which implies that it would reduce profitability. However, published results indicate that for each dollar invested in safety, a \$4–8 return can be expected (Barrie and Paulson 1984). Assuming these values are accurate, a properly implemented safety program should at least pay for itself. However, data to support safety program savings are not commonly documented or reported.

## Safety Management

Most accidents on construction sites are preventable through implementation of an effective safety program. Unsafe conditions and accidents are usually a sign that something is wrong in the management system. Safety

must be managed in the same manner that other aspects of a company are managed (Petersen 1979).

Although an effective safety program can prevent or reduce injuries, not all contracting organizations implement safety programs. The Occupational Safety and Health Act has charged all employers with the requirement that workplaces be free from recognized hazards that can cause death or physical harm. Implementation of this requirement has not been an overwhelming success and early in the program there was a great deal of resistance to the OSHA field-inspection procedures. The regulations do not require development of formal safety programs.

The priority of safety rises when insurance premiums are increased. These monetary losses are measurable, while the risk of increased employee exposure to injuries or death is intangible. A general impression of safety management in the construction industry is one of noncompliance. It often appears that the contracting community violates accepted procedures willfully and purposefully.

### **Safety and the Construction Manager**

Traditionally the general contractor was responsible for managing the project safety program. General contractors are, by contract, in control of the means, methods, sequences, and techniques employed at the site and have general control over the project subcontractors. Under the standard construction contractors this control includes the safety program. Construction management, however, commonly uses a multiple prime approach in which the overall coordination and supervision is controlled by the construction manager. The contract language of construction management agreements essentially holds the contractors responsible for the management of their internal safety programs and those of their subcontractors. However, these same documents do not indicate who is responsible for the overall management of the project safety program. Better definition and understanding of the contract is necessary.

Unless the owner has the capability to provide supervision, coordination, and inspection of multiple contractors, the construction manager will be expected to provide this direction and supervision. Without a general contractor on site, the construction manager is the first line of contact between the owner and contractors. In this regard, the construction manager is hard pressed to avoid some responsibility for the supervision, coordination, and inspection related to safety on a construction project.

### **ANALYSIS**

Two postulates are stated as the basic framework for developing the construction manager's liability for safety: (1) Safety is an economic as well as humanitarian concern that requires proper management control; and (2) construction managers, because of their unique contractual position, cannot avoid some degree of responsibility and, therefore, liability, for safety and the project safety program. Both points were presented in the background discussion. However, the second postulate requires further development. A review of appropriate standard forms of agreement and court decisions on safety liability are used to develop the argument for active CM involvement in the safety program.

**TABLE 1. Standard CM Agreement Comparison**

Construction manager (1)	AIA (1980) (2)	AGC (1979) (3)	NSPE (1977) (4)	CMAA (1986) (5)
Provides coordination of prime contractors	X	X	X	X
Directs and schedules the performance of all work	—	X	—	—
Not responsible for the construction means, methods, techniques, or procedures	X	X	X	X
Reviews work of trade contractors for deficiencies	X	X	X	X
Reviews and processes progress payments	X	—	—	X
Has right to stop work	—	X	—	—
May take corrective action and charge contractor, if contractor fails to maintain safety precautions required by law	—	X	—	—
Coordinates contractor safety program	X	—	—	—
Reviews contractor safety program	X	X	—	—
Provides facilities or work not readily included in separate trade contracts (safety signs, barricades, etc.)	—	X	—	—
Contractor responsible for initiating, maintaining, and supervising safety precautions and programs	X	X	X	X

### Standard Forms of Agreement

This review of the standard construction management agreement clauses emphasizes those clauses that assign responsibility to the construction manager or may imply an inherent responsibility. If the construction manager is actively involved in the project and shares some responsibility for the construction process, then it is possible the construction manager may be responsible for the associated safety effort. Table 1 summarizes the findings from the review of standard construction management agreements.

### American Institute of Architects (AIA)

The AIA documents are used for contracts in which the construction manager is an independent third party acting as an agent for the owner. The owner contracts directly with the prime contractors. Coordination responsibility is defined in section 1.2.2 of *B801 Standard Form of Agreement between Owner and Construction Manager* (AIA 1980). The provision states that the construction manager will provide the administrative, management, and related services to coordinate the work of the contractors. In section 1.2.7 it is indicated that the construction manager is not responsible for the means, methods, techniques, sequences, or procedures employed by the contractor. The portion of the B801 document that directly ties the construction manager to the safety program is section 1.2.4 (AIA 1980):

Review of the safety programs developed by each of the contractors as required by their contractor documents and coordinate the safety programs for the project.

Although none of the contract clauses call for continuous inspection of the construction effort, many indicate that a fairly active inspection program is necessary. A few of these indicate that a CM should

1. Endeavor to achieve satisfactory performance from each of the contractors.
2. Develop and implement procedures for review and processing of applications by contractors for progress payments. (Note: Site inspections are required for progress payments and, therefore, the CM would gain exposure to safety precautions during these visits.)
3. Determine, in general, that the work of each contractor is being performed in accordance with the requirements of the contract documents.
4. Record the progress of the project. Maintain a daily log containing a record of weather, contractors' work on the site, number of workers, work accomplished, problems encountered, and other relevant data as the owner may require.

The AIA (1980) document clearly places the CM in an active participant role.

### **ASSOCIATED GENERAL CONTRACTORS OF AMERICA (AGC)**

The AGC standard contract documents are also designed for independent third-party construction managers and the owner directly contracting with the contractors. The AGC has developed two documents specifically related to construction management, which are: (1) *AGC 8d Standard Form of Agreement between Owner and Construction Manager* (1979); and (2) *AGC 520 General Conditions for Trade Contractors under Construction Management Agreement* (1980). The most significant for this review is the *AGC 8d Standard Form* (1979). The construction manager's responsibility for project control during the construction phase, outlined in Section 2.2, states (*AGC 8d* 1979)

Monitor the work of the trade contractors and coordinate the work with the activities and responsibilities of the owner. Maintain a competent full time staff at the project site to coordinate and provide general direction of the work and progress of the trade contractors on the project.

Safety is addressed in Section 2.2.8 as follows:

Review of the safety programs of each of the trade contractors and make appropriate recommendations. In making such reviews, he shall not be required to make exhaustive or continuous inspections to check quality of the work, safety precautions and programs in connection with the project. The performance of such services by the construction manager shall not relieve the trade contractors of their responsibilities for performance for the work and for the safety of persons and property, and for compliance with all federal, state, and local statutes, rules, regulations, and orders applicable to the conduct of the work.

The section also indicates that the construction manager reviews the work of trade contractors for deficiencies without assuming any of the architect/engineer responsibilities for design and inspection.

**Engineer's Joint Contract Documents Committee (EJCDC) [National Society of Professional Engineers (NSPE)]**

The *NSPE/PEPP-ACEC 1910-15 Standard Forms of Agreement Between Owner and Project Manager for Professional Services* (1977) is used when the design professional and the construction manager are from the same firm. It can be modified to a third-party form by deletion of the design services portions of the document. The project manager's responsibility for safety under this agreement states (*NSPE 1977*)

The resident project staff will direct its efforts toward providing greater protection for the owner so that the completed project will conform to the contract documents, but neither project manager nor his staff shall be responsible for the means, methods, techniques or procedures of construction selected by the contractors or for safety precautions and programs incident to the work of contractors or for any failure of contractors to comply with the laws, ordinances, rules or regulations applicable to the construction work or for any failures of the contractors to perform the construction work.

This clause attempts to indemnify the construction manager from contractor negligence as well as define safety responsibility. Regarding coordination of the work, the construction manager is required to coordinate the sequence of operations and other relationships among the separate contractors and maintain liaison between them and the owner.

**Construction Management Association of America (CMAA)**

The final clauses to be reviewed are those suggested by CMAA. CMAA was formed in 1982 in an effort to provide uniformity among construction management firms. Suggested standards of practice were published in 1986. This association was established to provide some uniformity among firms offering construction management services. The owner and construction manager agreement clearly indicates the responsibilities of the construction manager during the construction phase to include the following (*CMAA 1986*).

1. Establish and implement coordination and communication procedures among the CM, owner, design professional, contractors, and other appropriate parties.
2. Maintain daily job reports, logs, files, and other necessary documents.
3. Conduct construction site meetings and overall coordination meetings with all contractors.
4. Coordinate technical inspection and testing provided by design professionals or other third parties.
5. Review and make recommendations as to disposition of progress payments.
6. Establish and implement a program to monitor the quality of the construction whose purpose shall be to assist in guarding the owner against defects and deficiency in the work of contractors.
7. Monitor and expedite the progress of the work.

Throughout the document there are various exculpatory clauses that disclaim the construction manager's responsibility for coordinating or reviewing contractor work. Safety is not addressed in the document except to indicate that the contractor is solely responsible for the safety of his personnel and operations.

Table 1 summarizes the safety responsibilities of the construction manager under standard contract for services agreements. A recurring theme in all the documents is that the contractor shall be solely responsible for the construction means, methods, techniques, sequences, procedures, and all safety precautions and programs. Both the AIA and AGC documents require more review and coordination of the contractor safety programs.

## **SAFETY LIABILITY**

The duties described in the contractor clauses require involvement in activities that expose the construction manager to increased liability for the safety of all personnel on the project site. Modifications to standard documents enable owners and construction managers to tailor their involvement in safety programs. Two approaches can be taken by construction managers with respect to project safety programs. A hands-off approach requires minimal involvement in the safety program. However, a minor role may be sufficient to determine the construction manager's liability. The other approach would require that the construction manager become actively involved in the safety program.

There are no definitive answers to the question of which approach is correct. Court decisions can provide an insight into the developing legal interpretation of this important issue. Construction management may not be new in the construction arena, but it is relatively new with respect to the development of case law. Assuming that court decisions written for design and construction professionals can be extended to construction management, several areas of liability for safety can be reviewed. Cases were evaluated for possible rules or judicial trends applicable to the construction manager's position in safety-related issues. Case citations are provided for only those cases in which the specific point is illustrated. Other supporting cases are not cited.

When examining the legal liability of the construction manager, the different roles of the construction manager must be considered. The construction manager's liability can be reviewed from the position of the owner, contractor, or architect/engineer, depending on the particular situation. As the agent for the owner, the construction manager stands in for the owner. Other times, such as during document reviews, preparation of estimates, or payment approvals, the construction manager performs duties normally associated with the general contractor or architect/engineer. The construction manager may assume the responsibilities and the liability connected with the role.

## **Possessor of Land**

The owner, as possessor of the land, must anticipate the dangers posed to persons visiting or working on the property. The owner should make reasonable attempts to remove the hazards or provide the visitor or worker with adequate warning about the hazards [Petersen v. W. T. Rawleigh Company, 144 NW 2nd 555 (1966)]. A CM, acting on behalf of the owner, would be in position to anticipate and make reasonable attempts to have hazards removed. The explicit control to have hazards removed would be established in the contractor documents.

## **Employer of Independent Contractors**

A general rule related to employers of independent contractors excludes the employer from liability for the independent contractor's negligence. There are numerous exceptions to this rule. The most important exception, with respect to construction management, occurs when the owner maintains sufficient control over the project. Sufficient control may be established by retaining the rights to administer, coordinate, and inspect the construction effort in the contract. Another aspect of this liability, relative to control, is the capability to take an action that may eliminate a hazardous situation. Certain parties on a construction project are in a better position to take appropriate precautions or actions to prevent accidents.

Owners and their agents must be careful that they do not do anything that may be construed as directly supervising the contractor's employees. This is particularly true during site visits and inspections. However, degree of control is not always related to the degree of direct supervision. The accident in *Disalvatore v. United States* [456 F. Supp. 1079 (1978)] involved a construction worker who was killed when he fell through an exposed elevator shaft. It was determined that the accident occurred as a result of a government employee failing to resolve a dispute between two independent contractors, which left the shaft unprotected. The government employee did not directly supervise employees but did retain control of the work when the dispute arose and no decision on responsibility was made.

## **Legislated Imposition of Liability**

Legislated liability exists in some states in which rules have been adopted to place the responsibility for safety on the owner. These require the employer to recognize the potential for dangerous situations.

A peculiar risk within "peculiar risk of harm" doctrine exists where employer should recognize that a risk is likely to arise as a result of a method of work which employer knows that contractor will adopt; and peculiar risk may also arise out of contemplated and unsafe method of work adopted by the independent contractor [*Mackey v. Campbell Construction Company*, 162 Cal Rptr 64 (1980)].

## **Duty of Care**

The "duty of care" that should be exercised is not a matter of law but is determined by a jury based on the facts. It would appear that in deciding the liability and responsibility of parties for safety, it is less a matter of law and more a matter of the facts, circumstances, and relationships. Actions of individuals will be scrutinized in terms of how reasonable and appropriate they are for a given situation. In *Signs v. Detroit Edison Company* [287 NW 2d 292 (1979)], the court gave the following instructions to the jury concerning "negligence" and "ordinary care."

When I use the words negligence with respect to defendant's conduct, I mean the failure to do something which a reasonable person would do under the circumstances which you find existed in this case. It is for you to decide what a reasonably careful person would do or not do under such circumstances. When I use the words ordinary care, I mean the care that a reasonably careful person would use under the



circumstances which you find existed in this case. The law does not say what a reasonably careful person would or would not do under such circumstances. That is for you to decide.

### **Construction Manager Liability**

Most cases against construction managers are filed on the theory of negligence. This allows an injured worker to seek damages against third parties "not in the same employ." The authority to stop work on the project and knowledge of the danger causing situation are keys to construction manager liability.

The courts often treat construction managers as if they were construction contractors. One case concluded that the construction manager, as the owner's representative, was to coordinate all aspects of the project including the establishment and implementation of a comprehensive safety program. Since courts are not bound by any particular definition of a construction manager, they concentrate on the contractual requirements and actions of the parties to determine the extent of liability of the construction manager. In *Corollo v. Tishman Construction and Research Company* [440 NYS2d 437 (1981)] the court found, through the contract documents, that the "construction manager" was substantially in charge of, and in supervisory control of, the work site. The construction manager's contractual obligation was reported as follows.

To provide design consultation on the project; to monitor project costs; to schedule the project efficiently for both design development and construction phases; and to review the design of the project.

### **Indemnity**

To avoid legal liability for injury to persons or property, many standard contracts include indemnity clauses that basically "hold harmless" one or more parties to the contracting agreement. For example, the contractor may indemnify and hold harmless the owner, architect, and construction manager from and against all claims, losses, and expenses arising from performance of the work caused by any negligent act or omission of the contractor, subcontractor, or anyone directly or indirectly employed by any of them.

In another case, the court found the contractor could not indemnify the construction manager against any claims brought by the contractor's own employee. However, because of the effect of the workmen's compensation act, the construction manager could not be held harmless since this would limit the employee's recovery to only that provided by workmen's compensation [Riggins v. Bechtel, 722 P2d 819 (1986)].

The degree of contribution to the cause of an injury can also affect the indemnity.

The rule recognized in Minnesota is that one may have indemnity to the full extent of a liability if the other party's negligence is the primary cause of injury to a third party, and if the other party owes a duty to the one seeking indemnity. The rule does not apply if negligence is concurrent. In this case the issue of contribution comes into play [Thill v. Modern Erecting Company, 136 NW2d 677 (1965)].

In general the courts will try to honor the indemnification terms set out in the agreement. In addition to express agreements, parties may impliedly agree to indemnify each other because of their obligation to perform their duties in a professional or workmanlike manner. Although indemnification clauses have been overruled in some circumstances, they can provide some limited liability protection.

## **RECOMMENDATIONS**

The best way for a construction manager to avoid unanticipated liability is to become an active participant in the safety program. First, by becoming more active in the safety effort, the construction manager improves the overall quality and effectiveness of the program, thereby reducing the accident rate and exposure to third-party lawsuits. Second, if an accident does occur and the construction managers are sued, they have a better chance of proving reasonable or ordinary care in the execution of their responsibilities, thereby reducing the possibility of negligence. The following summarizes the factor affecting CM liability for safety.

### **Factors Increasing CM Liability**

1. CM fails to exercise reasonable care in performance of duties.
2. CM is in the best position to correct safety deficiencies.
3. CM is contractually responsible for safety program review, coordination, and/or development.
4. CM retains supervisory control over the work (inspection, administration, and coordination).
5. The CM acts as a general contractor.
6. The CM had or should have had knowledge of a safety deficiency.
7. The CM works in a state with unconditional liability laws.

### **Factors Decreasing CM Liability**

1. CM makes every reasonable effort to prevent and correct safety deficiencies.
2. A safety program is in place on the job site that decreases the possibilities of accidents.
3. CM contract clearly highlights safety responsibilities of all parties to the construction effort.
4. CM contract includes an indemnification clause that indemnifies the CM from negligent acts of others.

The CM, as the owner's representative, will provide the overall coordination and direction of the safety program. The contractor should continue to supervise and control the safety program that governs his own areas of responsibility. The following provides guidance for the contractor's assistance in this process.

1. Review plans and specifications to ensure that applicable safety provisions have been included.
2. Investigate work-safety record of potential contractors.

3. Review and approve the contractor's safety plans and coordinate the overall safety program.
4. Resolve safety problems in a timely fashion and when the problem includes more than one contractor.
5. Provide regular safety training programs.
6. Organize and chair the safety and health committee.
7. Organize and direct periodic safety meetings with representatives of each contractor on site.
8. Conduct periodic inspections of the job site to identify deficiencies. Initiate corrective actions.
9. Act as the site liaison to all outside agencies.
10. Conduct a review of accident investigations performed by contractors.
11. Investigate complaints of safety violations.
12. Maintain availability of pertinent documents related to safety for contractor personnel access and use.
13. Provide for safety training of contractor personnel.

And the following are requirements for the contractor.

1. Comply with the CM safety program and policies, including attendance at all safety meetings.
2. Develop and submit a safety program for CM review.
3. Appoint a qualified representative with full authority to act on all matters relating to accident prevention.
4. Provide personal protective equipment to all employees and enforce the use of the equipment.
5. Provide safety indoctrination to all new employees.
6. Provide periodic training to all employees.
7. Promptly investigate all accidents and property damage.
8. Plan work to protect against personal injury.
9. Schedule safety inspections and initiate corrective actions.
10. Investigate employee complaints and suggestions for safety improvements.
11. Maintain copies of appropriated publications.
12. Cooperate with other contractors on overall job-site safety programs.

Based on legal precedence it would seem prudent for the CM to shield against liability, not through the use of exculpatory language within the contract, but by ensuring that an adequate safety program is operating on the construction site.

## CONCLUSION

Construction managers (CM) cannot shield themselves from liability for safety. The standard contract documents indicate that the construction manager will not be able to take a hands-off approach to safety management. Cases involving the liability of the CM for safety clearly support the need for an active role in management of safety.

An active role in safety management can be achieved when safety program management is provided as a standard management service to the owner. The economic incentives of a well-managed safety program should be em-

phasized in discussions with the owner. The CM should act as the decision maker to resolve disputes between contractors on safety-related issues. In addition, the CM should be prepared to conduct periodic safety inspections and direct safety meetings. Developing the safety program and policies for contract document requirements should be a responsibility of the construction management team during the design phase.

The contract documents should clearly indicate special safety provisions and identify the authority of personnel relative to safety. In addition, reporting requirements, inspection procedures, enforcement provisions, and safety meeting requirements should be highlighted. Responsibilities of other parties in the contract should be listed as well. By specifically indicating the responsibilities in the contract there is greater assurance that the requirements will be recognized and enforced in the event of judicial proceedings. Indemnity clauses protecting the CM and owner from damage claims that result from the contractor's negligence should be included in the standard forms of agreement. These should not contain exculpatory language to cover poorly written specifications or attempt to limit CM exposure to liability. Clearly written indemnity clauses, in addition to active participation in project safety, should significantly reduce the CM's exposure to safety liability. Effective safety program management should be considered as important and necessary for successful project completion as scheduling, estimating, and cost control.

## APPENDIX. REFERENCES

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