CONSTRUCTION LAW HANDBOOK

VOLUME 1

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ASPEN LAW & BUSINESS
A Division of Aspen Publishers, Inc.
Gaithersburg New York
CHAPTER 2
VISIONS FOR THE NEXT MILLENNIUM

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Peter Drucker says that every 100 years or so in human history, a dramatic transformation occurs. In other words, society transforms itself in new and dramatic ways. The glacial processes of evolution fast-forward to new revolutionary structures. The construction industry and that segment of the legal profession that serves the industry is now in that fast-forward process of transformation. Such an era is not for those who yearn for the past; nor is it for the faint of heart. Rather, the next millennium beckons to those who can take what is the best of the past, creatively recombine the traditional with the innovative in effective, pragmatic, and economical ways, and thereby reshape the structures and processes of the construction industry and the legal profession.

This is a great era in which to be a lawyer. The future will, indeed, be “larger than the past.”

There are several major new forces driving the construction industry into the twenty-first century. These new forces are advances in technology; industry realignment; globalization of the economy; privatization; a diminishing skilled workforce; a transformation of dispute resolution processes; and a profession in search of itself.

[A] Advances in Technology

There are a number of technology developments that clearly will affect the construction industry in the near future. Designers are leading the way. Object-orientated databases are (or soon will be) a standard design deliverable. Concurrent manufacturing is driven increasingly by design, thus altering traditional relationships between parties to the construction process. Smart tools are being developed that allow workers to perform complex tasks more readily. Sensors are used for inspection. Composite, high-strength materials are being tested. Global positioning technology is used to assist in layout. There are increasing uses of modularized building systems, particularly in the mechanical trades.

However, no technology offers more promise than does the explosion of information and telecommunications technology. Computers, of course, have been used on construction projects for some time. Until recently, they have been used primarily to perform routine functions faster and
better. The power of computing has now developed to a point that allows things to be done differently than ever before.

Construction is an inherently complex business. Even casual observers of the construction process are struck by the enormous amount of information required to construct a project. Hundreds, even thousands, of detailed drawings are required. Hundreds of thousands of technical specifications, requests for information, and other documents are needed. Complex calculations are used to produce the design. For years, this complexity dictated a labor-intensive, highly redundant methodology for doing the work. Projects were fragmented and broken into many parts. Different entities undertook different parts of a project, both for design and construction. Therefore, the construction industry became exceptionally fragmented. On a project of even average complexity, there may have been from 5 to 15 firms involved in design. From 40 to 100 companies may have been engaged in construction. Many more companies supplied materials, professional services, and other elements necessary for completion of the project. It was effectively impossible to convey the sum of knowledge necessary to construct a facility in a set of plans and specifications. Stated another way, the information technology traditionally used for construction is inadequate.

Now, however, there is a major push toward integration of design and construction services. This is not a matter of doing things faster: it is a matter of doing things differently. For the first time, technological tools enable simultaneous and virtually instantaneous sharing of enormous quantities of data relating to the construction of facilities. Many design and construction processes can be done at the same time. Indeed, this is already being done in small ways. Studies at the Massachusetts Institute of Technology have demonstrated how design teams from around the world can be electronically linked with data and video transmission capabilities to produce complete designs from locations that are spread literally around the globe. A 1996 study by VTT, the Technical Research Center in Finland, argues in favor of a reorganization of the building process and suggests a theoretical model for reducing the cost and time of construction by 30%. In its 1995 report, the Construction Industry Institute found that improved use of information technology could result in project cost savings of 4% to 33%. Research projects at Stanford, Purdue, New Mexico, and the University of California at Berkeley are currently under way that seek to apply modern information technology to the task of reducing the cost and time of construction.

These new ways of doing things will alter basic relationships within the industry. Of necessity, there will be basic restructuring of how the

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industry is organized. Architectural firms, engineering firms, and construction contractors will need to change in order to remain competitive. The simple notion that design and construction are separate functions is, in political parlance, no longer operative.

[B] Industry Realignment

Most certainly, the coming years will bring more “strategic alliances.” Firms will combine and collaborate in ways not easily imagined. The industry started a revolution with partnering a few years ago. Originally conceived as a means for reducing debilitating disputes, partnering will continue to evolve, leading to relationship-based collaboration on complex projects. Firms will combine, based on complementary competencies, to produce required services for their customers.

One trend sure to drive industry realignment is the exponential advance in telecommunications. Work will be transformed from a place to go into a task performed. The implications for construction are substantial. The industry has always struggled with how to deliver its human resources to projects, particularly with the immobility brought by the increase in dual-income families. There are new ways of delivering human resources to projects—through fax, video, and interactive computer communications.

A second, even more powerful trend driving realignment is the trend toward trust-centered relationships. There is clearly a hunger for more trust in construction relationships. In various ways, much of what has historically been done in the construction process was rooted in mistrust. A majority of the terms of a typical construction contract do not define the work to be done but rather seek to allocate risk to other parties, often in overreaching, unfair ways. This is derived from a fundamental lack of trust that people will act fairly, absent a contractual obligation to do so. Much of the waste and inefficiency attendant to construction is a product of mistrust.

The industry has tired of mistrust. It is seeking ways to restore trust to the construction process. This is driven by a desire to make the business more enjoyable and by simple pragmatism. Research conducted by the Construction Industry Institute and various academic practitioners, including Dr. William Badger at Arizona State University, suggest what industry professionals intuitively have always known: the greater the trust, the lower the cost of the project.

The search for increased trust drives industry realignment by encouraging long-term relationships in which success is defined over time rather than by a single transaction. Partnering, strategic alliances, and even acquisitions often are motivated, at least in part, by a desire to create a more trusting environment for the construction process.

Some may think these trends only affect large businesses. In fact, the reverse is true. John Naisbitt correctly argues that ever larger informa-
tion and economic systems make the smaller players more important. Technological advances allow even the smallest firms the opportunity to compete on a relatively level playing field with much larger firms. Innovative competitors of any size can sell knowledge to a willing marketplace, almost without geographic limitation. Knowledge will become a key to construction commerce, every much as important as labor, capital, and equipment. This promises great opportunity for large and small construction firms but will also add significant risk. Never before have firms faced a comparable prospect of rapid, dramatic competitive change. Small, fast innovators may cripple or even kill the Jurassic-era players.

[C] Globalization of the Economy

It is almost trite to note that the world economy is becoming globalized and that this is affecting the construction industry. However, people have different views on the subject. The Construction Industry Institute found that the United States secured a declining share of the international construction market. From 1966 through 1971, the CII estimates that the United States controlled 69% of the global construction industry. This percentage declined to approximately 36% by 1985 and has increased only slightly over the past ten years. These figures are correct, but the conclusions drawn can be misleading.

Since World War II, the United States has dominated world construction. This occurred primarily because the United States was the only developed country in the world relatively unscathed by World War II. The economies of Western Europe, Soviet Russia, and Japan were quite literally destroyed. Since the implementation of the Marshall Plan, the United States helped rebuild the world and the capacity of the world construction market. Thus, it should come as no surprise that as these efforts prove successful, the dominant position of the United States would decline.

The real surprise is that the United States still controls 36% of the international construction market. From the period 1986 to 1994, the Engineering News Record’s top 400 companies saw international contracts grow from $15 billion to $90 billion. Perhaps, the even bigger news is that the share of the U.S. construction market enjoyed by foreign firms, while still small, grew 375% during the same period. Foreign firms can compete in this country, and U.S. firms can compete elsewhere. On balance, this vastly favors the U.S. construction industry. Due in part to the collapse of command economies on the former Soviet Union, Eastern Europe, and elsewhere, there has been an unprecedented boom in devel-

\* Yates et al., Construction Indus. Inst., Anatomy of Construction Industry Competi-
opining countries throughout the world. Asian countries (particularly China) will, notwithstanding recent problems, enjoy possibly the most rapid expansion in history. With sound foreign policy leadership, the North American Free Trade Agreement could become the America Free Trade Agreement, as other Latin American countries reach similar accords. The United States should encourage economically progressive countries like Chile to join NAFTA and avoid the threat of economic balkanization, a consequence of careless foreign policy.

Developing countries represent substantial new markets in areas in which local industry capacity may be inadequate to meet demand. The Construction Industry Institute estimates that by the year 2000, fully 80% of the world construction market will be in developing countries. For all of the concern about productivity, the United States construction industry remains among the most productive in the world. It is fully 35% more productive than the much celebrated Japanese construction industry. It is more productive than those of the United Kingdom and France, and, in fact, more productive than every nation with the possible exception of Germany. United States firms have particular experience and facilities that are much in demand elsewhere, including water and wastewater treatment plants, power plants, health care facilities, and advance technology complexes. There is no question that the globalization of the construction economy is already upon us and that it favors U.S. firms.

[D] Privatization

Few developments are more likely than the trend toward "privatization," a loosely applied term that generally refers to the private operation of traditionally public activities. Examples include the construction and operation of roads, prisons, wastewater treatment facilities, and utilities.

The United States infrastructure is in a state of serious decay. The net public investment in infrastructure, as a percentage of gross domestic product (GDP), declined from a high of 1.4% in the late 1960s to a low of 0.4% through much of the 1980s. Estimates of necessary public investment range as high as $3 trillion, just to maintain 1983 levels of service. Obviously, this level of spending is not likely. Furthermore, notions about the role government should play in providing vital services are changing. The role of government is shifting from a provider to a facilitator of public services.

The strategic use of privatization has been employed with dramatic success elsewhere in the world. The Philippines, Malaysia, Brazil, Hungary, and other developing countries have skillfully attracted foreign investment through use of privatization. Mexico used privatization to transform its staggering budget deficit (13% of GDP) to a budget surplus in

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*Yates et al., Construction Indus. Inst., Anatomy of Construction Industry Competition (1991).*
less than six years. Poor monetary policy and a reluctance to forcefully
attack institutional weakness should not obscure the economic accomplish-
ments of Mexico over the past eight years. The opportunity for privatization
in the United States is substantial. Studies by the Reason Foundation, a
Los Angeles–based public policy think tank, estimate there are publicly
owned facilities valued in excess of $100 billion that are candidates for
privatization.\textsuperscript{10} Private development of roads and highways is becoming
more common, and the United States Council of Mayors has focused its
attention on public-private partnerships as a means of addressing pressing
demands for infrastructure improvements.

Nevertheless, privatization is not a panacea. While privatization can
certainly increase private equity investment in infrastructure, it can also
create substantial opportunities for the construction industry. However,
privatization does not truly create new wealth or value; it simply transfers
it. Nonetheless, construction companies need to significantly expand the
services they provide to meet the coming demand for privatized projects.
They must combine feasibility planning, design, and financial services
with traditional construction services in order to compete in growing future
markets. The concurrent opportunities for lawyers should be obvious.

\textbf{[E] Need for Training}

The labor needs of the construction industry and trends in workforce
composition are on a collision course. No one seriously argues the proposi-
tion that the workforce of the future must be more highly skilled, better
educated, and continuously trained. Rapid technological change in a more
complex work environment ensures this.

What is happening to the American workforce? Nothing very positive
for our industry. By the year 2000, according to a report from the Hudson
Institute, there will be 12,000,000 fewer entrants into the workforce.\textsuperscript{11} The
needs of the construction industry are growing. Historically, construc-
tion has employed about 5% of the U.S. workforce. By the year 2000,
this percentage is estimated to grow to 5.8%. Researchers, including a
study by the CII, predict the industry will need to attract 200,000 new
workers each year to meet anticipated demand.\textsuperscript{12} This will not be easy.
The industry has done a terrible job at promoting construction as a career
choice for young people. Survey after survey reveals that construction is
perceived as a dirty, dangerous occupation, lacking in prestigious and
long-term opportunity.

\begin{itemize}
\item \textsuperscript{11} Hudson Inst., U.S. Dep't of Labor, Work Force 2000: Work and Workers for the
\item \textsuperscript{12} Yates et al., Construction Indus. Inst., Anatomy of Construction Industry Competi-
\end{itemize}
An even greater challenge will be to train the workforce to meet the future. Historically, the industry has relied on the public school system and trade unions to train its workforce. For different reasons, neither will be adequate in the future. The National Assessment of Educational Progress reports that only 27% of all new entrants into the workforce will be adequately trained to meet the skilled trades level.\(^{13}\) The literacy level is the lowest it has been in forty years. Reportedly, more than 90,000,000 Americans cannot read at a ninth-grade level. Deductive reasoning skills have slipped more than 40% over the last ten years.

The situation with trade unions is not much better. Unions simply do not have the resources they once did to apply to craft worker training. This will not likely change. Only 25% of the construction workforce is unionized. By themselves, unions will not be able to train the construction workforce of the future.

These problems are not new, they are just unaddressed. There is a compelling need for the construction industry to take forceful steps to provide comprehensive training and education for its own workforce. This requires a fundamental change in thinking. By any measure, the construction industry has lagged behind almost all others in its per capita investment in its workers. The vision of the construction industry for the future should be to:

1. Provide comprehensive skills and educational training programs for the workforce
2. Be active, supportive partners with the educational systems (particularly vocational education) to improve the quality of new entrants to the construction industry
3. Promote construction as a career, not just as a job
4. Offer benefits commensurate with the demands of the industry
5. Reinvent the historic relationships between contractors and organized labor to focus more on training.

The training needs of the industry are not simply limited to the field workforce. The evidence suggests that while labor productivity has declined, the management of labor is also seriously deficient. The industry's professional managers are ill-suited for the future. For example, in 1994, only 12% of the baccalaureate degrees awarded in the United States were engineering degrees.\(^{14}\) A significant number of these (an even higher proportion of graduate degrees) went to foreign nationals, many of whom will not remain in the country. A vastly disproportionate amount of the construction research and development being performed at American universities is being funded for foreign construction and engineering companies. It is a tragic irony that the United States has built the world's finest


\(^{14}\) U.S. Department of Education.
university system and fails to take advantage of it for the benefit of our domestic business enterprises.

The benefits of a new approach to workforce training are enormous. It is estimated that 50% of a construction worker’s time is spent unproductively. Consider the benefits of improving this percentage. There is no better or surer way to improve productivity and profitability of the construction industry than to develop a coherent plan for addressing the challenge of training the workforce of the future.

[F] Dispute Resolution Processes

Today, particularly in the United States, we see ADR techniques, most notably arbitration, evolving into a process similar to litigation, while litigation is becoming more like arbitration. This is mainly as a result of the following factors:

1. There is an increasing involvement of lawyers in ADR, resulting in its procedures being influenced by those familiar with the litigation process; and
2. Continuing pressures exerted upon the public courts by public reform groups to curb litigation through the adoption of various ADR procedures.

For example, the American Stock Exchange Constitution and Arbitration Rules provide for exchanges of litigation-like pleadings, consolidation of claims and parties, mandatory discovery, rules of evidence, and reasoned awards. On the other hand, the Superior Court of the state of Delaware recently adopted a summary nonjury litigation procedure providing for extremely limited discovery, the extensive use of affidavit testimony, and accelerated trial times.

Thus, the question arises as to whether, and on what terms, will ADR and litigation meet, in terms of evolving effective dispute resolution procedures for complex construction in the year 2000 and beyond?

Dispute resolution has become the subject of literally thousands of experiments by public and private institutions, professional associations, private corporations, governmental entities, courts, and individual partners to business contracts. As a result, certain hybrid procedures are emerging that appear to be better suited to serve the interests of all parties to major construction projects and offer to be the pattern for procedure in the new millennium. These new procedures and developing patterns are presented in more detail infra § 2.02.

[G] A Profession in Search of Itself

Perhaps it is because of a reduced demand for legal services. Perhaps it is a reaction to complaints from the construction industry that lawyers are too contentious and the legal process too expensive. Perhaps it is because clients are turning to the consulting and accounting professions
for advice in striking their agreements and resolving disputes. Or, it could be, perhaps, that a new millennium is approaching. Whatever the cause, the fact is that some of the best minds in the construction bar are looking for new roles for lawyers to play. Basically, they are seeking to reinvent the profession in the face of a declining market, increased competition, and widespread challenges to our professional values.

During the mid-'80s, when the ADR revolution was at its peak, construction lawyers began to seize the initiative and declare ourselves enthusiastically supportive of mediation, DRBs, mini-trials, and various other alternative methods to arbitration and litigation. Our clients, however, were only mildly impressed. In the late '80s and early '90s, as partnering became the rage, many of us declared, breathlessly, that we were reformed and recovering lawyers and pleaded to have a seat at the partnering table. Clients, were, for the most part, unpersuaded.

The most recent efforts to find and redefine ourselves as a profession include such creative concepts as the “Project Counsel,” the notion being that outside counsel would be engaged to facilitate the overall process of project delivery, and not to exclusively, or even primarily, represent the interests of any particular participant, such as the owner, design professional, or contractor. The core idea of a Project Counsel is that the attorney would eschew advocacy for a more neutral advisory and facilitative role.15 Another innovation is that the key project participants would hire outside counsel, all of whom would agree mutually to a flat or fixed fee for services rendered during the duration of the project; however, a condition subsequent to this arrangement is that if a dispute developed that could not be resolved short of litigation or arbitration, all fees from each counsel would be refunded to the clients.

The underlying assumption of these quite creative and innovative professional reforms is that our clients do not want advocates; rather, they want their attorneys to take a more neutral, project-oriented role—looking out for the “good of the whole” rather than the interests of individual parties.

Although no lawyer or any other person has an absolute grip on “the right way,” the future will likely demonstrate that clients will not want their lawyers to abandon the essential attitudes, tenets, and skills of advocacy. Rather, what clients will continue to require is that their lawyers be knowledgeable, skilled, experienced, and cost effective in the use of all available substantive and procedural tools—these to be combined with our best energies and creative talents to achieve the best results reasonably possible under the existing circumstances. In most cases, what is in the best interests of the client will be in the best interests of the project team, and the success of the project will follow.

15 Leading proponents of the “Project Counsel” approach are Christopher H. Noble, Esq., of Boston, Massachusetts, and Richard D. Conner, Esq., of Greensboro, North Carolina.
What we, as a legal profession, will have to learn to live with is a little paradoxical behavior on the part of our clients. While they may say that they want a neutral and “project-oriented” outside counsel, at the end of the day, when the transactional or dispute-related issues are on the table, our client will want to look us squarely in the eye and ask for our dead-level best call as to what is in their best interests—*not* what is best for the other parties or the amorphous “project.”

This is not to say that completing the project on time, within budget, and with no disputes is not in the best interests of all the parties as well as our clients. Most of the time, the universe of interests will be concurrent—at least on the major objectives. However, once in a while, our client’s interests, needs, and requirements will conflict with those of the other participants; and, if so, the client will want complete assurance that our advice is competent, ethical, and given with complete fidelity and loyalty to the client alone.

To be an effective advocate is, also, to be knowledgeable and experienced in, and willing to use, the entire universe of ADR techniques, whenever they are appropriate, and after full and complete disclosure of all options and their consequences. Nevertheless, competency in advocacy also requires that we be prepared to take off the gloves and go to the litigation mat on occasion. Unilateral disarmament is always dangerous, both for lawyers as well as nations.

So, perhaps what our clients are really trying to tell us is that they want a lawyer who is at once a counselor, confidant, and conciliator, but always an advocate, and, when necessary, a commando. Thus, although it is good that we continue to explore alternatives for delivery of legal services, we should not easily let go of what is most vital in our tradition. As T.S. Eliot put it:

> We shall not cease from exploration
> And the end of all our exploring
> Will be to arrive where we started
> And know the place for the first time.

§ 2.02 A PROPOSED PARADIGM FOR RESOLUTION OF COMPLEX CONSTRUCTION DISPUTES

This section considers the development of ADR processes as applied to construction industry disputes and proposes new paradigms or “visions” of how these ADR processes will evolve to meet the needs of the industry in the new millennium.

[A] Pre-arbitration Procedures: Phased Dispute Resolution

[1] Issues for Consideration

In recent years, the “evolution” of certain ADR procedures has developed rapidly due to the adoption by the business world, particularly
the construction industry, of mediation, mini-trials, and Dispute Review Boards.

The success of early mediation and mini-trials was as a result of the principle that the earlier the parties to a dispute are forced to evaluate their positions in the light of opposing arguments, the earlier the chances for settlement or resolution. This has been recognized by a number of studies of court procedures:

Our [court] system permits rudimentary pleadings to start an action. It leaves to discovery the development of evidence in support of each side's claim in order to permit each side to put forth its best case at trial. In the discovery process, the parties, often for the first time, learn the strengths and weaknesses of their cases. There comes a point in the course of discovery when the parties have learned enough about their factual and legal strengths and weaknesses to assess their case intelligently, but perhaps, not enough to try the case most effectively.

Settlement becomes practical when the parties understand their cases. . . Settlement is also aided by requiring the parties to focus on their cases. This often happens only with the pressure of an imminent trial. Thus, it is not unusual for settlements to occur as late as the eve or the midst of trial.

Because the great majority of cases are settled [94.6%]. an opportunity for expediting resolution of civil cases and reducing discovery exists in moving up the point at which parties understand their cases and must focus on their merits. This can be done in appropriate cases by formalizing a restricted discovery process to reach that point quickly, and then imposing a settlement procedure to force serious consideration of settlement. If that process falls, the case can proceed to a full trial on the merits after full discovery.¹⁶

ADR should be introduced at the early stage of contract negotiations. It is at this time that the parties first identify their differing interests, allocate their respective risks, and are in a position to anticipate the potential disputes that may arise between the parties so as to provide for their efficient and economical resolution. A prime cause of disputes is lack of knowledge. The more facts that are made available, the more discernible the solution to the problem.

A contract may require that the parties prepare, maintain, and preserve certain categories of documents, records, and other sources of information with respect to the subject of agreement—e.g., tender documents,

accounting records, correspondence, site meeting minutes, logs, diaries, weather conditions, laboratory test reports, etc. More importantly, the contract can require that the parties exchange certain categories of documents in informal discovery as a condition precedent to proceeding with a claim. Clearly, it will be much easier and far more economical for the parties to exchange documents and information at this early stage of dispute resolution rather than under the formal rules of discovery in the context of a litigation or arbitration.

This concept of contractually required informal negotiation and information document exchange procedures is beginning to be accepted and incorporated into standard form agreements such as the American Institute of Architects, AIA Document A-312, Performance Bond (Dec. 1984 ed.). There is no apparent reason why such consensual provisions in a contract will not be enforced. For example, in a case of first instance, the United States District Court for the Eastern District of New York enforced an agreement between two manufacturers to use a similar ADR procedural device, holding that the dispute resolution clause was, in effect, an enforceable agreement to arbitrate under the Federal Arbitration Act or, alternatively, was specifically enforceable because the plaintiff did not have an adequate remedy at law. In any event, more and more businesses are beginning to develop and to incorporate informal dispute resolution clauses into their contracts, recognizing that they are practicable and workable as a first-stage form of ADR.

Following an informal exchange of evidence, the next "phase" or opportunity for ADR may be referral to mediation, a mini-trial, or to a Dispute Review Board. There are literally hundreds of definitions or descriptions of mediation; however, rights-based mediation is most familiar to the construction lawyer. The goal is to settle the dispute with attention to the identified legal rights of the parties. Rights-based mediation is considered to be an extremely effective method of solving complex construction cases, in relatively short periods of time, and at lower costs than would be the case with litigation or arbitration. It differs from conventional mediation in the following respects:

Dispute resolution by rights-based mediation permits the parties to make informed business decisions based on an independent and impartial analysis of the facts. Because disputants must have a thorough understanding of the facts and the underlying history of the case, they need an impartial, confidential assessment of the probable outcome and possible future costs (should they go to arbitration). With that information in hand, the parties are able to make rational choices that allow the mediation to

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be successfully concluded. The settlement rate for fact-based mediation is approximately 90 per cent.\textsuperscript{15}

Even if the mediation fails to result in a settlement, the mediation process forces the parties, at an early stage, to analyze and test their respective positions before adversaries and a neutral party. As a result, weak contentions can be abandoned and strong contentions may be sharpened.

Another significant benefit of mediation is that it can occur during the currency of the project while the facts, documents, and witnesses are readily available to the parties. This is also the central idea behind Dispute Review Boards.

The concept and use of Dispute Review Boards (DRBs) for resolution of contract claims is not new to the American construction industry. The first well-known use of a DRB was in 1975, on the second Eisenhower tunnel in Colorado. Since then, several major projects have successfully used DRBs.\textsuperscript{20} A DRB consisting of three neutral parties, usually design professionals and contractors, is typically named in the contract. They meet for the first time at the pre-construction meeting, and continue to meet during the course of the job, usually every two to three months. These meetings usually coincide with completion of critical stages of the job or at milestones considered likely to generate claims. These frequent meetings generally ensure that the DRB will have maximum and up-to-date information about the project. DRBs stand ready to deal with disputes as soon as they arise, when issues are more manageable and the parties are open to settlement. Disputes are typically submitted to the DRB by correspondence, after initial negotiation has failed to resolve the issue.

Presentations before the DRBs are informal, consisting of written and oral presentations by all parties, rebuttal by each adversary party, followed by questions from the DRB. The DRB then makes a recommendation for resolution of the issues based on entitlement, \textit{i.e.} interpretation of the contract documents and applicable law, rather than a projection of a potential award by arbitrators or courts. Generally, most disputes are resolved, and the job moves forward. Essentially, then, the DRB format is a variation of the mediation process, which requires the parties to shape their case and analyze and test their contentions before adversaries and the neutral parties at an early stage of the dispute resolution process.

Another variation of the mediation process is the mini-trial. As with mediation, there are many variations of mini-trial procedures; however, the

\textsuperscript{15} Id. at 7.

American Bar Association. Standing Committee on Dispute Resolution, describes mini-trials as follows:

A private, consensual proceeding where counsel for each party to a dispute makes a truncated presentation of his or her best case before the top official with settlement authority for each side and, usually, also, a neutral third-party adviser. At the conclusion of this exchange (which usually lasts a day or two), the principals attempt to settle the underlying dispute. If they are unable to do so, the adviser renders a non-binding opinion as to the probable litigated resolution of specific legal, factual and evidentiary issues as well as the probable overall court outcome of the dispute. Armed with this additional data, the disputants enter into further confidential settlement negotiations in an attempt to reach a mutually acceptable agreement.  

In order to make an effective presentation of a claim or defense, each party must have a relatively thorough understanding, not only of its own contentions but also of the contentions of the other parties as well. As a practical matter, this means that there must be a reasonable opportunity for limited discovery by each party before participating in a mini-trial. Accordingly, most mini-trial procedures recommend or make some provision, usually on a voluntary basis, for limited discovery in advance of the mini-trial presentation.  

The pre-arbitration concepts described above have been developed in various ways, with a view toward the early, efficient, and fair resolution of complex construction disputes. One of the most sophisticated examples of a phased dispute resolution format is that developed by the Construction Dispute Resolution Forum (CDRF) in 1988. Essentially, the parties to a contract that incorporates the CDRF procedures agree to submit disputes involving $25,000 or less for informal mediation, and disputes involving $25,000 to $100,000 for a mini-trial. If the disputes are not resolved at the mediation or mini-trial stage, they would be presented for arbitration pursuant to specified arbitration procedures. Disputes involving $100,000 or more could voluntarily be submitted for mediation and/or a mini-trial but would be submitted for arbitration if not resolved by the former procedures. The philosophy underlying phased procedures is that construction disputes should be resolved as soon as possible and with the least cost. The value of phased procedures is that they facilitate movement from

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1 Standing Comm. on Dispute Resolution. American Bar Ass'n. Alternative Dispute Resolution. An ADR Primer.
informal mediation to the more formal mini-trial, then to arbitration, without the need for additional agreements at each stage.


Phased pre-arbitration dispute resolution procedures should be expressly incorporated into construction contracts, providing for the following progression with respect to all disputes arising under the construction contract.

- The parties should be bound to exchange all relevant documents and information pertaining to the claim or defense as a condition to proceeding further with the dispute; thereafter, the parties should be bound to meet informally and attempt to negotiate a resolution of the dispute.
- If the dispute is not resolved at the initial negotiation stage, the dispute, together with all pertinent documents and evidence previously exchanged, should be submitted to an impartial independent party (or DRB) for informal mediation. The mediation (or DRB) proceeding should be "rights-based"—i.e., the mediator should assist the parties in resolving a dispute based on the contract documents, applicable law, and pertinent facts.
- If the dispute cannot be settled by mediation, the parties should proceed with the limited discovery procedures provided for infra § 2.02[C]. After limited discovery is completed, the parties should present the dispute in the form of a mini-trial, before a designated representative of each party, sitting together with a designated independent party who will not have had previous involvement with the dispute.
- If the dispute cannot be settled during or within a specified period of time following the mini-trial, the dispute should then be submitted to arbitration.

[B] Consolidation of Claims

[1] Issues for Consideration

One of the more significant advances of modern civil litigation is the prevailing policy that all related claims should be joined and resolved in a single trial to promote economy of both costs and time, and to prevent inconsistent results that might otherwise result from a multiplicity of actions.

24 See, for example, the (United States) federal procedural rules governing counterclaims and cross-claims (Fed. R. Civ. P. 13); third-party practice (Fed. R. Civ. P. 14); joinder of claims and remedies (Fed. R. Civ. P. 18); joinder of persons (Fed. R. Civ. P. 19–21); interpleader (Fed. R. Civ. P. 22); intervention (Fed. R. Civ. P. 24); and class actions (Fed. R. Civ. P. 23).
Ironically. arbitration and other ADR procedures, which were themselves designed to save time and expense, generally do not provide for consolidation of claims by and against persons not parties to the ADR agreement. In the U.S. construction industry, this omission often leads to delays, multiplicity of actions, inconsistent results, and increased expense and exposure to greater risk. This is because construction project disputes often involve more than the immediate parties to a construction contract:

The building owner probably has contracted with an architectural or engineering firm for design and construction administration services, and the owner will look to either of these latter parties for indemnification if the contractor alleges design deficiencies. The design professional, in turn, may seek to place ultimate responsibility on the shoulders of one or more engineering consultants responsible for system design work. Likewise, the prime contractor has inevitably subcontracted a substantial portion of the construction work to others and will attempt to place their claims against it on to the owner, while looking to them to remedy any construction deficiencies for which the owner seeks recompense.

If the prime contractor has defaulted on its obligations under the performance or payment bond given to the owner at the commencement of the project, the owner may seek satisfaction from the contractor's surety under the terms of the bond. To complicate matters further, the potential exists for a variety of counterclaims and cross-claims: the contractor, for example, may sue the architect for negligence or seek recovery, as a third-party beneficiary, of the owner-architect contract. All things considered, the most construction-related disputes are much more complex than the two-party scenario.

Frequently, in this interlocking web of contractual relationships, there will be third-party indemnity obligations, subrogation rights, and other potential claims against persons not parties to the immediate dispute. Owners, particularly, are exposed to this risk, the classic example being a claim by the main contractor against the owner for delay caused by a design defect. Obviously, the owner will want to look to the design professional for ultimate liability on such a claim. However, the typical obstacle is an owner-architect agreement that may provide as follows:

No arbitration arising out of or related to this Agreement shall include, by consolidation, joinder or in any other manner, an additional person or entity not a party to this Agreement, except

by written consent containing a specific reference to the Agreement signed by the owner, architect or any other person or entity sought to be joined.26

Typically, the architect will not voluntarily agree to become embroiled in a dispute between the employer and the contractor; thus, two, rather than one, sets of arbitration proceedings may become necessary. A party seeking consolidation of claims by arbitration or litigation may seek relief in the courts; however, the rights to such relief are uncertain and dependent upon the jurisdiction involved.27

In recent years, counsel have begun to develop custom construction contracts that undertake to bind all parties, including owners, design professionals, constructors, subcontractors, and suppliers, to the dispute resolution procedures, including mandatory consolidation of related claims.28


• That the dispute resolution and arbitration procedures require the assertion of all counterclaims that arise out of the transaction or occurrence that is the subject matter of the opposing party’s claims, based on the same principles as provided in the Federal Rule of Civil Procedure 13(a) (compulsory counterclaims); and

• That the following criteria for joinder and consolidation be provided in the dispute resolution procedures:

—Where separate proceedings are pending between the same parties, or one party is involved in a separate proceeding with (or is about to assert claims against) a third party; and

—Where the dispute sought to be consolidated arises from the same transaction or related transactions; and

—Where there are common issues of law or fact in the dispute sought to be consolidated, thus creating the possibility of inconsistent results; and

—Where no party sought to be joined in the primary proceeding will suffer substantial prejudice; and

—Where consolidation or joinder will result in a more economic and efficient resolution of the issues.29

26 AIA Doc. B-141. Standard Form of Agreement Between Owner-Architect ¶ 1.3.5.4 (1997 ed.).
29 See Stipanowich, supra note 25, 72 Iowa L. Rev. 473.
§ 2.02[C]  CONSTRUCTION LAW HANDBOOK

Clearly, all parties involved in a single project should be required to agree to incorporate the dispute resolution procedure rules into their respective agreements.

[C] Discovery

[1] Issues for Consideration

The adoption of the United States Federal Rules of Civil Procedure in 1938 marked the beginning of the "age of discovery." The new rules of discovery were designed to eliminate "trial by ambush" or the "sporting" theory of practice. They were supposed to put all the facts on the table and thereby make trials fairer and more efficient. These rules and concepts have been firmly established in the federal system of courts for more than fifty years; and virtually all state courts have adopted identical or similar discovery codes. Many, however, have said that the "age of discovery" produced a "monster." Another commentator noted that the primary reason for abuses of the discovery process has been that the "foxes" (i.e., lawyers) have been left in charge of the "henhouse," which is to say that there are, essentially, no effective controls over the extent or scope of discovery, other than the lawyers, who, in the individual interests of their clients, will go to the limit to find any potential evidence. On a cost-benefit analysis, the costs of discovery have become profligate.

The absolute right to discovery, as envisioned in federal and state procedural codes, is not generally available in arbitration proceedings. As two critics of arbitration have observed, one typically discovers what the other side's case is all about "by the third day of hearings." The American Arbitration Association (AAA) Construction Industry Dispute Resolution Rules for Large Complex Cases provide that:

[a]s promptly as practicable after the selection of the arbitrators, a preliminary hearing shall be held among the parties or other representatives and the arbitrators. . . . At the preliminary hearing the matters to be considered shall include . . . (c) the extent to which discovery shall be conducted.

50 Justice Lewis F. Powell, in reference to the growth of discovery, said that "litigation costs have become intolerable, and they cast a lengthening shadow over the basic fairness of our legal system." See also Henry & Lieberman, The Manager's Guide to Resolving Legal Disputes 12.
The AAA also publishes *Guidelines for Expediting Larger Complex Construction Arbitrations*, which permit, but do not require, a preliminary hearing for the purpose of "addressing" the following items:

1. **A brief statement of the issues.** The panel may request parties to briefly describe the dispute and what issues are to be resolved.

2. **Specification of claims and counterclaims.** The panel may request the parties to specify the amounts involved and claims or counterclaims.

3. **Stipulation of uncontested facts.** The parties should agree on uncontested facts prior to the preliminary hearing. This document shall be presented to the panel at the hearing.

4. **Schedule for the exchange of information.** Including any reports from experts. The panel may ask the parties to exchange information as to each other's documents and witnesses. Consistent with the expedited nature of arbitration, the arbitrators may, at the preliminary hearing, establish (i) the extent of and schedule for the production of relevant documents and other information, (ii) the identification of any witnesses to be called, and (iii) a schedule for further hearings to resolve the dispute. The panel will determine the scope of such an exchange if the parties are unable to agree. When the information to be exchanged has been determined, the panel may set a schedule for such an exchange.

5. **Lists of witnesses, including biographies of expert witnesses and outlines of testimony.** The panel may require the parties to provide each other with a list of witnesses they intend to call, as well as outlines of testimony of witnesses, including expert witnesses.

However, the main difficulty with the AAA rules and guidelines is that they are purely discretionary: they confer no rights to discovery, and there is no assurance that the tribunal administrator or arbitrators will follow the procedures for discovery suggested by the guidelines or set forth in the rules. Thus, a party against whom a substantial claim is filed, and who legitimately requires documentary evidence in the sole possession of the claimant, may have no effective remedy.

Arguably, the AAA rules authorize arbitrators to subpoena documents for discovery purposes, in advance of the hearing. However, parties requesting discovery may often receive the response, "This is arbitration, not litigation!"

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Difficult questions of law and fact have arisen as to whether a party desiring pre-hearing discovery may seek the aid of a court:

The vast majority of courts that have addressed these matters, however, "have concluded that allowing discovery on the merits of a case prior to arbitration is inconsistent with the aims of arbitration."35

Although federal courts have the power under Rule 81(a)(3) to order discovery in an arbitration, they should rarely do so. When parties agree to arbitrate, they relinquish certain procedural niceties which are normally associated with a formal trial. One of these accouterments is the right to pretrial discovery.36

Although the arbitration rules might permit the tribunal to subpoena documents or witnesses, the arbitrating parties have no comparable privilege to conduct discovery on their own.37

The two generally recognized exceptions to these case holdings are (1) that discovery is permitted in the context of a motion to compel arbitration, where there is an issue with respect to the arbitrability of the dispute;38 and (2) that discovery is permitted if there are "exceptional" or "compelling" circumstances.39

A number of court studies have concluded that the cause of most discovery abuse is Parkinson's Law, which posits that "work expands so as to fill the time available for its completion."40 In a very real sense, the ills of our present litigation system are attributable to the single phenomenon that if you give a lawyer five years to do everything that can be done to win a case, the lawyer will think of five years of discovery activities. The fallacy in this approach is, from a results standpoint, that the outcome would probably not change very much if the same case was completed in three years, one year, or perhaps: six months. The solution seems obvious—we must shorten discovery deadlines:

If parties can agree, for example, on discovery cutoff six months from the date the suit is initiated, our judicial system should not stand in the way of the substantial time and cost savings

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39 See Tupman, supra note 37, at 30 (footnote). See also Hamilton, supra note 34.
achievable by such an approach. Establishment of hard, fast
and speedy case management deadlines will have a tremendous
impact on the management of the case. Gone would be the
ability to litigate for "as long as it takes." In its place would
be a structure that required all parties to evaluate their case,
prioritize, and adopt the best litigation strategy which could
be accomplished in the time available.\textsuperscript{41}

A related discovery device from litigation procedure is the pretrial
hearing and subsequent pretrial order typically used in American courts.
These orders are often quite comprehensive, including:

- Detailed outline of each party's case.
- Stipulations of fact.
- Statements of factual and legal issues to be resolved.
- Listings of proposed witnesses, together with summaries of testimony.
- Listing of documents and exhibits to be offered at trial, bound, tabbed,
  and indexed.
- Summaries of depositions and affidavits to be offered at trial.\textsuperscript{42} Such
  a schedule does have the effect of forcing the parties to prepare their
  case. Although it may arguably increase the expense of getting to a
  trial or hearing, it also narrows the issues and leads the parties to engage
  in settlement discussions, certainly saving hearing time and expense.\textsuperscript{43}


Arbitration procedures should provide for:

- Limited discovery as a matter of right.
- Preliminary definitions of issues and contentions.
- Mandatory exchange of documents and lists of witnesses and proposed discovery.


\textsuperscript{42} See, e.g., Schooner. The Lacey Order: Control of Complex Litigation before the Board 28.

\textsuperscript{43} Id.
• Resolution of discovery issues and promulgation of a detailed discovery plan by the arbitrators, if and to the extent the parties cannot agree.

• Strict time limits on discovery—e.g., not to exceed six months, except with the approval of the arbitrators.

• Following discovery, a consolidated pre-hearing order that defines the issues and details the proof to be offered by each party.

[D] Hearings and Evidence

[1] Issues for Consideration

The AAA Construction Industry Dispute Resolution Procedures now provide as follows:

The Parties may offer such evidence as is relevant and material to the dispute and shall produce any such evidence as the Arbitrator may deem necessary to an understanding and determination of the dispute. . . . The arbitrator shall be the judge of the relevance and materiality of the evidence offered, and conformity to legal rules of evidence shall not be necessary.44

The AAA guidelines for expediting complex cases do not deal with evidence. However, the Guide for Construction Industry Arbitrators states:

As an arbitrator, you do . . . have the responsibility to determine the relevance and materiality of any evidence or proof offered. You also have the discretion, in the interest of conducting the arbitration proceeding expeditiously, not to receive irrelevant, immaterial or unnecessarily repetitive proof.45

In practice, virtually all proffered evidence is admitted “for what it is worth.” or subject to objections regarding its probative value. The reason for this liberal policy is that the arbitrator is interested in getting all of the relevant facts he can; his principal objective is to render a reliable decision, and any information that adds to his knowledge of the total situation will almost always be admitted.46

As a general rule, courts will defer to the arbitrator’s decisions regarding the admissibility of evidence, except where the failure to admit

evidence denies a party a fundamentally fair hearing. Indeed, courts have held that an arbitration tribunal must be given discretion to determine whatever evidence is necessary or cumulative, so as to "rid the proceeding of formalities and expedite it in line with the very aims of the arbitral process."46

Perhaps the most useful innovations with respect to presentation of evidence at arbitration hearings can be drawn from the media. For example, a University of Texas law professor advised a group of local lawyers that, with decreasing amounts of time to present evidence and arguments, lawyers must learn to think and communicate like T.V. anchorpersons.49 Several good examples of media-type evidentiary presentations to juries were described in a recent article.50 The most dramatic of the innovative procedures was the video presentation of deposition testimony at trial. Although videotaped depositions themselves are not unusual, the manner and extent of their use in the case described was apparently unprecedented. The result was a presentation that closely resembled a T.V. documentary or news report:

For its direct examination of a particular witness, the offering party would prepare a summary and excerpts for review by its adversary. As long as the presentation was accurate, the opposing party could not require the addition of other excerpts on the same or related subjects. That was left to the subsequent "cross-examination," at which the non-offering party could present its own video summary and excerpts. Disputes were resolved by a magistrate.

Each party was free to choose the mechanics and hardware for its video presentation. The plaintiffs produced a single videotape that included the lawyer’s summary as well as the deposition excerpts. They constructed an elaborate rear projection system using two side-by-side eight-foot-square screens across from the jury box. The double screen allowed simultaneous viewing of the video summary and exhibits or graphics relating to the testimony.

Defendants presented their video testimony differently: their attorneys read the summaries in person and showed video excerpts on a regular television monitor near the witness stand. Exhibits were shown on a separate screen using an overhead


51 See Buxton & Glover, Managing a Big Case Down to Size, 15 Litig. 22.
projector. In some instances, defendants simply presented a summary without showing any excerpts at the actual testimony.

The use of deposition summaries and tightly edited videotaped deposition excerpts was obviously more interesting for all concerned. It also saved a lot of time. In all, videotaped testimony of 33 witnesses was presented in segments lasting from a few minutes to four hours. Had the parties been forced to read depositions into the record, or even just to present all the background testimony in lieu of summaries, juror attention might have waned and evidentiary points might have been lost. The pace of the trial would have slowed to a crawl.51


- Arbitrators should continue to determine the admissibility, relevance, materiality, and weight of all evidence offered and should be permitted to exclude irrelevant or unduly repetitious evidence. Arbitrators should, however, respect the lawyer-client privilege and any evidence that the parties have agreed should remain confidential, such as settlement discussions. This should also include any evidence submitted in mediation or in the context of a mini-trial.52

- Arbitrators in complex cases should encourage such innovations in the presentation of evidence as the use of narrative summaries of evidence, document summaries, and videotaped presentations of evidence.

[E] Decision Making

[1] Issues for Consideration

The most significant issues for consideration in this section relate to the following questions:

- Should arbitrators be bound by the underlying contract and the applicable law?

- To what extent, if any, should the arbitrators be authorized to apply principles of equity in decision making and therefore to provide equitable relief, such as the remedy of specific performance?

- Should arbitrators be required to make specific findings of fact and conclusions of law, or otherwise give reasons or a rationale for their decisions?

51 Id. at 23.
The extent to which arbitrators are bound to apply the underlying contract and applicable law has no clear answer. The United States Arbitration Act (9 U.S.C. §§1 et seq.), the Uniform Arbitration Act, and state arbitration statutes do not deal with this question. Many standard arbitration clauses do not contain a reference to the law to be applied by the arbitrators; nor do they typically state that the strict requirements of the contract are to be applied. Much of the confusion with respect to arbitration and applicable law has to do with the somewhat paradoxical principle that although arbitrators "may disregard the strict and traditional principles of law," they are not free to "disregard the rule of law."\(^{55}\)

The practice of commercial arbitration in the United States is generally that arbitrators do have the freedom of deciding disputed issues according to their own sense of justice and fairness, unless they are required by the underlying contract to apply the strict terms of the contract and applicable law.\(^{64}\) This practice is based on the rationale that arbitrators are not presumed to have been trained in the law and on the assumption that the parties have chosen to let the issue be determined in accordance with the "sense of justice and equity ... that reposes in the breast and minds of their self-chosen judges."\(^{55}\)

The AAA Construction Industry Dispute Resolution Procedures provide that the arbitrator:

may grant any remedy or relief, including equitable relief, that the arbitrator deems just and equitable and within the scope of the agreement of the parties.\(^{56}\)

Remarkably, there is no specific requirement that the arbitrator's decision be in accord with the same underlying contract that empowers the arbitrators to decide disputes arising under the contract, or with applicable law. On the other hand, the AAA Guide for Construction Industry Arbitrators undertakes to outline "what it takes to be a good arbitrator." Among the listed attributes of the "good arbitrator" is that "he or she must be able to decide cases in accordance with the contractual agreement of the parties and the applicable rules of procedure."\(^{57}\)

As a practical matter, and based on the personal experience of many lawyers, most arbitrators feel bound to apply the terms of the contract and applicable law, at least to the extent that they are aware of it. Professor

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\(^{55}\) See AAA Guide. supra note 45. at 3.
Mentshikoff, in one of the earliest studies of arbitration, reported that approximately 80% of the arbitrators questioned believed that they should decide within the framework of substantive law; however, 90% would not do so if they believed a more just decision might otherwise be made.55

The fact that arbitrators are not bound to apply the terms of the underlying contract and applicable law has provoked severe criticism of arbitration and ADR in general.59 The parties have generally spent considerable time, money, and energy in carefully allocating rights, duties, responsibilities, and risks among themselves at the time of contracting—all with the reasonable expectation that if there is a dispute, it will be decided according to the terms of the agreement and applicable principles of law. Moreover, the parties also have a reasonable expectation that disputes will be decided according to custom and practice in the industry, including reported precedent.60 As a result of the widespread concern on this issue, a number of private and governmental ADR institutions have promulgated procedures that require principled decisions. For example, the Duke University, Private Adjudication Center, Rules of Practice and Procedure, state:

Except as modified by these Rules or by agreement of the parties, questions of law shall be decided in accordance with the procedural, conflicts and substantive law of North Carolina and, where applicable, federal and state arbitration statutes. In all cases, the tribunal shall decide in accordance with applicable law and valid terms of applicable contracts between the parties and shall take into account the uses of the trade to the transaction.61

United States Mediation and Arbitration, Inc., has promulgated ADR rules for deciding disputes under the Johns Manville Reorganization Plan, as confirmed by the U.S. Bankruptcy Court in the Southern District of New York. Rule IV(E) of the Manville Rules states that the “award . . . shall be based upon the client’s legal right to recovery . . . based upon applicable court law.”

In other agreements, provisions have been made to allow equitable principles to override the applicable contract and law:

The arbitrators shall determine the rights and obligations of the parties according to the substantive laws of the State of New York (excluding conflict of law principles) . . .

61 PAC Rules. para. 1.04.
[Optional addition: . . . but shall have the power, as amiables compositeurs, to disregard any provisions of substantive New York law which, in their judgment, would lead to a result that is unjust, unfair and inequitable, or commercially unreasonable.]

The AAA Construction Industry Rules authorize arbitrators to provide for extraordinary, equitable relief, such as specific performance. Specifically, the AAA Guide for Construction Industry Arbitrators provides:

Remedies do not necessarily take a monetary form. For example, [the arbitrators] might direct specific performance of the contract. [The arbitrators] might also grant injunctive relief, barring a person from continuing a violation of the contract.

The freedom of arbitrators to depart from the underlying contract and applicable law is protected by the lack of any obligation—at least under the AAA rules—to state reasons or a rationale for their decisions. A former United States Claims Court judge once said: "It is an invitation to tyranny to be afforded the right to render final decisions without reasons."

The Center for Public Resources (CPR) recognizes the importance of reasonable decisions in arbitration of business disputes. CPR Rule 13.2 provides:

All awards shall be in writing and shall state the reasoning on which the award rests unless the parties agree otherwise. When there are three arbitrators, the award and any part thereof shall be made and signed by at least a majority of the arbitrators.

The CPR Commentary on this Rule is as follows:

Most parties engaging in arbitration want to know the basis on which the arbitrator(s) reached their decision. Our Committee, moreover, considers it good discipline for arbitrators to require them to spell out their reasoning. Sometimes this process gives rise to second thoughts as to the soundness of the result. The Rule 13.2 mandate gives the arbitrator(s) greater leeway than would a requirement to state "conclusions of law and findings of fact."

Some parties hesitate to arbitrate out of the concern that arbitrators are prone to "split the baby," i.e. to make compromise

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5 Hoeniger, Tools to Tailor AAA Arbitration for Large, Complex Matters 15.
awards. Any tendency on the part of arbitrators to reach compromise awards should be restrained by the requirement of a reasoned award.65


- Arbitrators in complex construction cases should be bound by the underlying contract and applicable legal principles, which include the established doctrines of equity; otherwise, the essential purposes of contracting will be undermined.
- Arbitrators in complex construction cases should continue to be authorized to order extraordinary equitable relief, if and to the extent it is authorized by the underlying contract or applicable law.
- Arbitrators in complex construction cases should be required to state reasons for their decisions, without necessarily being required to make "findings of fact" and "conclusions of law." If damages are awarded, the basis for damages calculations should be included.

[F] Appeal and Review

[1] Issues for Consideration

The primary goal of arbitration and ADR generally is that the decision or award of the arbitrators shall end the dispute once and for all, with limited or no right of appeal. On the other hand, if arbitrators in complex construction cases are to be required to apply the contract and applicable law, it is appropriate that there should be some effective check upon "arbitrary" decisions by arbitrators. One possibility would be to provide for appeals, but on somewhat more liberal grounds than are provided by existing law—for example, the jury award standard, or the "substantial evidence" standard. Almost no one would advocate a de novo review standard. A modified approach is likely to prevail for review in complex construction cases—i.e., a panel of select arbitrators who would review the award on motion by an aggrieved party.


- Arbitrary proceedings should provide for a thirty-day expedited appeal from written or reasoned awards in complex construction cases to a select panel of arbitrators, which review would be dealt with strictly on the basis of written submissions, with no oral argument.

§ 2.03 NEW OPPORTUNITIES FOR CONSTRUCTION LAWYERS

The fundamental changes in the construction industry will likely lead to comparable changes in the legal profession. With a declining need for litigators, there will be a rising need for lawyers who can structure the increasingly complex transactions of the construction industry.

Consider the complexity of the following hypothetical project for a power plant. The project is located in Canada. The lead engineer is in the United States; however, there are five design consultants from around the world. The contractor is a consortium of three or four builders from different countries. The engineer and lead contractor are operating under the terms of a long-term strategic alliance. The owner (an independent power producer) only wants to buy power and proposes a twenty-year concession agreement, after which time the plant will revert to public ownership. Schedule requirements have dictated that many design and construction activities proceed concurrently. Design documents, specifications, material properties, and the schedule will be produced in an integrated CAD-based system, on a shared software platform, with all designers and builders contributing data. Construction instructions are embedded in the CAD files and may have been derived from any one of the consortium members. Land needs to be acquired, technology agreements negotiated; the entire project is governed in part by multilateral trade agreements.6

Who will structure the multiple agreements and analyze the issues in this scenario, if not construction lawyers? Who will help ensure that risks are fairly allocated, when traditional roles are blurred? Who is situated to structure the deal itself and bring the various parties together? At present, there are no industry professionals who can adequately respond to the challenges presented in this multilateral, global transaction. Contractors are forced to assemble and manage a team of consultants, each with a typically myopic view of the issues involved. Some very large firms have developed much of this expertise in-house. However, these kinds of transactions increasingly involve larger numbers of medium-sized firms not possessed of such resources.6

Other than traditional opportunities, there are also expanded opportunities for construction lawyers. Construction lawyers are "renaissance" people. Sooner or later, every construction lawyer will touch on virtually every subject of law and will deal with a broad range of human activity. Construction lawyers are quick studies on technical subjects—they have to be. And they learn how to translate the theoretical into the practical for presidents of corporations and job-site foremen. Most lawyers spend as much time on the transactional and troubleshooting side of construction

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6 Id. at 14–15.
as they do on the dispute resolution side. In short, construction lawyers are versatile, and they have a "wide-angle" view of the world.

This being the case, the training, skills, and experience of construction lawyers will qualify them to take on a much broader spectrum of contracting than just construction contracting. Think about it! Virtually every business organization in the world contracts every day for various types of goods and services, e.g., manufacturing equipment, computer hardware and software, utility services, consulting services—the list is endless. What do these procurement contracts involve? They include acquisition of design services; they involve specifications for manufacturing, the transportation of equipment, and transfer of title under the Uniform Commercial Code. There is the usual allocation of risks; there is scheduling and the installation, construction, and servicing of various products. These goods and services contracts also contain such familiar contracting elements as scopes of work, bonding requirements, and letters of audit, warranties, indemnification provisions, and force majeure, change order, ADR, and termination clauses.

In other words, procurement contracts, even for the broadest range of goods and services, involve basically the same skills and experience that attorneys develop as construction lawyers. As an added bonus to prospective procurement clients, construction lawyers can offer experience in crafting tailor-made ADR arrangements, including "partnering" on nonconstruction projects. And because the industry is "growing global," the construction bar can be prepared to take its skills onto the international scene.

§ 2.04 NEW MILLENNIUM: "NO NEED TO APOLOGIZE FOR BEING A LAWYER"

In the new millennium, it will be time for lawyers to stop apologizing for what we do, for being an advocate in a world where one person's justice is another's injustice; one person's beauty is another's ugliness; and one person's wisdom is another's folly.

Let the bar begin to reclaim the pride of our profession by putting into context the oft-quoted line from Shakespeare's King Henry VI, Part 2, Act IV, Scene II:

The first thing we do, let's kill all the lawyers.

Those who glibly quote this line either ignore, or never knew, that it was a call to anarchy by Dick the Butcher, in furtherance of Jack Cade's conspiracy to create a communistic tyranny in sixteenth century England. This all-too-familiar Shakespearean line is almost always quoted out of context, the reason being that it reflects a fundamental condition of our society that gave rise to the legal profession. No two persons, no matter how wise, how well educated or informed, or how well intentioned, will perceive reality in exactly the same way. And even if their perceptions
are totally aligned, the communication of those perceptions will be flawed, sometimes inaccurate, usually biased, and almost always ambiguous. In other words, even honest, honorable, and well-meaning people see reality differently, and they communicate imperfectly. Consequently, these imperfect conditions lead to recurring controversies, contentiousness, and conflict. The world has always been so, and it always will be, at least on this planet and in our lifetimes.

The legal profession’s grand objective is to resolve conflict, much like the medical profession’s is to cure disease. Because the American legal system has its roots in English law, the fundamental belief is that the best and fairest way to resolve conflict is for each contending party to have an advocate who is dedicated and committed to putting forth the best case that can possibly be made to a neutral decision maker. There are other systems for pursuing justice, for example, the “inquisitorial system,” based on the Roman Civil Law, where the primary responsibility for discovery of facts and putting forth the best arguments lies with the adjudicator rather than the advocates. For many historical and philosophical reasons, our American founders adopted the more contentious, adversarial system.

The positive side of the adversarial model is that it provides each contending party far more creativity, and more freedom, in making a case. The negative side of our system is that it encourages, even requires, a certain amount of contentiousness. No matter whether the dispute is to be resolved by trial, arbitration, negotiation, or even mediation, our system puts the contending parties in an arena where each party, through its chosen advocate, pushes, pulls, and strains toward the best possible result for that party. Out of this not-so-pretty and sometimes unpleasant process, the dispute is resolved, civilly and nonviolently: the aggrieved party accepts the decision, and life goes on.

Unfortunately, but inevitably, when one speaks ill of lawyers, the reference is usually to an opponent’s lawyer, not one’s own. Perhaps these critics should be reminded that although we are required to wash our client’s dirty linen in public, we did not dirty the linen.

Most lawyers do their jobs honorably and well. They learn complex subjects quickly; they work tirelessly to absorb and identify with their client’s circumstances; they are adept at making the complex simple and communicating the essence of a mass of information in brief sound or word bytes, making use of the best and latest in communication and persuasive techniques. They should, also, remind critics that far more disputes are resolved quietly in lawyers’ offices than are taken to courts or private tribunals.

So let the legal profession be reconciled to the reality that society will continue to tell “lawyer jokes” and recall that familiar line from Shakespeare. Nevertheless, these same persons, i.e., clients, will continue to call when their vital business interests are at risk, when they are in trouble with civic authorities, when their kids are arrested for drug or
traffic charges, and when they need able leaders for church or civic organizations. And, yes, they will be the first to tell us and others, with pride, that their child has been accepted to law school.

And, finally, we, the advocates, will continue to do as our predecessors have always done in law, "strive mightily, but eat and drink as friends."
THE FIVE MOST IMPORTANT CLAUSES
OF EVERY CONSTRUCTION CONTRACT

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THE FIVE MOST IMPORTANT CLAUSES
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I. INTRODUCTION

What a challenge! How does an experienced construction lawyer go about selecting "the five most important clauses" of every construction contract? More importantly, will such a selection find general agreement by other experienced construction lawyers?

This exercise requires one to look to the fundamental elements of commercial contracting in general and construction contracting in particular. These fundamental elements, in my view, are the following:

- A description of the work (Scope of Work)
- How and when the contractor will be paid (Payment)
- Changes in the work (Changes)
- Warranties and guarantees of the contractor's performance (Warranties)
- Terminating performance under the agreement (Termination)

If these are the core elements, rest assured that there will be significant other elements of any construction contract that are vital to the process and to the deal. Also, be cautioned that other construction industry professionals will likely differ as to what contract provision should make "the top five." However, take comfort in knowing that all will agree that the following contractual elements consume the bulk of construction contract negotiations and lead to at least 90% of the litigation and other dispute resolution processes that result from construction contracting.
II. THE FIVE CLAUSES

A. Scope of Work

In construction contracting a description of the work is commonly referred to as the "scope of work." That portion of the agreement describing the scope of work usually appears in general terms at the front of the document and is described in excruciating detail in one or more appendices to the agreement. The scope of work provisions will also define the contractor's role in delivering the project. For example, is the contractor going to function as a traditional general contractor, with overall responsibility for the work, or will the contractor function as a construction manager, serving as the owner's agent, consultant or representative with only limited responsibility for delivering the project?

Precisely what work is going to be done is a cornerstone of a construction agreement. Clearly describing what is expected from each side will go a long way toward eliminating disputes. The scope of the work, from the viewpoint of the contractor will usually be defined exclusively, that is, "we will only perform . . . " The scope of the work, from the owner's viewpoint, should be defined inclusively, that is, this agreement includes "all work, labor and materials and services that may be required to complete the project." The obvious problem with an ambiguous description of the work is that the owner will think that more work should be done under the agreement, whereas the contractor will believe that the owner is asking for more work than was agreed.
One of the more common acceptable scope of work descriptions defines the work as being shown on identifiable drawings and specifications that exist as of the time of making the contract. For example, it may define the work of the contract as "all electrical work shown on drawings E-1 through E-10 dated January 10, 1994, by Smith & Jones, Architects, in accordance with specification section 16,000-electrical, dated January 10, 1998."²

The special conditions, specifications and even drawings should be thoroughly reviewed to be sure that all work has been identified for inclusion or exclusion, and to attempt to eliminate conflicts within the contract document. For example, suppose the mechanical contractor reviews the plumbing drawings, but fails to examine the electrical and structural drawings. There is mechanical work shown on the architectural drawings that is not shown on the mechanical drawings. The subcontract with the mechanical contractor states that it includes all mechanical work as shown on all drawings. This is a classic problem. The mechanical contractor has probably agreed to furnish more work that was estimated.

Another potential problem in defining the scope of work in the traditional fashion is where the parties know from the outset that the work will not be accordance with plans and specifications. Instead, the work will be accordance with another design that has been submitted and approved, usually as a result of value engineering or cost-cutting prior to the contract. Where this is done, the parties should describe the work to be in accord with the agreed value engineering.³
B. **Payment**

There are, essentially, three ways that an owner pays a contractor for the work:

- Lump sum or fixed price
- Unit prices
- Cost plus

In selecting the mode of payment, the parties are implicitly allocating the risk of the unknown, and sometimes unknowable, as between the owner and contractor.

With a lump sum price, the contractor assumes a significant degree of risk of loss for such unknown variables as difficulty of construction, rising costs, weather, availability of labor, materials and equipment. The owner, however, will likely pay a premium (that the contractor builds into the lump sum) to cover such contingencies that may or may not occur. Another potential disadvantage to the owner with a fixed price is that the contractor has an incentive to cut corners on the quantity and quality of the work so as to maximize the profit margin. The compensating advantage of a lump sum price is greater clarity and certainty as to the rights and obligations of the parties, with less opportunity for disputes to arise.

In a unit price arrangement, the cost per unit of work is fixed (for example, $___ per cubic yard of rock). However, the total quantities of material and labor are unknown (for example, how
much rock or fill will be required to be removed). Hence, under this payment format, both the owner and contractor assume a share of the risk of the unknown; the contractor takes the risks of rising costs, difficulty of construction, and weather, etc. and the owner assumes the risk of a higher cost of construction for the overall project.

A cost plus arrangement requires the owner to pay the actual cost of the work (usually broken down and defined), plus a specified amount payable to the contractor for overhead and profit. Under a pure cost plus arrangement, the owner assumes virtually all of the risk of the unknown variables. However, the theoretical compensating benefit to the owner is that it does not have to pay for contingencies that may not occur, as with a lump sum. Furthermore, there is no built-in incentive for the contractor to cut quality or quantity, because the contractor is assured of full payment for all costs of labor and material that go into the project.

There are several variations of cost plus payment arrangements:

- Cost plus a fixed fee, whereby the contractor assumes the risk of substantial changes and additional work.

- Cost plus a percentage (of the cost) fee, whereby the owner assumes the risk of unknown variables.

- Cost plus a fixed or percentage fee with a not-to-exceed amount or cap, whereby the owner is protected by a ceiling on costs.
• Cost plus a fixed or percentage fee with a cap, but with a cost saving arrangement (e.g., contractor receives 40% of savings) so as to incentivise the contractor to keep the costs to a minimum.

Clearly, payment provisions and the mode of payment are basic to any construction agreement and vitally effect the allocation of risks as between the owner and contractor.

Payment provisions in a construction agreement typically call for "progress payments," usually on a monthly basis for work completed in the previous month. As such, progress payments are, essentially, an advance or, put another way, an interest free loan, from the owner to the contractor. Why would the owner do this? Because the owner does not receive substantial value until the project is complete, and a partially completed project usually has no market value to an owner. Nevertheless, owners agree to make progress payments to contractors because, as a practical matter, most contractors cannot afford to finance the project to completion, and a prudent owner will include such built-in safeguards in the agreement, as requiring prior inspections of the work by architects or engineers, and requiring a contractor to meet certain milestones in performance of the work. Therefore, it is vitally important that the construction agreement contain strong and enforceable payment provisions; For example:

• Periodic inspections and reviews of the work before payment is authorized.
• Rights to suspend or stop the work for defaults in performance.
• Rights to withhold payment for defective or questionable work.
• Payment to be made according to defined milestones or fairly balanced schedules of values.
• Strong retainage provisions.

Typically, the parties will agree that the owner may withhold up to 10% of progress payments until the work is "substantially complete" so as to incentivise the contractor to complete the project, and to provide some assurance that the owner will have sufficient funds to complete the work or pay subcontracts in the event that the contractor fails to do so.

C. Changes

Changes are virtually inevitable on every construction project for a number of reasons:

• Owner's changing requirements or budget limitations.
• Errors and omissions in the design.
• Differing site conditions.

Therefore, it is crucial that the construction agreement clearly grant to the owner the right to unilaterally change the contract or the contractor's performance. Construction contracts are unusual in this respect, as most commercial contracts are fixed when entered into and cannot be changed except by a mutual amendment. However, in the construction context, unilateral changes by the owner are permitted only when there is concurrent provision for making fair compensation to the contractor, and when the change is generally within the scope of the work.
A properly drafted change order clause should provide for:

- An absolute right on the part of the owner to order a change within the scope of the agreement.
- Obtaining the contractor's cost proposal with an assessment of the impact on the remaining work.
- Providing a procedure for determining compensation.

The American Institute of Architects agreements provide a typical procedure for making changes in the work. For example, in Article 7 of the AIA Document A-201 (1987 edition) the owner may unilaterally order that the contractor either perform additional work or delete work from the agreement, provided that the change is within the overall scope of work. If the owner and contractor agree, and the change order is signed, the change becomes an amendment or modification to the agreement. On the other hand, if the owner and contractor cannot agree, the contractor must, nevertheless, proceed to perform or delete the work under what is known as a "Change Directive."

The AIA documents also provide a procedure for determining an equitable adjustment of the contract price. Basically, the contractor is entitled to its direct field costs and a reasonable allowance for overhead and profit, in the absence of an agreement with the owner. Under the AIA documents, a "Change Directive" is issued where the parties are not in agreement as to either what constitutes a change or the cost thereof. The change is required to be performed, and the least agreed amount
is required to be paid. This appears to remedy the situation where the change is requested with no additional payment because the parties do not reach agreement on price.

A dispute over work claimed as a change can result in a suspension of the work until the dispute is resolved or termination. Suspension of the work or termination often means delaying completion and litigation. To avoid such serious consequences of disputes, it is obvious that treatment of changes should be adequately covered in the contract. It is good practice to identify either in the contract documents or by separate letter the persons authorized to make changes. It is also good practice to state either the names or job descriptions of persons who appear to be in some position of authority, but do not have the authority to make changes.

D. **Warranties**

Warranties are representations or affirmations of fact which are generally made by the contractor to the owner. As such, warranties are either true or false; if true, the warranty is honored, if false, the warranty is breached.

Under the standard form AIA documents, a contractor typically makes a general warranty to the owner concerning the quality of the work, as follows:

"The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform with the requirements of the Contract Documents. Work not
conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment."

In essence, the contractor makes a three-fold warranty to the owner:

- That all materials and equipment furnished will be of "good quality" and "new," unless the contract otherwise provides;
- That all "Work" will be free from defects, not inherent in quality required by the contract; and
- That the Work will conform to the contract.

Note that warranties are absolute or near absolute, and, therefore, are relatively easy to enforce. Warranties, in the context of construction agreements, are only effective as of the date of "Substantial Completion" and represent to the owner that the work is in accordance with the agreement as of that snapshot in time.

Note also, that the above warranty provision does not contain a time limitation for enforcement, however, the AIA documents also provide "one year guarantee," which reads as follows:

"In addition to the Contractor's obligations under Paragraph 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under
Subparagraph 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Paragraph 2.4.8.

Thus, the "one year guarantee," essentially, says that if within one year the work is found not to be as required by the contract, as required by warranty in Section 3.5.1, the contractor will fix the problem, after proper notice from the owner. This provision does not say or mean that after one year all bets are off, and that the contractor has no liability to the owner. Rather, the provision provides that the absolute warranties made in Section 3.5.1 will still be in effect after one year from "substantial completion," without regard to whether the work, when performed, was in accord with the contract.

Therefore, when both the warranty under Section 3.5.1 and the "one year guarantee" under Section 12.2.2.1 are taken together, the net result is as follows:

- The work as of "Substantial Completion" must be new, free from defects and in accordance with the contract.
- The work must remain in that condition for a period of one year from Substantial Completion, or the contractor will fix it, or pay to have it fixed.
• After one year from Substantial Completion, the contractor has no obligation to the owner for work which was good when constructed, but for reasons not due to the fault of the contractor, have become defective after one year.

• However, the contractor remains liable to the owner after one year for work which was not either new or free from defects, and not in conformity with the contract at Substantial Completion, for up to the statutory period of limitations.

E. **Termination**

Termination of a construction agreement is an awesome and dreaded capital crime and punishment. It is a serious act which results in serious risks and potential devastating consequences to both the owner and contractor.

Termination of performance under an agreement at common law is a unilateral act by one of the parties to an agreement which has the legal effect of terminating the contractual relationship between the parties, thus leaving them to their rights and remedies under common law. Termination can be accomplished only where the party at fault has "materially" breached the agreement. The concept of "materiality" is a loaded term, which much room for disputes and controversies. It is an act or omission which goes to the essence of the agreement and results in substantial harm to the non-breaching party. Materiality is also determined by such considerations as the likelihood of an alternative remedy to the non-breaching party, the timing and relative balance of prejudice to both parties.
The party in material breach of a construction agreement is liable for a host of damages to the non-breaching party, including the actual cost of remediation, potential consequential damages, including loss of anticipated profits and loss of expected business opportunities, or as an alternative, the reasonable value of goods, services to remedy the performance. In a word, the consequences of termination can be awesome. Therefore, what can and should the parties do in the contract to deal with the possibility and consequences of termination?

In general, the parties should undertake to define what constitutes grounds for termination, i.e., what is a material breach of contract. This can take the form of objective standards provided for performance in the context of scheduling, standards of quality, and failure to make payments to subcontractors and suppliers. However, at the same time, because all possible breaches can never be known at the time of contracting, a general provision providing for termination in the event of material breach should be provided in the agreement.

Termination provisions should include for an advance notice of intent to terminate, which provides an opportunity to cure on the part of the breaching party. One should also be cautious in not allowing an indefinite period of cure. In general, the notice provision should be clearly stated and objective.

In construction agreements, notice requirements and the right to terminate will generally be reciprocal as between the owner and contractor, and there will be a procedure providing for written notices, to whom, with concurrent time periods, etc. There will also be
provided specific rights and obligations in the event of termination, for example, the owner will generally be accorded the right to take possession of the contractor's equipment and materials on site, as well as accorded the right to complete the project for the balance of the contract price.

A properly drafted termination clause should also provide for the nature and scope of damages to the non-breaching party, for example, recovery of direct costs, fixed or liquidated damages, and provisions as to whether or not consequential or incidental damages may be recovered. The trend in construction contracting is to limit consequential or incidental damages.

Many construction agreements also provide for termination for convenience, which allows a party who desires termination to do so without regard to whether the other party is in material breach of the agreement. While seemingly unfair, a termination for convenience clause will typically provide that the owner must fully and adequately compensate the contractor for all costs and payments due for work performed to date, as well as the costs incurred due to termination, but will forbid the contractor from recovering lost or anticipated profits as a result of the early termination. Generally, courts will enforce terminations for convenience if they are reasonable.

The AIA-A201 General Conditions (1997 edition) provides specific grounds for termination by the contractor, for cause, as well as termination by the owner for cause. In
addition, the 1997 edition provides that the owner may terminate the agreement for convenience:

"The Owner may, at any time, terminate the contract for the Owner's convenience, and without cause.... Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall

1. cease operations as directed by the Owner in the notice;

2. take actions necessary, or the Owner may direct, for the protection and preservation of the work; and

3. except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing Subcontracts and purchase orders and enter into no further Subcontracts and purchase orders.

In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

2. *Id.*

3. *Id.*

4. See also, Article 7 Changes In the Work AIA Document A-201 (1997 ed.)

5. *Id.*, Sec. 7.3.8.

6. Leiby, *supra*, note 1, Sec. 7:15

7. AIA Document A-201, Sec. 3.5.1. (1997 ed.)

8. *Id.*, Sec. 12.2.2.1. (1997 ed.)

9. *Id.*, Sec. 14.1

10. *Id.*, Sec. 14.2