

Construction Management

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The construction manager is responsible for coordinating the work of multiple prime construction contracts and for overseeing quality control. Construction management services may be handled by the architect of record or as a professional service by another architect.

For architects seeking a way to control the construction process in order to maintain their professional relationships with their clients, providing construction management (CM) as an architectural service is a viable project delivery method. Between 1990 and 1996, according to the 1997 AIA Firm Survey, the number of firms that performed CM services increased from 5 to 17 percent. In the 2000 edition of the survey, 36 percent of the firms reported that they offer CM services.

When architects offer CM services, there are a number of potential benefits for both owner and architect. These include better control of the project construction schedule, improved integration between design and construction, and daily on-site representation by the architect, all of which result in savings in project costs for the owner and increased profitability for the architect. CM services can be integrated into both the design and construction phases of a project or provided during construction only. Construction managers give advice on the time and cost consequences of design and construction decisions, scheduling, and cost control; coordinate contract negotiations and awards; make timely purchases of critical materials and long-lead-time items; and coordinate construction activities.

The beginnings of construction management are rooted in the 1950s with the advent of computerized scheduling methods such as PERT (project evaluation review technique) and CPM (critical path method) for managing complex projects. During the '60s and '70s CM services became institutionalized as public sector clients divided general contracts into multiple packages, which require more coordination. Today construction management is a widely accepted delivery technique. CM services can be provided using different contractual arrangements that engender different degrees of risk (and reward). Architects, designers, building contractors, and other third-party entities offer CM services to clients.

CLIENT NEEDS

Clients are showing an increased interest in CM services because this delivery method can save them time and money, increase project quality, and, perhaps most importantly, offer single-point accountability. For them, the primary objective of designer-led construction management is maximization of the owner's return on capital investment.

Possible complications of constructor-led CM services. When a client engages a third-party construction manager or other constructor-led CM services, the fee involved increases the cost of the project but does not ensure that the construction manager will

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Summary

CONSTRUCTION MANAGEMENT SERVICES

Why a Client May Need These Services

- ▶ To have single-point accountability
- ▶ To maximize return on capital investment
- ▶ To save time and money
- ▶ To increase project quality

Knowledge and Skills Required

- ▶ Strong administrative and management skills
- ▶ Knowledge of business and contracts
- ▶ Knowledge of construction materials and methods
- ▶ Field supervisory experience
- ▶ Good communication and negotiation skills
- ▶ Ability to prepare detailed cost estimates
- ▶ Ability to develop detailed schedules

Representative Process Tasks

- ▶ Review of project program
- ▶ Advising project architect on pertinent project issues
- ▶ Preparing time schedules
- ▶ Preparing budgets and cost estimates
- ▶ Oversee bidding and preparation of construction contracts
- ▶ Supervising construction phase of work
- ▶ Overseeing project closeout
- ▶ Coordinating work of project participants

▶ **“In the late 1970s, the rise of construction managers paralleled the unwillingness of architects to take on responsibility for construction. This led to a loss of perceived value and a loss of potential compensation. Owners still had to pay to ensure their buildings were constructed properly, but increasingly they were not paying architects for this. Only in recent years has the architectural profession begun to learn to benefit from risk instead of running from it.”**

AIA Project/Service Delivery Think Tank, July 1999

operate in the best interest of the client. As well, architects can encounter difficulties in this project delivery process. Third-party construction managers may not attempt to obtain the best bids for the work and may have more allegiance to construction subcontractors than to the owner. In the name of value engineering, a construction manager can also cause difficulties by reducing the project scope and revising the specified materials proposed by the architect; this can interfere with achievement of the client’s objectives. Architects may have to perform duties assigned to the construction manager contractually—for example, researching materials, methods, and trades—if the construction manager does not conduct the work in a timely manner. Other problems can arise when CM firms are staffed with people who lack adequate training in scheduling and budgeting or do not possess the communication skills necessary to complete the services in the best interest of the client or the project.

Precipitated by excessive design restrictions and time-consuming design reviews, such problems can create an adversarial relationship between a third-party construction manager and an architect. By comparison, when construction management is performed as an additional service by the design architect, adversarial relationships (and the attendant change orders, cost escalation, schedule delays, and poor design execution) are significantly reduced.

In a traditional design-bid-build project, the architecture firm carries out design and prepares the construction documents necessary to obtain bids from general contractors and perhaps a select group of specialty trade contractors. If the client holds multiple prime contracts, the architect often is responsible for coordinating the prime contractors, with neither contractual obligation nor financial compensation.

During construction, AIA Contract Document B141, the Standard Form of Agreement Between Owner and Architect with Standard Form of Architect’s Service, requires the architect to observe the contractor’s activities throughout the construction period to ensure that the contractor complies with minimum standards and the agreed-upon scope and completion of work. Within this context, the architect has limited authority on the job site and reports deficiencies directly to the owner. Often the owner is caught between the designer and contractor when problems occur, as each blames the other for construction-related problems. In this arrangement the architect has no control over the construction schedule, and with a fixed design fee, the architect’s profits are reduced should any difficulties or delays in construction occur.

Advantages of designer-led construction management. When construction management is provided by an architecture firm, the client benefits from project leadership that is focused on ensuring the quality of the entire design and construction process. The goal of designer-led construction management is seamless integration of the steps and processes that must occur to complete a project on time and within budget.

In a designer-led CM practice, the architecture firm designs a project, prepares construction documents, and, acting as the owner’s advisor, actively solicits bids from a select group of contractors. Contractors are chosen based on past performance and a demonstrated ability to comprehend the project scope, perform the work contracted for, and minimize requests for additional information or increased compensation.

Rather than a single or a few prime contractors, a CM project generally employs 10 to 15 prime contractors who ordinarily are subcontractors (e.g., concrete, structural steel, masonry, drywall, painting, etc.). The architecture firm provides a construction manager to coordinate the work of prime contractors, while the project architect continues to provide architectural services, including construction-phase observation. The construction contractors remain under contract to the owner, and the architect–construction manager works as the owner’s advisor and contract administrator. The client benefits from daily on-site representation and single-point accountability, and the architect benefits from increased compensation and responsibilities that result in higher-quality projects completed on time and on budget.

The strongest selling point for designer-led CM services is that it can save the client money. Many firms have documented that clients save from 7 to 15 percent of project construction cost by eliminating a general contractor’s overhead and profit and the cost of a project superintendent employed by the general contractor. A portion of a general contractor’s overhead and profit serves as a project management fee. When the architect provides CM services, much of the money that would have gone to pay that project management fee can be paid to the architect as compensation for performing the CM services.

Client concerns regarding architect-supplied CM services. Clients may have several concerns about CM services supplied by the architect.

Administratively, providing CM services as an owner's advisor is essentially the same as providing standard design services. Client concerns about conflict of interest (that the construction manager might try to protect the architect regarding design responsibilities) can be alleviated by involving the client's representative in job meetings and construction decisions. Experience shows that the client will quickly determine that the architect–construction manager as advisor is providing a professional service, that is, acting as the client's representative with an obligation to work in the best interest of the client.

Clients with a great deal of expertise in managing construction may prefer a construction manager–constructor method of project delivery. In this contractual relationship, the individual serving as construction manager–constructor holds the contracts with subcontractors. If this individual is an architect, then this arrangement is similar in risk and reward to the design-build delivery approach, where there is one contract for both design and construction. Firms that frequently use the construction manager–constructor approach like it because it emphasizes both design and construction as professional services.

SKILLS

A firm offering CM services for the first time must undergo a cultural transformation. To lay the groundwork for this change, it is advisable for a firm to prepare a strategic business plan that addresses the risks, rewards, and financial management of offering CM services. To prepare this, the firm would have to do the following:

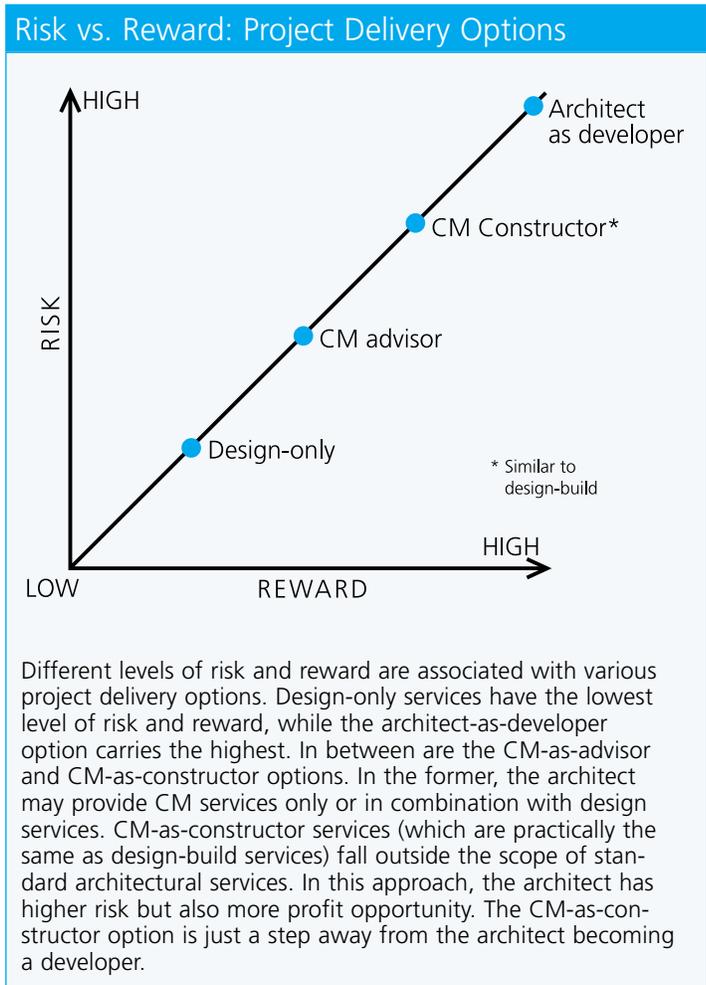
- Assess the skills needed to perform competent CM services
- Determine what would be needed in a risk management plan
- Research the legal requirements for construction management in the states where the firm practices
- Determine the forms of contract and agreement the firm will use
- Review insurance requirements
- Consider possible changes in the firm's organization
- Identify strategies for marketing the value these services provide to clients

A traditional architecture practice might begin to add CM-advisor services in one of three ways. The firm could contract to perform the services described in AIA Document B801/CMa, Standard Form of Agreement Between Owner and Construction Manager–Advisor Where the Construction Manager Is Not a Constructor, and use in-house expertise to perform the services.

Alternatively, the firm could hire a consultant to perform the services included in B801/CMa. In this case the consultant could be another architect with expertise in CM services or a trusted contractor who subcontracts to perform on-site duties while the architecture firm continues to perform the administrative duties (similar to hiring an engineering consultant when complete architectural engineering services have been contracted for and in-house engineering is not available).

A third option is for the firm to hire a new employee with the expertise necessary to complete the services. If this option is undertaken, the architect must select the new employee carefully, to avoid introducing differences in cultural attitudes that might negate all the potential positive features.

Skills required for construction management. Administrative acumen is the primary skill a construction manager should possess. Managing dozens of separate contracts requires



In assessing their CM skills, firms should examine the CM services they have performed without obligation or compensation to maintain a professional relationship with clients.

Why Offer CM Services?

There are some pros and cons to consider when an architecture firm is deciding whether to offer construction management as a service of the firm. Generally the positive aspects are many and the concerns few.

Advantages of Offering CM Services

An architecture firm can gain many benefits from offering CM services to their clients. The most obvious are increased profitability; a comfortable fit with services the firm already offers; improved documentation, estimating, and scheduling skills; improved relationships with clients and employees; an expansion of marketable services; and more attention to risk management issues.

Increased profitability. A prime incentive for offering construction management (CM) as an architectural service is the possibility of increased profits. CM services offer great profit potential for many reasons. Expanding the scope of services for an existing client increases the firm's billings with a minimum of marketing effort. Providing broader services without expanding the volume of active projects enables the firm to be more efficient and productive. When the architect controls the construction schedule a CM project can be completed much faster than a conventional project—in most cases at least 25 percent faster. Because there is a construction manager on the project daily, and projects are completed faster, the project architect is relieved of many time-consuming construction problems and can move on to the next project sooner. The efficiency and profitability of design services increases. Finally, CM services are inherently profitable. A single construction manager with about one-third of an administrative

assistant's time can administer \$4 million to \$6 million in construction. While fees for CM services vary across the world, profitability can be as high as 50 percent of gross income, depending on the size and complexity of the projects.

Natural transition for clients and staff. Another reason to consider CM services is the ease of incorporation into a conventional practice. The primary change from a conventional service is that the construction work is divided into multiple bid packages rather than a single prime contract and the architect replaces the prime contractor's construction superintendent with a construction manager to coordinate the efforts of multiple contractors. This transition is not difficult to make. To some degree the architect is already providing much of the service connected with CM without additional compensation.

Sharpen the firm's documentation, estimating, and scheduling skills. Offering CM services can sharpen a firm's skills. CM experience increases the design staff's knowledge of bidding conditions, field problems, and construction means and methods. It can also improve the quality of project drawings and specifications and the accuracy of construction cost estimates.

Return to master builder. CM offers an opportunity to restore the broad scope of services traditionally provided by the architect as master builder. Planners, engineers, interior designers, developers, kitchen and bath specialists, specifications writers, project managers, and construction managers all provide services to clients in areas that used to be the architect's domain. Providing CM services can renew the client's confidence in the architect's ability to provide comprehensive services and open the door for provision of specialty services that have been delivered by others in recent decades. Firms have also reported that offering construction-related opportunities

good business sense, people skills, and organizational talent. Coordinating the efforts of contractors to complete project work on time and within budget is the single most important task of a construction manager.

Estimating, specification writing, scheduling, monitoring, and documenting are also important CM activities. Because these professional skills are so important, it is strongly recommended that firms wanting to offer CM services hire a construction manager with a professional degree in architecture, engineering, or construction management. In addition to having professional expertise, a construction manager must be a natural listener and marketer, have keen negotiation skills, and be comfortable serving as a crisis manager. This combination of abilities requires a special personality with an even temperament.

The construction manager must be familiar enough with the design and construction processes to be able to coordinate the work. Someone with field experience should be able to understand task coordination and be able to answer a contractor's questions without hesitation. Individuals who were trained with general contracting companies may not have the skills necessary to manage a professional service relationship with a client and may tend to favor contractors' interests.

Firms that are successful with designer-led CM services are able to integrate the work of their design and CM staffs to encourage true collaboration. Locating project architects and construction managers in close physical proximity helps develop a collaborative spirit.

A firm offering CM services must have competent and adequate administrative support. The major challenge of construction

In an architecture firm offering CM services, it is important to instill in the staff the rule that the design architect is in charge throughout all phases of the project. Many construction decisions may be delegated to the construction manager, and the construction manager must actively participate in preparing plans and specifications. Nonetheless, best results are achieved when the design architect remains in control of the scope and quality of a project.

for employees has helped them find new employees in a tight job market.

Enhanced marketing of architecture services. Marketing might be considered both a reason for adding CM as a service and, at the same time, a concern. First, it is fairly easy to “sell” CM services to an owner looking for a single source of accountability, lower construction costs, and faster project delivery. Even if an owner is not interested in CM services, the architect’s experience with CM can only strengthen a proposal to provide design services.

One concern with marketing CM services is reflected in some architects’ fears of alienating developers and large general contractors who might also be clients. Initially it may be a good idea to keep a low profile with these “old friends”; however, once a CM service has been established, the profitability and increased income to the architect should soon overshadow any income realized from developer- or contractor-led projects.

Enhanced risk management. Firms can improve their ability to manage professional liability risks by providing CM services. There is no better way to manage professional liability than to have a firm’s representative on site every day to document activities in the field, coordinate the work flow, and, most importantly, resolve issues before disputes arise. These techniques do more to reduce professional liability than one can imagine. Many firms report that since the addition of CM services, fees have doubled and even tripled. While the professional liability policies are underwritten primarily on fees, these firms report their premiums have stayed the same. This fact indicates that the professional liability insurance companies recognize the positive effects of a design firm offering CM services. Their documentation improves, and they are better at resolving conflict early, before claims are made or formal dispute resolution methods employed.

Common Concerns

Of the concerns commonly expressed by firms deciding whether to add construction management as a service, the biggest is the risk involved. The three areas of most concern are professional and general liability (or insurable risks), job site safety, and uninsurable risks, including fixed-cost contracts when acting as a constructor or fines from regulatory agencies for failure to comply with laws and regulations.

Both professional liability and general liability can be covered with adequate insurance. Professionally, CM is an architectural service just like design and can be insured under a standard professional practice liability policy. General liability can be covered with a standard general contractor’s general liability policy. (Firms should ask their insurance agents to be sure their activities are properly underwritten. Most insurance companies offer a supervisory constructor category, which can save substantial premium dollars but provide similar coverage.)

Job site safety can pose some added risk, although by contract, the responsibility for job site safety still rests with the construction contractors if the architecture firm has contracted for CM-as-agent responsibilities. (While recent OSHA rulings have been contrary to this philosophy, designers should still strive to remove themselves contractually from job site safety when acting as an agent.) If the firms have contracted for CM as constructor responsibilities, then job site safety is a primary concern, and the firm’s business plan must address this new risk. In all cases, the astute firm will consult with legal and insurance counsel for advice on management of the risks associated with offering CM services, for the rewards are likely to outweigh the risks. Firms seeking to provide CM services will become innovative facilitators of the built environment and will be rewarded, professionally and financially.

management is the amount of paperwork involved in tracking progress and administering contracts in a timely manner. Normal duties in construction management include preparing construction contracts, reviewing contractor requests for payment on a monthly basis, keeping accurate documentation, and preparing construction progress reports. A good administrative assistant, or an intern architect or construction manager in training, can help an experienced construction manager manage more work.

Tools and resources. Assuming the architect’s office has standard word processing and spreadsheet computer programs, little else is needed to add construction management as a basic service. However, Internet and information technology hardware and software are emerging as tools for performing comprehensive CM services for some clients. Sophisticated clients may require their construction managers to use project Web sites and digital information to speed communication between client, architects, consultants, and contractors. The sites can be used to track daily progress and construction-related issues needing immediate attention.

PROCESS

Construction management services are aligned with the activities and tasks associated with building design, construction documentation, construction procurement, and construction. The scope and approach to construction management is largely determined by the contractual arrangement established between the firm providing construction management services and the client. These relationships are described and expressed in the different forms of agreement in three families of AIA construction management documents.

AIA DOCUMENTS FOR CONSTRUCTION MANAGEMENT SERVICES			
DOCUMENT TITLE (SHORT)	CM-ADVISOR	CM-CONSTRUCTOR	ARCH-CM
Owner-Contractor Agreement	A101/CMa	See Owner–Construction Manager Agreement	A101
Owner-Architect Agreement	B141/CMa	B141 with modifications (see A511)*	B141 amended by B144/ARCH-CM
Owner–Construction Manager Agreement	B801/CMa	A121/CMc or A131/CMc	See Owner-Architect Agreement
General Conditions	A201/CMa	A201 as modified by A121/CMc or A131/CMc	A201
Guide to Supplementary Conditions	A511	A511	A511
Instructions to Bidders	A701	A701	A701
Change Order	G701/CMa	See instructions for A121/CMc or A131/CMc	G701
Application for Payment	G702/Cma G703	See instructions for A121/CMc or A131/CMc	G702/G703
Certificate of Substantial Completion	G704/CMa	See instructions for A121/CMc or A131/CMc	G704
Construction Change Directive	G714/CMa	See instructions for A121/CMc or A131/CMc	G714
Project Payment Application	G722/CMa G723/CMa	See instructions for A121/CMc or A131/CMc	None

*Cost estimating services will be performed by the construction manager–constructor. Generally, an owner may not want the architect to duplicate those efforts, although there may be occasions when the owner wants a second opinion to check the CM-constructor's work.

AIA Documents

The AIA contract documents address three arrangements an architect's clients can use to contract for CM services: construction manager as advisor, construction manager as constructor, and architect offering CM services along with design services.

Construction manager as advisor: This project delivery method closely resembles the traditional relationship between owner and architect, in which the duty of the architect is to act as an advisor to the owner and on behalf of and in the best interest of the owner in all instances. Architects are familiar with the B141, A101, and A201 AIA documents. The Cma designation appended to one of these reflects the provisions added to recognize the responsibilities and duties of a construction manager–advisor. The construction manager–advisor can be either an architect or an independent nonarchitect such as a contractor. Thus a nonarchitect construction manager can also use this series of documents. The B801/CMa carefully outlines the duties and responsibilities of the construction manager as advisor. The use of two contracts for service—one for architectural services and a second for construction management—enables the architect to clearly demonstrate the two types of service to an owner and to formulate proper and adequate charges for each. As well, the use of a second contract for CM services allows an architecture firm to provide CM services on a project for which it is not providing design services.

Construction manager as constructor: The prime document of this series, the A121/CMc, Standard Form of Agreement Between Owner and Construction Manager Where the Construction Manager Is Also the Constructor, was written jointly by the AIA and the Associated General Contractors of America (AGC) and is intended for use if the construction manager provides a guaranteed maximum price (GMP). A131/CMc is the contract for construction manager as constructor when there is no GMP. One of the AIA's goals in writing these documents was to influence the owner-contractor relationship when contractors offer CM services directly to the owner.

Architects also may wish to offer CM services with a GMP, either for a project they have designed or for a project designed by another architect. However, if architects use the A121/CMc document, some very important and serious changes in responsibility will be introduced into the owner-architect relationship. Architects must consider seriously whether they are willing to accept these differences. First, the document incorporates the same responsibilities for means and methods of construction as are found in the standard owner-contractor agreement described in the

CONSTRUCTION MANAGEMENT CHECKLIST

Preconstruction Phase

- Check overall CM responsibilities:
 - Read B801/CMA, Standard Form of Agreement Between Owner and Construction Manager–Adviser Where the CM Is Not a Constructor
 - Read B144/ARCH-CM, Standard Form of Amendment for the Agreement Between Owner and Architect Where the Architect Provides Construction Management Services as Adviser to the Owner
 - Read A201/CMA AIA, General Conditions of the Contract for Construction—Construction Manager–Adviser Edition
- Review project program.
- Provide preliminary evaluation (for project architect and owner):
 - Owner's program
 - Project schedule
 - Construction budget
- Prepare or assist in preparing a preliminary cost estimate.
- Provide cost evaluations for alternative materials and systems.
- Advise project architect on following (upon request):
 - Proposed site use
 - Selections of materials
 - Building systems and equipment
 - Availability of materials and labor
 - Time requirements for procurement, installation, and construction
 - Possible economies
- Update project schedule.
- Update cost estimates:
 - Schematic design phase
 - Design development phase
 - Construction document phase
- Advise project architect regarding design details that might affect constructability, cost, and schedule.
- Temporary project facilities—make recommendations to project architect.
- Safety programs—provide owner with information regarding allocation of responsibilities, i.e., each contractor is responsible for safety.
- Prepare list of bid packages.
- Prepare construction schedule (include in specifications).
- Assist owner in selecting consultants and testing laboratories, if necessary.
- Analyze labor availability and make recommendations.
- Check requirements for equal opportunity employment and advise specifier.
- Review specifications (assist in writing if needed).
- Prepare list of prospective bidders for project architect's review.
- Develop bidder's interest.
- Conduct pre-bid conference, if necessary.
- Receive bids (with project architect).
- Prepare bid tab.
- With project architect, make recommendations to owner regarding acceptance or rejection of bids.
- Prepare construction contracts and obtain contractor's and owner's signatures.
- Obtain building permit.

Construction Phase

- Return each contractor's copy of the construction contract with notice to proceed. Remind contractors of safety responsibilities.
- Hold preconstruction conference.
- Introduce owner, project architect, CM, contractors to project requirements:
 - Project description by project architect
 - Project goals by owner
 - Importance of construction schedule
 - Site conditions—materials storage, etc.
 - Temporary facilities—job shack, telephone, power, water, etc.
 - Applications for payments
 - Number of copies: _____
 - Submittal date: _____
 - Expect payment by: _____
 - One approved copy will be returned to contractor
 - Contractor safety programs
 - Weekly progress meetings (set time and day)
 - Other items
- Prepare and distribute preconstruction meeting minutes to the owner, the project architect, and all contractors.
- Materials and equipment delivery:
 - All items needed in next 4 to 8 weeks
 - Check each Monday
- Conduct weekly progress meetings:
 - Request presence of present on-site contractors.
 - Encourage contractors scheduled 2 to 4 weeks ahead to attend.
 - Project architect should attend.
 - Invite owner's representative to attend.
 - Agenda:
 - Record day and date and length of meeting.
 - Record names of attendees.
 - Provide brief update on progress.
 - Review work schedule for next week or two.
 - Check coordination problems.
 - Check construction problems.
 - Identify potential change orders.
 - Other items
 - Remind contractors of safety responsibilities (monthly)
- Prepare and send copies of progress meeting notes to owner, project architect, and each contractor.
- Maintain daily log.
- Process monthly applications for payment.
- Check shop drawings and monitor processing.
- Record actual progress on construction schedule.
- Ascertain whether contractors maintain a clean and orderly job site.
- Maintain a set of construction documents at the job site.
- Mark up a set of construction documents for as-built documents.
- Assist owner with receiving, storage, and installation of owner-purchased equipment and/or furnishings.
- Observe on-site tests and testing of material, equipment, systems, etc.
- Prepare pre-final punch list.
- With project architect, conduct final inspection.
- Secure copies of warranties and guarantees for the owner.
- Review final applications for payments.
- Turn over set of as-built documents to the owner.

A101 and A201 documents. Once an architecture firm accepts this responsibility, insurance for professional liability may be voided. Insurance coverage may still be possible, however, using something like the general liability insurance that is available for general contractors.

Another responsibility assumed by an architect who uses the A121/CMc document is job site safety. Professional liability insurance offers no coverage for this risk, but a general (contractor) liability type of insurance policy could provide coverage. Other contractor-type duties and responsibilities normally and readily accepted by contractors are also included in the A121/CMc, but these are easily provided by an architect. Thus architects should carefully study the A121/CMc, the owner–construction manager agreement in which the construction manager is also the constructor, along with the A201, General Conditions of the Contract for Construction (as modified by A121/CMc), to ensure they clearly understand the risks an architecture firm assumes in offering construction management services as a constructor.

Architect provides CM services along with design services. The B144/ARCH-CM is a document intended to make it easier for architects to contract with an owner for construction management as part of normal architectural services. The B144/ARCH-CM document is to be used as an amendment to the B141, Standard Form of Agreement Between Owner and Architect. The items included in the B144/ARCH-CM are very similar to those in the B801/CMa agreement between the owner and construction manager–advisor, but in a slightly abbreviated form. Since this amendment is only a modification of the standard B141, all the other construction administration documents utilized for conventional (design-bid-build) work can be used. The obvious advantage here is that a modification to an existing and familiar document is all that is required for an architecture firm to provide CM services.

On the other hand, the very simplicity of this amendment to the B141 could lead an owner to question the value of the service. In response, the architect may compromise and provide CM-advisor services for a below-market rate of compensation. Some firms have found that using two separate contracts as described above—one for architectural services and another for CM services—makes it more apparent that a total service is being provided for each discipline, rather than construction management being added on to the architect’s standard contract. This distinction makes it easier to negotiate fair compensation for each service.

Finally, it must be noted that once a method of contracting for CM services has been selected, it is important to use only the documents from that family for the project. Serious legal consequences can result when documents for different types of services from unrelated families of documents are mixed.

 **Architects and construction managers should carefully review the requirements of the specific form of agreement signed by the architect and the owner.**

Process Activities and Steps

The accompanying construction management checklist shows the activities and steps involved in performing competent CM services. The checklist is not intended to replace the duties and requirements noted in B801/CMc, Owner–Construction Manager Agreement, or B144/ARCH-CM, amendment to B141. Rather, the checklist shows activities and steps in project development. Activities are organized within the two major project phases, preconstruction and construction. The preconstruction phase typically accounts for about 20 percent of CM services and the construction phase for the remainder.

“Construction Management” was originally published in *The Architect’s Handbook of Professional Practice*, 13th edition, ©2000 by the American Institute of Architects, published by John Wiley & Sons, Inc.

The AIA provides a contract document designed especially for alternative architectural services.

B102–2007, Standard Form of Agreement Between Owner and Architect without a Predefined Scope of Architect’s Services.

AIA Document B102–2007 is a standard form of agreement between owner and architect that contains terms and conditions and compensation details. B102–2007 does not include a scope of architect’s services, which must be inserted in Article 1 or attached as an exhibit. Special terms and conditions that modify the agreement may be included in Article 8.

The separation of the scope of services from the owner/architect agreement allows users the freedom to append alternative scopes of services.

AIA Document B102–2007 replaces and serves the same purpose as AIA Document B141–1997 Part 1.

For more information about AIA Contract Documents, visit www.aia.org/contractdocs/about

May 2011 The American Institute of Architects