We’re called contractors in no small part because contracts are such an integral part of our industry. Every day we deal in contracts with owners both private and public, with subcontractors and vendors, and on occasion with architects and engineers. Although these contracts often exceed millions of dollars and we sign our names to them agreeing to abide by all of their terms and conditions, how often do we actually read them and fully understand their contents?

The predominant form of standard construction contracts are those published by three organizations: the American Institute of Architects (AIA), the Associated General Contractors of America (AGC), and the Construction Management Association of America (CMAA). The Engineer’s Joint Contract Documents Committee also publishes a series of standard contract forms used primarily by the engineering profession. Although frequently modified by owners, the basic contents of these standard contract forms should become familiar to all whose responsibility it is to abide by their provisions.

In the later part of 1997, the American Institute of Architects issued their newly revised contracts, copyrighted 1997, which superseded their 1987 editions. Many owner–general contractor contracts written as late as 1998 still used the 1987 edition, and many contracts currently in effect utilize the 1987 copyright. In 2004, AIA issued 12 new contract documents, six of which pertain to design-build, and in 2005, four forms dealing primarily with architectural services were introduced.

Other less frequently used contracts are also under review, such as turnkey and joint venture contracts. The design-build contract and the design-build process deserve their own space, thus a later chapter in this
book will be devoted entirely to them. Many of the AGC contract documents were 1999 issues, and CMAA has 2005 updates for their construction manager contracts. Even before a standard form or modified contract is executed, at times an owner, general contractor, or subcontractor will agree to proceed with a limited amount of work based upon the issuance of a letter of intent with the assumption that a fully executed contract will follow shortly thereafter.

The Letter of Intent

A letter of intent is generally a temporary document authorizing the commencement of construction in a limited fashion. Limits are placed upon the scope of work to be performed, the dollar value of the work to be performed (often expressed as a “not to exceed” amount), the time frame in which the work is to be completed, and restrictions on subcontracts or purchase orders to be awarded in order to comply with the provisions of that letter of intent. When a full scope contract is ultimately awarded, that which was included in the letter of intent will be incorporated and any payments made under the letter of intent will usually be credited to the contract sum.

A number of reasons exist for using a letter of intent, including

- An owner may wish to start demolition of a recently vacated office space while negotiating with a new tenant desirous of a quick move in.
- Having received a verbal loan approval from their lender, an owner may wish to commence a limited amount of construction work on a new project while awaiting full written approval of that loan.
- When a project is “fast tracked,” an owner may wish to commit to a certain portion of work while the final budget and/or design is being completed. The letter of intent can be used to purchase some long-lead items such as reinforcing steel or structural steel shop drawings that would jumpstart the project.

A letter of intent must be specific in nature:

- It should clearly define the scope of work to be performed. If plans and specifications define that scope of work, these documents ought to be referenced. If plans and specifications are not available, an all-inclusive narrative should define the exact nature of the required work.
- It should include either a lump sum to complete the work, or a “cost not to exceed” amount, including the contractor’s fee.
- It should include payment terms.
It should contain a date when the work included in the letter of intent can commence, and in some cases, when the letter of intent expires.

It should contain a statement stipulating that the scope of the work and its associated costs will be credited to scope/cost included in any formal construction contract, if subsequently issued.

It should include a termination clause setting a time limit on the work, or an event that triggers termination, such as the issuance of a formal contract. A termination clause “for convenience” is often included, allowing either party to terminate work upon written notification, and stating the method by which a settlement of costs up to that point will be established.

The letter of intent is to be signed and dated by all concerned parties.

A typical letter of intent between an owner and contractor might be worded as follows:

Pursuant to the issuance of a formal contract for construction, the undersigned (owner) hereby authorizes the (contractor) to proceed with the tree removal in the areas designated on Drawing L-5, prepared by ABC Engineers, and dated July 8, 2006. All debris including tree stumps will be removed from the jobsite. Prior to commencement of the work, all erosion control measures will be installed by the Contractor according to Drawing L-8, issued by ABC Engineers, and dated July 1, 2006.

Maintenance of soil erosion measures will be required from the date of installation until this letter of intent is terminated on or about September 15, 2006.

All of the above work is to be performed at cost plus the 15-percent contractor's overhead and profit fee. Daily work tickets and copies of all subcontract agreements and purchase orders will be presented by (contractor) to (owner’s representative) as substantiation for all costs.”

Signed: Contractor

Signed: Owner

Defining costs in the letter of intent

When any formal agreement between an owner and contractor includes reimbursement of costs, the definition of what constitutes “costs” in the initial document will greatly reduce any disagreements when subsequent invoices are presented for payment. This subject will be dealt with more fully when discussing cost plus contracts later in this chapter, and must also be considered when issuing a letter of intent.

Scope of work, tasks, and reimbursables included in letters of intent can include such items as shop drawing preparation, and cancellation charges for any materials/equipment ordered if a further construction contract is not forthcoming or if the letter of intent is terminated.
prematurely. Reimbursable expenses may extend to in-house costs incurred by the general contractor for estimating, accounting, and even interim project management and superintendent salaries. The owner can be presented with a list of reimbursable costs appended to the letter of intent as an exhibit to avoid future misunderstandings.

When a formal construction contract is issued, the segregated costs associated with the work performed under the letter of intent are generally applied against the costs for the total project. It is important to accumulate and segregate all reimbursable costs as they are incurred by assigning a separate cost code to all labor, material, equipment, and subcontract commitments. This will permit easy retrieval of all related costs when reimbursement is requested from the owner.

**Subcontractor commitments via the letter of intent**

While operating under the terms and conditions of the letter of intent, the general contractor may have to make certain commitments to subcontractors and vendors, and any purchase orders or subcontract agreements issued should contain the same restrictive provisions as the agreement between the general contractor and owner.

For example, if the owner’s letter of intent contains provisions for the preparation of reinforcing steel drawings, placing an order for some nonstock sizes and even partial fabrication, the same restriction(s) placed upon the general contractor should be transferred to the reinforcing bar vendor.

**The letter of intent termination clause**

A typical termination provision in a letter of intent would be similar to the following:

> Upon receipt of a written directive to cease the work covered under the terms and conditions of this letter of intent, the Contractor shall immediately stop all work. All costs for work-in-place as of that date will cease. Cancellation costs for work-in-progress will be honored upon a receipt of a detailed explanation for all such costs documented by purchase orders or other commitments and related Stop Work Orders.

Any such termination clauses should be included in all vendor purchase orders or subcontract agreements. It is important that the Project Manager notify all vendors and subcontractors promptly, both verbally and in writing, upon receipt of any termination notice issued by the owner.

It is risky business to proceed with any phase of construction work without some form of written authorization. In this day and age, corporate
personnel are very mobile, moving from one job to another, and that familiar owner representative who initially authorized the work may be gone from the company, along with all traces of any prior verbal commitment.

Requesting a letter of intent when the occasion arises is not only the proper business approach but is also a way of preserving a good relationship, since misunderstandings will be lessened or eliminated entirely.

Prevalent Types of Construction Contracts

Construction contracts today generally fall into one of the following categories:

- Cost of the Work Plus a Fee
- Cost of the Work Plus a Fee with a Guaranteed Maximum Price (GMP)
- Stipulated or Lump-Sum
- Construction Management
- Design-Build

Less frequently used contracts between owner and general contractor include

- Turnkey
- Joint Venture
- Build-Operate-Transfer (BOT) and its several variations

Each form of contract has its own caveats, and a closer look at each type may be helpful to further understand their unique provisions.

Cost of the work plus a fee

What could be simpler—a contract where the contractor bills the owner for all work-related costs plus their fee for overhead and profit? Well, the cost-plus contract requires a great deal of thought, preparation, and administration in order to work successfully.

This form of contract demands an atmosphere of trust between owner and contractor and means keeping communication channels open in order to convey the status of work and their costs as they accumulate. First of all, a definition of what constitutes “cost” is often a point of interpretation between owner and contractor, and needs to be fully defined upfront. Secondarily, this form of contract lends itself to situations where a complete set of drawings and/or specifications have not yet been developed, so defining the scope of work is crucial.
What constitutes “cost.” One has only to look at the American Institute of Architects’ Document A111, 1997 edition, Cost of the Work Plus a Fee with a Negotiated Guaranteed Maximum Price, to provide a starting point for a fully developed list of costs—both reimbursable and nonreimbursable:

Costs to be reimbursed

1. Labor costs—basic hourly rates, premium rates, and labor “burdens.” Many owners question the high hourly rates of some collective bargaining agreements when all benefits are included, and if the type of trades to be employed on the project is known, a breakdown of each trade’s billable rate attached as an exhibit may prove useful (see Figure 2.1).

2. Wages—the salaries of the contractor’s supervisory and administrative personnel when stationed at the site with the owner’s approval. If any nonfield-based personnel costs are to be reimbursed (for instance, estimating and accounting), they should be listed here.

3. Taxes—insurance, employer contributions, assessments

4. Subcontract costs

5. Costs of materials and equipment incorporated in the completed project

6. Costs of other materials and equipment, temporary facilities, and related items fully consumed in the performance of the work

7. Rental costs for temporary facilities, machinery, equipment and hand tools not customarily owned by construction workers whether rented from the contractor or others.

8. Cost of removal of debris from the site

9. Costs of document reproduction, faxes and telephone calls, postage, parcel post, and reasonable petty-cash disbursements

10. Travel expenses by the contractor while discharging duties connected with the work

11. Cost of materials and equipment suitably stored offsite, if approved in advance by the owner

12. Portion of insurance and bond premiums

13. Sales and use taxes

14. Fees—assessments for building permits and other related permits

15. Fees for laboratory tests

16. Royalties—license fees for use of a particular design, process, or product
### Wage Rate Schedule

#### Straight Time

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<th>Benefit Fund</th>
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#### Double Time

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Rates are subject to change per collective bargaining agreements.

Please note the above rates do not include 15% overhead & profit mark up.

FIGURE 2.1 Wage rate schedule.
17. Data processing costs related to the work
18. Deposits lost for causes other than the contractor’s negligence
19. Legal—mediation and arbitration costs, including attorneys’ fees arising out of disputes with the owner with the Owner’s prior written approval.
20. Expenses incurred by contractor for temporary living allowances
21. Cost to correct or repair damaged work provided that such work was not damaged due to negligence or was nonconforming

**Costs not to be reimbursed**
1. Salaries and other compensation of the contractor’s personnel stationed at the contractor’s principal office or offices, except as specifically provided for in the contract
2. Expenses of the contractor’s principal office
3. Overhead and general expenses, except as provided in the contract
4. The contractor’s capital expenses
5. Rental costs of machinery and equipment except as specifically spelled out
6. Costs due to the negligence of the contractor
7. Any costs not specifically included in costs to be reimbursed (This transfers the responsibility onto the contractor to include a comprehensive list of reimbursable costs since they will not be able to later claim they “forgot” to include some miscellaneous costs which are always reimbursed.)
8. Costs, other than approved change orders, that would cause the GMP price to be exceeded

Any and all changes to these standard “costs,” both additions and subtractions, need to be clearly spelled out in the agreement. The project manager must alert their superintendent and their accounting department to properly identify all applicable costs by project number and by proper cost coding. When requisitions are prepared, documentation of all reimbursable costs are to be attached to that request for payment.

**Cost-plus contract pitfalls.** The following are a few pitfalls to avoid when administering a cost-plus contract without a GMP:

- The scope of the work included in the agreement must be clearly defined and if the scope is increased, any associated increase in cost

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must be presented quickly to the owner in writing either as a fixed amount or an estimated cost.

- A statement of “costs to be reimbursed” and those not to be reimbursed must accompany any cost-plus agreement.

- When a project manager is assigned to the project and time spent administering the project is a reimbursable cost, establish a method of accounting for his/her time in the field and in the office when working on the project. It will be helpful to keep a simple one- or two-sentence log of activities associated with these hours so that, if called upon in the future, the project manager can recall the exact nature of those activities.

- Prepare weekly reports tracking actual costs versus the estimate. If no estimate was presented initially, prepare weekly costs to apprise the owner of those week-to-week costs. Note: Some vendors and subcontractors are notoriously late in submitting invoices, so always add a caveat to the reported costs such as “costs received to date” or “additional costs may accrue during final accounting.”

- Attempt to convert the cost-plus contract to a lump sum or GMP as quickly as possible—if the nature of the work so dictates.

Remember the five critical elements in a cost-plus-fee contract:

- Define the scope of work as precisely as possible
- Identify all scope changes as soon as they occur.
- Establish approximate or firm costs for these changes.
- Notify the owner of the changes and related costs as soon as they are identified—and do it in writing.
- Hope for the best!

The stipulated or lump-sum contract

A stipulated or lump-sum contract is most frequently used in competitive bid work in either the public or private sector where a complete set of plans and specifications have been prepared by the owner’s design consultants. Contractors are expected to estimate the cost of the work contained in a specific set of bid documents—no more, no less. Any deviation of the scope of work as interpreted from these bid documents, except if amended later by other contract provisions, will result in a change of scope where any adjusted costs will be dealt with by change orders.

The problem of defining scope. Although defining the scope may appear to be rather straightforward, it is not. The “intent” of the plans and
The Start of the Construction Process

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specifications can often be interpreted in many ways by each participant in the construction process. Since the architect is generally designated by the contract as the “interpreter” of the plans and specifications created, the final decision on what constitutes the obligation of all parties to the contract rests with that authority—unless challenged and resolved by either negotiation, arbitration, or litigation. The use of requests for information (RFIs) during the bidding process is one way of clearing up any discrepancies, errors, and omissions in the plans and specifications, and all bidders should afterward receive the architect’s response.

Allowances and alternates in the stipulated-sum contract. Allowances are frequently included in a contract when the exact nature of the work or quality levels desired were not clearly defined when the contract was formulated. As the owner and architect provide definition, the contractor must establish the actual cost, compare it with the allowance amount, and adjust the contract sum accordingly. Unless the contract specifies otherwise, the following costs are to be included in developing the total cost of the allowance in question:

- Cost of materials and equipment
- Cost of unloading and handling at the site, plus installation costs
- Overhead and profit (included in the contract but not in the allowance)

Alternates, meanwhile, can sometimes be looked upon as the owner’s wish list. They are generally items that may be added to the contract scope at a predetermined cost. One problem relating to alternates is the time frame in which they are to be accepted or rejected, and many contracts do not include a date or time frame within the budget for acceptance or deletion. Take a simple example: an alternate for a recessed entry mat in a vestibule as opposed to the contract provision for a smooth concrete surface upon which the owner can place a mat. The decision to accept or reject the alternate must be made prior to the placement of the concrete slab. Acceptance after the slab is poured will necessitate chopping out the slab at considerably more cost.

When alternates are included in the contract and no date of acceptance or rejection is specified, the project manager must prepare a list and advise the owner of the latest date for which the alternate can be accepted at the cost included in the contract.

Lump-sum contract pitfalls. The following are a few pitfalls to avoid when administering a lump-sum or stipulated-sum contract:

- A thorough review of the bid documents is essential to uncover any ambiguities, errors, and omissions in the plans and specifications.
During the bidding process, these problems can be presented to the architect who will issue a ruling in the form of a response to the contractor’s RFI or via a Q&A follow-up to questions posed by several bidders. It is important that all parties are notified of these queries, and the project manager should verify that the design consultant’s directive has been sent to all bidders.

- Although it may be precarious to qualify a bid on a public project without risking a rejection of the bid, in private work the contractor can qualify their bid and list their qualifications if they have concerns about the intent of the documents. However, some contractors are reluctant to do so for fear that their bid will be rejected. Generally, if the bid for a private project is competitive, qualified or not, the owner will probably not reject the bid but will arrange an interview to discuss these questionable issues. In public bidding, the agency may consider minor deviations in the contractor’s bid if they are deemed “in the public interest” to do so.

- When awarding contracts to subcontractors, avoid including the words “to include plans and specifications.” Relying on this phrase as the sole basis for determining their scope of work can be dangerous. Instead, include a scope letter defining the scope of work more specifically. Remember the subcontractor’s interpretation of the plans and specs may be considerably different from yours. (More on this subject in Chapter 6.)

- Prior to negotiating a contract with a subcontractor or vendor, review the estimate thoroughly. If any items were inadvertently omitted, attempt to incorporate them into the subcontractor agreement or vendor purchase order. Remember, this is the time when your negotiating power is greatest.

- Obtain the subcontractor’s/vendor’s agreement that they have received and reviewed all appropriate documents—plans, specifications, addendums, and so on—that will be referenced in the subcontract agreement or purchase order.

**The Cost-plus-a-fee with a GMP contract**

The cost-plus contract with a guaranteed maximum price (GMP or Gmax) is frequently used because it allows the owner to gain the protection of the maximum cost of the construction while retaining the potential for cost savings. It is basically a cost-plus-a-fee contract with a cap on it, and many of the caveats that apply to the cost-plus-a-fee contract also apply to this contract. The GMP contract is often used for “fast tracked” projects when incomplete or sketchy construction documents are all that is available at the time of contract preparation. Usually,
70- to 80-percent complete design documents are sufficient to negotiate a GMP contract, and this very process can result in numerous misunderstandings between contractor and owner.

**The importance of the contract qualification statement.** Because the GMP contract is most often awarded before the plans and specifications are 100-percent complete, the question of what the contractor should assume for the 20 to 30 percent of the remaining design can be answered in a comprehensive qualification statement attached to the contract as an exhibit (Figure 2.2). In this exhibit, the contractor will list specific items that have been included in the scope of work anticipated (but not as yet in the final design) as the drawings are completed.

Other contractors get more specific and include a scope sheet for each division of work, where they not only list every item included in their guaranteed maximum price but the cost of that item, in order to establish a quality level. Figure 2.3 shows a portion of one such exhibit, this one dealing with electrical work.

**Fees and savings.** The contractor’s fee is usually prenegotiated, based upon a percentage of cost. Any changes that increase the scope of work will be allowed a percentage increase in overhead and profit. When minor deductions in scope occur, the contractor should not be expected to include a credit for fee reduction since the amount of deleted work will probably not have materially affected the overall management of the project. When major portions of work are deleted, a credit for overhead and profit may be warranted, however.

The GMP contract contains a “savings” clause specifying that any savings will be shared by the owner and the contractor in varying percentages. Some owners prefer to have the contractor receive a greater portion of the savings, theoretically creating more incentive for the builder to search for potential savings. Thus, a 50/50 savings basis provides the owner with an incentive to review and accept value engineering suggestions proposed by the contractor.

**Cost certification provisions.** A standard feature of the GMP contract is a requirement for a cost certification audit when the project has been completed. The owner has the option to audit the contractor’s books to determine the extent and nature of any savings, or to verify that all costs charged to the project are proper. If this audit is to be conducted by an independent accounting firm, provisions for the audit should be included in the contract either as a contractor-excluded cost or as a separate line item setting aside a specific sum for the audit.

In anticipation of an owner audit, the project manager must monitor, identify, and isolate all costs as they are incurred, and as they relate to
The Start of the Construction Process

Exhibit F

Schedule of Assumptions and Qualifications

Pricing Qualifications

The Guaranteed Maximum Price provided for in Section 6.1 of the Agreement is subject to the following assumptions and qualifications. As used below, “we” and “our” refers to the Contractor. If an item is described as “included,” then the cost of completing that item is included in the Guaranteed Maximum Price.

Division 1 - General Conditions/General Requirements

Inclusions/Exclusions

1 Underpinning is said to be not required by the structural engineer and is therefore not included.
2 Asbestos, lead, or hazardous materials testing, removal and remediation is not included.
3 Utility and service company fees and charges for connections or meters are not included.
4 Temporary electric consumption cost during construction is not included.
5 A payment and performance bond is not included in the base, an alternate has been provided in the schedule of alternates.
6 Builders risk insurance is assumed provided by Owner and is not included.
7 Costs associated with the Health Department inspections are not included.
8 Construction site security, other than separation of work zones by construction fences is not included.
9 With timing going to be critical, we assume that the Owner will assist in obtaining permits with ISD / BFD / BW&S/ BRA as may be required.
10 We have assumed Civil drawings to be 1"=10' not 1"=20' as shown.
11 We have assumed MEP drawings to be 1/8"=1' not 1/4"=1' as shown.

Allowances included within the General Conditions

1 Police details, fire watch and street permits: $15,000 is included.
2 Winter weather protection will most likely be required for the waterproofing, and concrete sidewalks.
   In addition, protection will likely be required for the facade restoration after the completion of the sidewalks.
   $25,000 is included.
   An allowance of $25,000 is included to refeed, relocate and coordinate all existing MEP's.

FIGURE 2.2 Contract qualification statement.

the various line items in the estimate and requisition. This will save countless hours and reduce owner frustration at the end of the project if any job related costs are called into question. Most payroll reporting systems require a project manager to apportion their daily activities to specific projects or cost codes, and it is a good idea for the project manager, in a separate log, to enter a brief one- or two-sentence entry describing their time devoted to the GMP project.
Awarding subcontract agreements. Prior to the issuance of a subcontract agreement, some GMP contracts require the project manager to submit all subcontract proposals to the owner for their review, together with a recommendation for any awards. In fact, some contracts include a provision requiring the owner to approve a subcontract agreement, in writing, before it is issued. If that’s the case, the owner must be made aware of the time restraint necessary for their review and comment. Thus, the project manager should then forward each subcontractor recap to the owner with a cover letter stating the time frame in which approval is required.
### The Start of the Construction Process

#### FIGURE 2.3

A portion of an exhibit concerning electrical work.

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<td>3.00</td>
<td>450.00 /ea</td>
</tr>
<tr>
<td>Elevator Power</td>
<td>1.00</td>
<td>1,500.00 /ea</td>
</tr>
<tr>
<td>Sump Pump</td>
<td>2.00</td>
<td>350.00 /ea</td>
</tr>
<tr>
<td>Sewage Ejector</td>
<td>2.00</td>
<td>850.00 /ea</td>
</tr>
<tr>
<td>Water Booster</td>
<td>0.00</td>
<td></td>
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<tr>
<td>1000 GPM Fire Pump/Jockey Pump</td>
<td></td>
<td></td>
</tr>
<tr>
<td>System</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Compressor for Dry Fiping System</td>
<td>2.00</td>
<td>750.00 /ea</td>
</tr>
<tr>
<td>Awning</td>
<td>1.00</td>
<td>550.00 /ea</td>
</tr>
<tr>
<td>Electric Unit Heaters</td>
<td>1.00</td>
<td>450.00 /ea</td>
</tr>
<tr>
<td>Split System AHU's</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B.C.W. Equipment</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Wall Mounted Bathing Tunnel Fixtures - W1</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>1x4 Surface Mounted Fixture - FS1</td>
<td>23.00</td>
<td>140.00 /ea</td>
</tr>
<tr>
<td>2x4 Surface Mounted Fixture - FS2</td>
<td>12.00</td>
<td>140.00 /ea</td>
</tr>
<tr>
<td>Exit Signs</td>
<td>24.00</td>
<td>225.00 /ea</td>
</tr>
<tr>
<td>Fixtures - Wiring</td>
<td>2875.00</td>
<td>3.50 /ft</td>
</tr>
<tr>
<td>Fixtures - Homerus</td>
<td>865.00</td>
<td>5.25 /ft</td>
</tr>
<tr>
<td>Lighting Control</td>
<td>17136.00</td>
<td>0.60 /hrs</td>
</tr>
<tr>
<td>Fixture Labor</td>
<td>96.00</td>
<td>80.00 /hrs</td>
</tr>
<tr>
<td>Fixture Wiring</td>
<td>1600.00</td>
<td>3.25 /ft</td>
</tr>
<tr>
<td>Fixture Wiring - Homerus</td>
<td>480.00</td>
<td>5.50 /ft</td>
</tr>
<tr>
<td>2x4 Surface Mounted Fixture - FS3</td>
<td>27.00</td>
<td>140.00 /ea</td>
</tr>
<tr>
<td>Emergency Battery Unit</td>
<td>38.00</td>
<td>275.00 /ea</td>
</tr>
<tr>
<td>Batting tunnel Lighting-Allowance 10 fixtures</td>
<td>10.00</td>
<td>200.00 /allw</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lighting</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Alarm</td>
<td>17,136.00</td>
<td>0.40 /sf</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communication</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Security (Empty Conduit)</td>
<td>17,136.00</td>
<td>0.30 /sf</td>
</tr>
<tr>
<td>Tel/Data (Empty Conduit)</td>
<td>17,136.00</td>
<td>0.30 /sf</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electrical</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>13.89/sf</td>
<td>222,965</td>
<td></td>
</tr>
</tbody>
</table>

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**Reference:**

- FIGURE 2.3
- The Start of the Construction Process

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Only qualified subcontractors should be invited to submit bids, and if any nonqualified subcontractors submit bids unsolicited, the proposal should be forwarded to the owner. If an unrealistic low bid is received from an unsolicited subcontractor who has a past record of poor performance or poor quality work, the bid should be forwarded to the owner with a comment stating that this was an unsolicited bid and is not to be considered. The reasons for the bid rejection should be included. In the absence of such a procedure, an owner may learn of a particular low bid, and not being made aware of it, may be of the opinion that they are not being afforded the most competitive pricing.

To be safe, the project manager should forward all unsolicited bids to the owner—if in fact the contract calls for the owner to review these bids—with comments and recommendations by the general contractor. In most cases, the owner will follow the general contractor’s advice.

On the other hand, if a contractor does not prequalify subcontractors and receives an unrealistically low bid from one of them, forwarding it to an owner with a comment that the bid should be rejected will likely prompt the client to respond, “Well why did you allow an unqualified subcontractor to submit a bid on my job in the first place?”

**Change orders and value engineering.** There may be a tendency to fold extra work into the GMP without the issuance of a change order, the reasoning being that substantial savings have accrued to absorb these costs. However, those illusive “savings” may quickly disappear and reduce or totally eliminate any surplus, a portion of which should have been returned to the contractor. Any change in scope requested by the owner or the architect/engineer should be cause for issuing a change order.

**Value engineering.** One of the many functions of a project manager administering a GMP contract will be to look for savings throughout the life of the project. All subcontractors and vendors should be requested to review their work with an eye toward developing possible cost savings. As these suggestions are received, the project manager must review and analyze them to determine whether a savings in one trade may result in an increase in another trade, in effect resulting in no savings at all.

This process of “value engineering” has received its share of criticisms, and in several cases, rightly so. For example, the substitution of two small rooftop exhaust fans for one larger unit may result in a savings in the mechanical portion of the work, but will it add costs to electrical circuitry and an additional framed rooftop opening? All such “value engineering” suggestions should be routed through the architect and engineer for comment before being formally submitted to the owner. The more adept a contractor becomes at developing meaningful cost
savings or value engineering suggestions, the easier it will be to build a solid reputation as an effective administrator of GMP contracts.

**GMP contract pitfalls.** The following are some pitfalls to avoid when administering a GMP contract:

- If the GMP was based upon less-than-complete plans and specifications, carefully review all future design development drawings to ascertained that the scope of work emerging as a “for construction” set is what was anticipated by the contractor initially, complete with inclusions and exclusions. If it appears that this scope has deviated from the original concept, alert the owner immediately and identify the changes and their respective costs.

- When receiving value engineering cost savings, review them carefully with all related suppliers and subcontractors to verify that the actual savings being suggested are, in fact, true savings and that no hidden costs lurk somewhere down the line.

- Resist the owner’s request to submit “actual costs” to date versus “estimated costs” early in the project. Any early “savings” may dramatically change as later costs develop. Respond to any such requests by saying that it is too early to project true costs at this stage of the work.

- Do not allow scope increases or decreases to occur without increasing or decreasing the guaranteed maximum price, and do this as quickly as possible.

- Instruct field supervisors to identify all materials and equipment, and attach signed receiving tickets with the project name, number, and where the item was used. This will make it much easier to verify costs if and when a detailed audit is required.

**Construction manager contracts**

Construction manager (CM) contracts have gained much popularity in recent years as a project delivery system for several reasons:

- The CM concept allows an owner to engage a construction professional to work with their design team as the project progresses through the design development stage, thereby utilizing the contractor’s knowledge of costs, constructability issues, and local market conditions.

- It essentially provides an owner with an arm’s-length management team, allowing them to avoid a third-party relationship with a builder.
The Construction Management Association of America (CMAA) defines CM work as follows:

- A project delivery system comprised of a program of management services
- Defined in scope by the specific needs of the project and the owner
- Applied to a construction project from conception to completion, to control time, cost, and quality
- Performed as a professional service under contract to the owner by a construction manager
- Selected on the basis of experience and qualifications of the CM firm
- Compensated on the basis of a negotiated fee for the scope of services rendered

The CM concept can be subdivided into the following:

- **CM—For Fee (also referred to as Agency):** A process whereby the required construction management services performed by the CM are reimbursed via a fee based upon a percentage of costs. The final, ultimate cost of the project is not guaranteed—it is what it is.

- **CM—At Risk:** The CM in this case also provides all required construction management services, including reimbursable expenses and a fee based upon a percentage of costs; however, the CM guarantees the final cost of the project. Some critics of this form of CM contract charge that the CM now serves two masters, the owner and their own company since decisions may be made that favor the CM’s bottom line instead of the client’s interests. Any CM with such a reputation will soon be out of business, making this the biggest counterargument to the two-masters proposition.

**Construction management services during preconstruction and construction.**

The CM will provide professional staff to the owner prior to or during the design phase—including estimating, scheduling, purchasing, and project management. The purpose being to develop the owner’s construction program with the design development team in order to insure it meets the client’s schedule and budget restraints. The CM may provide these services as a lump-sum proposal or cost-plus-a-fee, with or without a GPM. The owner may or may not elect to award the second phase, the construction phase of the project once the preconstruction portion is concluded.

Regarding construction services, the CM provides the staff and related facilities to administer and manage the construction project, acting as
the owner’s agent. During construction, the CM will be awarded either an “agency” or an “at-risk” contract.

Of course, many owners engage CMs to perform both functions—preconstruction and construction services—so one contract may be issued incorporating both phases. Some contracts have an escape clause, however, so if the owner is not satisfied with the CM's performance during the preconstruction phase, the construction portion of the contract can be voided, allowing the owner to seek the services of another CM.

The preconstruction phase of a CM contract. One major advantage of the CM process is that an owner can obtain the services of a team of construction professionals to act on their behalf during the preparation of the project’s design. The CM’s staff of experienced professionals, having day-to-day contact with subcontractors, local labor pools, equipment manufacturers, and material suppliers (as well as a detailed database of construction component costs) can provide invaluable assistance in determining the most cost-effective design commensurate with the owner’s budget and project delivery dates. A clear understanding of the services required by the owner is essential in establishing a comprehensive list of reimbursable expenses assigned to these activities.

CMAA’s owner and construction manager contract. CMAA Document A-1—the Owner and Construction Manager contract (2005 edition) includes detailed information regarding the basic services associated with the predesign, design, and construction services to be provided by a construction manager. In general, this includes the following:

- **Predesign phase:** Tasks include working with the owner to develop a management plan, selecting an architect, developing a master schedule, developing a budget and preliminary estimate, and fostering a management information system.

- **Design phase:** Work to do in this phase includes monitoring the designer’s compliance with the owner’s program, reviewing the design documents, making revisions to the master schedule, preparing estimates as required, performing value engineering, advising on contract awards, prequalifying bidders, conducting pre- and postbid conferences, and developing MIS programs for scheduling, cost reporting, and cash flow.

- **Construction phase:** Providing project management is part of this phase, as well as conducting cost administration and analysis procedures. Monitoring safety, schedules, costs, changes in scope, and close-out and occupancy procedures are other tasks that must be handled.

Some contracts do not prohibit construction managers from performing certain work tasks with their own forces if they are experienced in
these tasks and can demonstrate that their involvement will be cost-effective. In that event, the CM is allowed to include a certain percentage for administrative costs and profit just as though that portion of the work had been subcontracted to another firm.

**CM fees.** The fee charged for construction manager services varies depending upon whether preconstruction and construction services are required, and whether the CM will be a “for fee” or “at risk” contract. Fees in either case are significantly lower than those charged by general contractors performing lump-sum or GMP work because the CM is reimbursed for most field-incurred expenses; therefore, most of the fee will go to the contractor’s “bottom line.”

These “reimbursable expenses” are specifically listed in the CM’s proposal, and their “cost” includes an applied percentage for overhead and profit. These reimbursables are referred to as “reimbursables with a multiple”—in other words, the owner will pay the CM for specified costs multiplied by a factor of 1.5 or 2.0, or whatever is agreed upon. Therefore, the cost of a superintendent’s weekly salary, including fringe benefits, may possibly be $1500. At a multiple of 1.5, the owner will agree to pay the CM $2250 for the “cost” of this superintendent’s services; at a multiple of 2, the super’s cost is billed at $3000 per week.

Exclusive of preconstruction services and reimbursables, a “for fee” CM will be in the range of 2 to 4 percent whereas the fee for a CM “at risk” could be as high as 8 percent. Preconstruction services are often quoted on a lump-sum basis in the proposal that includes specific duties and responsibilities during that phase and a time frame for carrying out those duties and responsibilities.

**CM contract pitfalls.** One of the pitfalls to avoid in administering a CM contract is failure to include a complete and inclusive list of reimbursables for field-related expenses (which is why a CM will administer a project from the field, transferring all office-related project functions to the field, thereby removing those costs from their central office overhead).

A typical CM list of standard reimbursables includes the following:

- **Project Field Office Set-Up:**
  - Office complex, trailers, security fencing
  - Office equipment, duplicating machine, computers, miscellaneous (staplers, hole punches, and so on)
  - Utility connections for telephone, data, water/sewer (if applicable), electricity
  - Signage
  - Printers and scanners
Office furniture—desks, chairs, filing cabinets, conference tables
All IT-related costs, Internet connections, wireless costs, and so on

Project Field-Office Expenses:
- Supplies for office equipment, periodic maintenance
- Copy machine supplies
- Fax machine supplies
- Utilities—power, telephone, sanitary, water
- Postage, package deliveries, overnight delivery service
- Wireless charges
- Reproductions
- Automobile and trucking expenses; repairs
- Travel expenses
- Security
- Office maintenance and cleaning services

Site-Related Expenses
- Engineering (if requested)
- Initial survey, interim lay-outs, final survey
- Testing
- Shop drawings—receipt, review, and transmission to A/E, and then their return to the appropriate subcontractor/vendor
- As-built drawings (either preparation, or the review of drawings prepared by others)
- Safety/first aid
- Photographs
- Project Maintenance (if requested)
- Site security—fencing; including maintenance, lighting
- Erosion control
- Access roads—installation and maintenance
- Fire extinguishers and maintenance of same
- Personal safety equipment
- Portable toilets—delivery and periodic maintenance
- Clean-up/dust control
- Dumpster services
- Trash chutes
- Pest control

The joint venture agreement
In today’s marketplace, large national and international building firms are venturing into new geographic areas seeking work to increase or maintain their already substantial annual volume. These incursions are often the result of their national account clients building in a new
geographic area, or construction giants who are just looking to increase their market share. Expansions into local markets may offer opportunities to established local contractors. Having little to no experience with local subcontractors, vendors, and labor markets, large contractors may seek out local partners to work with them in what is known as a joint venture. This can benefit both firms if the joint venture agreement is properly prepared, allowing shared responsibilities and shared profits to enrich both parties. A typical joint venture agreement (contract) is set forth in Figure 2.4 for those interested in pursuing this type of work.

**Turnkey contracts**

Turnkey contracts are often associated with the process engineering industry in the design and construction of petrochemical and chemical plants where the owner is also buying the design and engineering expertise of the contractor. Although there are several variations on the turnkey contract concept, the most universally accepted definition is a project whose costs will not be paid until the contractor completes the project and “turns the keys” over to the owner. In a turnkey project, the cost of funds required by the contractor to pay for all expenses incurred over the life of the project will be included in their total project costs. Monthly requisitions are not submitted to the owner for payment, but once the project has been completed and accepted, the contractor receives payment in full.

**Build-operate-transfer**

The build-operate-transfer (BOT) concept gained popularity in the last three decades of the twentieth century, but more so in Europe and Asia than in the United States. It is a process whereby the builder/developer provides architectural, engineering, construction, and financial services to construct a project which they will not only build, but also operate for a specific number of years before transferring the title to the owner. These projects are applicable where a revenue-producing facility will be constructed since the concept of BOT is based upon the builder/developer receiving sufficient revenue to cover design, construction, financing, and operational costs while also generating a profit. BOT-type undertakings typically appear in the public sector and consist of such revenue-producing projects as toll roads, bridges, and tunnels. Although dozens of these BOT projects, and their variations, have been built in Asia, Great Britain, and Europe, the Dulles Toll Road in Virginia is one of only a few of America’s ventures into this sophisticated project delivery system.
The Start of the Construction Process

Contracts with government agencies

Local, state, and federal public agencies have contract forms that sometimes borrow heavily from those of the American Institute of Architects (AIA) or Associated General Contractors of America (AGC). They will also include pages of various local, state, and federal laws and ordinances,
The Start of the Construction Process

34 Chapter Two

1.2 No payment shall be made by the Joint Venture to any of the parties hereto in reimbursement of expenses incurred by such parties in connection with the preparation of the bid for and securing the award of the construction contract, unless otherwise agreed in writing.

1.3 It is the intent of the parties hereto that the joint bid contemplated and provided for herein shall be satisfactory and acceptable to both parties. If the parties are unable to agree upon a joint bid this Joint Venture shall terminate upon written notice by the dissenting party to the other party or parties, which written notice shall be delivered to the other party or parties prior to the time of the bid, and, in such event no party shall have any liability to any other party or parties.

1.4 This Agreement shall not be interpreted or construed so as to extend beyond the submission of such joint bid and the performance of such construction contract, nor to create any permanent partnership or permanent Joint Venture between the parties and shall not limit any of the parties in their right to carry on their individual businesses for their own benefit, including other work for the Owner.

2. PROPORTIONATE SHARES

2.1 Except as otherwise provided in Paragraphs 4.2 and 4.3 hereof, the interest of the parties in any profits and assets and their respective shares in any losses and liabilities that may result from the filing of such joint bid and/or the performance of such construction contract, shall be as follows:

<table>
<thead>
<tr>
<th>Party</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

with such percentages being referred to hereinafter as the respective party’s Proportionate Share.

2.2 It is the intention of this Agreement, and the parties hereby agree that in the event of any losses arising out of, or resulting from the performance of said construction contract, each party hereto shall assume and pay its Proportionate Share of such losses. If for any reason any one of the parties hereto sustains any liabilities or is required to pay any losses arising out of or directly connected with the performance of such construction contract, or the execution of any surety bonds or indemnity agreements in connection therewith, which are in excess of its Proportionate Share in the losses of the Joint Venture, the other party or parties shall reimburse such party in such amount or amounts as the losses paid and liabilities assumed by such party exceed its Proportionate Share in the total losses of the Joint Venture, so that each member of the Joint Venture will then have paid its Proportionate Share of such losses; and to that end each of the parties hereto agrees to indemnify the other party or parties against and to hold it harmless from any and all losses of said Joint Venture that are in excess of such party’s Proportionate Share. Provided, however, that the provisions of this sub-paragraph shall be limited to losses that are directly connected with or arise out of the performance of said construction contract and the execution of any bonds or indemnity agreements in connection therewith, and shall not relate to or include any speculative, prospective, incidental or indirect consequential losses that may be sustained or suffered by any of the parties hereto.

2.3 The parties shall, from time to time, execute such applications for bonds and indemnity agreements, and other documents and papers as may be necessary in connection with the submission of said joint bid for and the performance of such construction contract. Provided, however, that the liability of each of the parties hereto under any agreements to indemnify a surety company or surety companies shall be equal to the Proportionate Share of each of said parties in the Joint Venture.

FIGURE 2.4 (Continued.)

as well as executive orders that must be complied with. Under the canopy of Equal Employment Opportunity (EEO), or provisions for fulfilling requirements for Disadvantaged Business Enterprises (DBE), Minority Business Enterprises (MBE), Women-Owned Business Enterprises (WBE), and the Americans with Disabilities Act (ADA), these supplemental or special conditions are often in print so small as
2.4 If any of the parties hereto is a subsidiary of another corporation, the performance by such subsidiary of the obligations assumed hereunder shall be guaranteed by the parent corporation of any such subsidiary.

3. MANAGEMENT OF JOINT VENTURE

3.1 Authority to act for and bind the parties to this Joint Venture in connection with all or any part of the performance of said construction contract shall be vested in the Management Committee, which may, from time to time delegate all or any part of such authority to one of the parties and/or to any individual or individuals upon unanimous consent of the parties. Neither the Management Committee nor any party hereto shall have the authority to act for or bind any other party except in connection with the performance of said construction contract. Except as provided in Paragraphs 4.2 and 4.3 each party shall have a voice in the Management Committee equal to its Proportionate Share. Except as otherwise noted herein the Management Committee may act upon consent of the party or parties having a Proportionate Share or Shares totalling more than fifty percent (50%). The parties hereby designate the following individuals to represent them on the Management Committee:

<table>
<thead>
<tr>
<th>PARTY</th>
<th>REPRESENTATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Such designations may be changed by any party at any time upon written notice to the other parties by the Chief Executive of such party.

3.2 is hereby designated as the Managing Party, subject, however, to the superior authority and control of the Management Committee. The Managing Party, shall appoint the Project Manager through whom the Managing Party shall have direct charge over and supervision of all operational matters necessary to and connected with the performance of said contract, except as otherwise provided herein.

3.3 Any delegation of authority to any individual or party may be revoked by majority vote of all the parties; provided, however, that if the authority of the individual serving as Project Manager is revoked, the Managing Party shall have the right and obligation to appoint another individual to serve in that capacity who is acceptable to the parties hereto.

3.4 Decisions (or, at their option, the establishment of Guidelines to be followed by the Managing Party) regarding the following matters shall be made upon the unanimous vote of the Management Committee:

a.) Significant financial matters such as borrowing, debt guarantees, lease commitments and the investment policy with respect to Joint Venture funds.

b.) The sale of Joint Venture assets; including the terms of such sale and the agent therefor, if any.

c.) Settlements, in excess of a threshold amount set by the Management Committee, of claims or litigation by or against the Joint Venture.

d.) Transactions between any joint venturer and the Joint Venture, including agreements, if any, concerning rates of payment or reimbursement for employees, equipment, temporary or permanent materials, or management, data processing and/or other services.

FIGURE 2.4 (Continued.)
country by the Department of Labor, for laborers and tradesmen hired to work on federally funded construction projects valued in excess of $2000. Davis-Bacon also applies where federal funds have been provided for local and state projects. A prevailing wage rate schedule is included in the bid documents for the contractor’s use in preparing their estimate and, if awarded a contract, these rates are to be employed as a minimum wage for all workers hired for the project.
The Start of the Construction Process

The Start of the Construction Process

The defaulting party shall have no representative on the Management Committee and shall have no right to participate in the affairs of the Joint Venture until either (1) all of the defaulted contributions and default interest have been paid to the Joint Venture or (2) distributions to the non-defaulting parties have included repayment of all of the excess contributions and payment of all default interest.

4.3 If any party hereto shall dissolve; become bankrupt, or shall file a voluntary petition in bankruptcy, the remaining party or parties shall do all things necessary to wind up the affairs of this Joint Venture, including the completion of said construction contract, the collection of all monies and property due to the Joint Venture, the payment of all debts and liabilities of the Joint Venture, and the distribution of its assets. Such dissolved or bankrupt party shall have no further voice in the performance of said construction contract or in the management of the Joint Venture, nor shall any trustee, legal representative, or successor of any type. The participation of such dissolved or bankrupt party, or its representative, in the profits of the Joint Venture shall be limited to that Net Proportion (Contributions of defaulting party minus default interest charges) which the contributions of such party to the working capital of the Joint Venture bears to the total contributions to such working capital made by all of the parties, but such dissolved or bankrupt party and its representatives shall be charged with and shall be liable for its full share, as fixed in Section 2 hereof, of any and all losses that may be suffered by the Joint Venture under said construction contract, or any additions or supplements thereto or modifications thereof.

5. BANKING AND ACCOUNTING

5.1 All contributions of working capital made by the parties hereto, and all other funds received by the Joint Venture in connection with the performance of said construction contract, shall be deposited in such bank or banks as the parties may designate in separate bank accounts bearing the name of this Joint Venture. Withdrawals of such funds may be made in such form and by such persons as the parties may from time to time direct. All persons authorized to draw against the funds of the Joint Venture shall be bonded in such company or companies and in such amounts as the parties shall determine.

5.2 Separate books of account of the transactions of the Joint Venture shall be kept in accordance with generally accepted accounting principles. Such books, and all records of the Joint Venture, shall be available for inspection by any party at any reasonable time. Periodic audits shall be made of such books at such times and by such persons as the parties may direct, with a certified audit performed annually (unless otherwise agreed, in writing, by the parties hereto) and copies of the audit reports shall be furnished to each party. Monthly financial statements and cost reports shall be prepared, with contract profit reported on a Percentage-Of-Completion method. No less frequently than every three months forecasts of cash flow, final contract revenue, cost and profit and reports setting forth the status of change requests, shall be prepared and copies furnished to each party. Upon completion of the construction contract, a final audit shall be made and copies of such audit report shall be furnished to each of the parties.

6. MISCELLANEOUS

6.1 The parties may determine from time to time during the course of this Agreement that some of the assets held and acquired by the Joint Venture may be divided among or paid to the parties in accordance with their Proportionate Shares. Upon the completion of the construction contract, the assets held and acquired by the Joint Venture shall be divided between the parties and the profits or losses accrued in the performance of said contract shall be divided between or paid by the parties, as the case may be, in accordance with the terms of this Agreement, and this Agreement shall then

FIGURE 2.4 (Continued.)

This “prevailing wage rate” is generally close to union labor rates and includes not only the hourly wage rate for each trade but also a provision for fringe benefit levels, which if not met by the contractor, must be paid to the worker “in kind.” For example, if a wage rate of $15 per hour is required and fringe benefits worth another $5 per hour are also mandatory, a contractor must account for $5 in fringes, or add any shortfall to the worker’s weekly paycheck. The only workers who can be paid
less than the prevailing wage are those classified as apprentices and trainees registered in state-approved apprenticeship or training programs.

The contract work hours and safety standards Act. The contract work hours and safety standards Act (CWHSSA) requires the contractor to pay time and a half for overtime hours (over 40 in any workweek).

The Copeland Act. The Copeland Act (Anti-Kickback Act) makes it a crime for anyone to require a labor or mechanic employed on a federal of federally assisted project to kickback any part of their wages. Some disreputable contractors, required to pay Davis-Bacon wage rates, wages
that were higher than those workers earned previously on private projects, required these employees to kickback a portion of their weekly wages. This law makes the practice a crime.

Certified payroll requirements. Minimum hourly rates for skilled and unskilled labor should be established and included in the contract documents, where a certification of compliance is required (Figure 2.5) with the submission of weekly payroll costs on special forms provided in the bid documents (Figure 2.6).

These certifications, following the provisions of the Davis-Bacon act must be strictly followed since falsification is a violation of federal law. For the project manager embarking on their first public works project, it is critical that they read all of the bid documents, particularly the general, supplementary, and special conditions section of the specifications.

General and supplementary provisions. In the general and supplementary conditions section of the specifications, there are stipulations dealing with subcontractors and methods by which equal opportunity requirements are to be met. Some sections of the specifications may dictate how a site logistics plan is to be established, while other items include the various close-out procedures and requirements that must be addressed.

Special conditions. The special conditions portion of the contract specifications in many public works projects include limitations on fees to be applied to change-order work, and if present, these provisions should be included in any subcontract agreements.

A typical requirement:

On work performed by a general contractor with their own forces, their allowance for overhead and profit will likely be as follows:

For amounts up to and including $5000 15% overhead and profit
For amounts between $5001 and $25,000 10% overhead and profit
For amounts exceeding $25,000 5% overhead and profit

For work performed by subcontractors, the general contractor is allowed to include 5-percent overhead and profit.

Subcontractors are permitted the same overhead and profit as that just outlined for the general contractor performing work with their own forces.

Total subcontractor fees, including those of their subcontractors, cannot exceed the amounts stipulated in the preceding section.

Requirements for payment for the offsite storage of materials and equipment are frequently spelled out in this section of the specifications. If materials or equipment are stored in a location any distance from the
jobsite, there may be provisions in the general, supplemental, or special conditions requiring the contractor to reimburse the inspector for any costs incurred to travel to that area and to inspect the item being requisitioned.

Subcontractors need to be made aware of these provisions at the time of contract negotiations to avoid misunderstandings at a later date. The project manager should never assume that the subcontractor has read and
The Start of the Construction Process

FIGURE 2.6
Typical certified payroll reporting form.
understood all of these miscellaneous provisions. It has been the author’s experience that very few subcontractors thoroughly read any of these special, general, and supplementary conditions, and when brought to their attention during the project they seemed upset that they were expected to abide by such provisions.

The notice to proceed in a Public Works project. This document, generally in the form of a letter, transmitted to the contractor by the government agency, is the official notification of the starting date of the contract—the date from which the contract time will be charged. In some cases, there may be two Notices to Proceed: the first one issued for mobilization of the contractor’s field office (the contract timeclock generally does not start with this notification), and the second one stipulating when the contractor is to commence construction (this one does start the contract clock).

Public Works provisions that can affect subcontractor negotiations. Prompt payment provisions are being included in an increasing number of public works projects. The “pay-when-paid” clause in many general contractor-subcontractor agreements will therefore be void when these prompt payment clauses are included in government contracts. The prompt payment provisions typically state that the general contractor is obligated to pay their subcontractors within 30 days of receipt of payment. These subcontractors, in turn, must pay their subcontractors within 30 days of receipt of their payment. If payment is to be delayed, the contractor or subcontractor must respond in writing stating the reason for the delayed payment (for example, subcontractor is in default of the contract, or must replace defective work, or has failed to pay the vendor).

Change-order clauses in government contracts. Some contracts may contain clauses which state that no changes other than those for project enrichment or extra work ordered by the owner’s representative or architect will be approved. The term enrichment can have one meaning for the owner, but a different one for the contractor.

What about items added when the local building official or fire marshal walks through the job on an inspection tour? If additional exit lights are required or added emergency lights are requested, is this a legitimate change order falling within the concept of enrichment? A contractor could argue strongly that this is a compliance with code requirement, and without these extra cost items the project is worthless since it will not receive a certificate of occupancy. That surely qualifies these added cost items as enrichments.

AIA Document A201, 1997 edition, specifically mentions that the contractor is not required to ascertain that the contract documents are in accordance with building codes (more on this subject in Chapter 3).
Administering contracts with public agencies can be a demanding task. The project manager should be thoroughly familiar with all phases of the contract because they could probably be enforced to the letter by an overzealous inspector.

**Watch for owner-inserted changes to the standard contract.** Rare is that contract for private sector work that’s not amended by an owner’s lawyer. Some of the amendments to the base contract or the general conditions attachment can be deadly if not recognized by the project manager before the contract is executed. Traps await those who do not take the time to read and understand all of the terms and conditions in a contract, as well as the content of all of the exhibits and addenda attached to it. The following is a sample of some of the more onerous provisions, and the sections of the contract and general conditions where such amended articles might be found:

**Article 3 of the General Conditions pertaining to the Contractor**
- Regarding shop drawings—“The contractor shall submit complete and accurate submittal data at the first submission. If the submittal is returned requiring resubmittal, only one such additional submittal will be reviewed at the owner’s cost. Any additional submittals will be reviewed at the contractor’s cost.”
- Schedules—“If any of the work is not on schedule, the contractor shall immediately advise the owner in writing of proposed action to bring the work back on schedule. In such an event, the owner will require the contractor to work such additional time over regular hours (including Saturdays, Sundays, and holidays) at no additional cost to the owner, in order to bring the work back on schedule.”
- Contractor responsibility for details not shown on the drawings—“The contractor has constructed several projects of this type and has knowledge of the construction and finished product.” This is a trap yet to be sprung. If some minor portions of work are omitted from the contract documents, the contractor may be required to provide them at no cost since they have acknowledged having constructed several similar projects.
- “If the drawings and specifications conflict, then the greater quantity and/or quality shall apply.”

**Article 7 of the General Conditions—Changes in the Work**
- “The owner at all times shall have the right to participate directly in the negotiations of change-order requests with subcontractors and material suppliers.”
“If the owner and contractor are unable to agree on the amount of any cost or credit to the owner resulting from a change in the work, the contractor shall promptly proceed with, and diligently prosecute, such change in work and the cost or credit to the owner shall be determined on the basis of reasonable expenditures and savings.” This means that you cannot refuse to perform extra work if the cost of this work is in dispute prior to starting the work. The preferable method in such a case is to invoke the Construction Change Directive procedures, as outlined in the standard AIA contract.

Article 9 of the General Conditions—Payments and Completion

“Unless otherwise agreed to in writing by the owner, the project shall not be considered substantially complete if the items in the punch list would reasonably require more than two weeks to complete.”

Article 13 of the General Conditions—Miscellaneous Provisions. The following provision type is applicable primarily to renovation and rehab work.

“The contractor shall review the structural capability of the structure prior to allowing installation of temporary lifting devices or staging equipment or the temporary off-loading and storage of materials. Costs associated with the architect’s review or redesign of structure to accept the temporary construction loading shall be borne by the contractor.”

Contingency accounts may include limits on what can be considered a contingency item, such as outlined in the following:

“Any estimating errors or other errors in the contractor’s bid are not cause for reimbursement from the contingency account.”

“Any funds remaining in the contingency account will be cause for a deduct change order and cannot apply to the project’s overall savings.”

“It is understood that the amount of the contingency reserve is the maximum sum that the contractor will seek or is entitled to recover from the owner for costs that fall within the categories and definition of contingency costs.”

The potential for restrictive clauses in the contract documents, sometimes in obscure places, makes it important for a project manager to carefully review the owner’s agreement, highlight the important provisions, and be ready to deal with them if the occasion arises.