Chapter 4

PROJECT MANUAL GUIDE

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**00 00 GENERAL GUIDELINES**

A. This Guide provides aid to the Designer in preparing the Project Manual, so it complies with requirements and customary practices of the State Building Commission. The staff of Campus Planning and Construction Administration at MTSU (CPCA) is available to discuss these requirements.

B. Hardcopy publishing:
Print Project Manuals on 8½” x 11” pages. Each Section shall start on a right hand-page, with sections longer than one page printed two-sided. Binding can be in 3-ring binders or 19-ring plastic cleat binders. **Do not use** wire, glue, or crimp bindings.

C. Class of Documents: Before assembling the Project Manual, most likely at the time outline specifications are developed, consult CPCA on the nature of the Contract to be procured and which class of standard *Bidding Documents* is most appropriate. Classes require distinct standard documents in some cases, such as bid forms, but also use some documents in common. Further detail follows in this guide. The classes of *Bidding Documents* are as follows:

1. **General Work** documents are intended for most construction over $100,000. This normally includes any procurement via Design/Build, Best Value, and Construction Management, for which the project manager should instruct the Designer on the extent to which these need Bidding Requirements, Contracting Forms, and Conditions:
   a. Traditional design / bid / lump sum construction
   b. Alternative delivery “Best Value” procurement and lump sum construction
   c. Alternative delivery “CM/GC” trade bidding for GMP construction services

2. **Non-Construction** documents are intended for direct purchases not involving on-site construction and do not provide alternates, unit prices, and allowances options.

D. Standard *Bidding Documents*

1. Become familiar with the standards that CPCA provides for most of Divisions 00 and 01. Each bears an **identifying footer**. Layouts “a” and “b” below are shown here as for Portrait pages, while Landscape have left/right opposite.

   a. **Since July 2011**, identifying information shows:
   
   Posted in PDF format  \hspace{2cm} \downarrow \text{how posted on website}  \hspace{2cm} title \hspace{2cm} Commissioning \hspace{2cm} 01 91 13 – 1
   
   General Work  \hspace{2cm} \downarrow \text{documents class} \hspace{2cm} \downarrow \text{edition, source, file, page} \hspace{2cm} \downarrow \text{number and page} \hspace{2cm} \downarrow \text{title} \hspace{2cm} Commissioning \hspace{2cm} 01 91 13 – 1
   
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   b. **June 2011** documents lack the documents class identification in the left side second line, and instead show:

   Posted in PDF format  \hspace{2cm} \downarrow \text{how posted on website}  \hspace{2cm} title \hspace{2cm} Commissioning \hspace{2cm} 01 91 13 – 1
   
   General Work  \hspace{2cm} \downarrow \text{edition, source, file name} \hspace{2cm} \downarrow \text{number and page} \hspace{2cm} \downarrow \text{title} \hspace{2cm} Commissioning \hspace{2cm} 01 91 13 – 1
   
   Jun 11 CPCA s019113 Page 1 of 1

   c. **Older editions** that are still in use have a footer with the section and page number centered, and a title to the right with identifying script beneath that title, such as,

   \begin{align*}
   \text{Jan} & \quad \text{CPCA} & \quad \text{01 29 16} & \quad \text{Page} \quad \text{1 of 1} \\
   \end{align*}

   \text{Date of issue}  \quad \text{Source}  \quad \text{Section Number}  \quad \text{Version}  \quad \text{Pages}
2. **Front-End Review Checklist:** The *Designers’ Manual Administrative Forms* document F475 lists standards with their current edition dates, key letters for *General Work*, other specialty sub-groups of General Work, and *Non-Construction*, to indicate which class(es) each document fits and instructions to “use”, “fill-in”, or “create”. Do not edit or retype documents marked “use” unless so approved. When retyping or editing, omit the CPCA footer because the document will no longer be standard. The CPCA website contains the intended Standards posted in native Word™ or Excel™ format for suitable editing.

E. Prepare the Project Manual in accordance with the *CSI Manual of Practice* or *Project Resource Manual*, unless otherwise approved. This *Project Manual Guide* and the standard *Bidding Documents* in the *Designers’ Manual* comply with CSI Masterformat 2004. Number and organize all bidding documents according to Masterformat 2004 and its more recent updates that follow the same numbering convention.

F. Tailor the Project Manual to the project. Do not include provisions which are inapplicable to the project. Ensure that Bidding and Construction Documents are thoroughly coordinated, complete, concise, and free from redundancy.

### 00 01 INTRODUCTORY INFORMATION

A. The COVER of the Project Manual may be any style or format that suits the Designer if a title page consistent with this guide is included. The cover shall at least include the project title.

B. The TITLE PAGE may be omitted if cover provides prescribed content. A title page, if used, shall provide: date; a project title including SBC project number, with subscript if used, institution name, and work name (that does not include “Phase” or “Modification”); County name(s); Owner; and, Designer, as shown at right-top.

C. Additional graphics and information are acceptable in both the Cover and Title page, provided the standardized content requirements are met. For example, the Designer may elect to add the names of consulting engineers, as shown at right-bottom.

D. Affix the DESIGNER’S SEAL AND SIGNATURE to the cover or title page only that provides the prescribed content or a specific Seals Page (normally 00 01 07). The statute requires the Designer’s seal and signature. Those of major consultants are recommended to ensure compliance (T.C.A. Section 62-2-306(b)).

### PROJECT MANUAL

Date of reference

**PROJECT**
166/002-01-2011
Middle Tennessee State University
Nuclear Reactor New Construction

**COUNTY**
County names(s)

**OWNER**
Middle Tennessee State University

**DESIGNER**
Name of Design firm
address
phone number

**CONSULTING ENGINEERS**
Name of discipline (i.e.: STRUCTURAL)
Name of consulting firm or individual
Name of second discipline etc.
E. Provide a Section 00 01 10 Table of Contents for the entire Project Manual. Do not refer to this as an index. A table of contents for each Division at its beginning is redundant and discouraged.

F. Provide a Section 00 01 15 List of Drawings. Differentiate between those bound within the Project Manual and those bound as separate companion volume(s). Drawings bound into the Manual should be after the specifications, thus maintaining consistency with the order in which this list follows the list of specifications in the Table of Contents.

G. Provide a Section 00 01 20 List of Schedules for tables of specification data, such as door, window, and hardware schedules that are at the end of the Project Manual or a separate companion volume(s). Differentiate between the two. Do not redundantly list schedules incorporated into a specification section or a drawing. If drawings and schedules are both bound in the project manual, the drawings should be first after the specifications, which is the order of their listing in these sections.

**PROCUREMENT REQUIREMENTS**

**00 10 SOLICITATION**

A. Basic information:

1. **Plan Rooms:** document F517 of the Administrative Forms provides a list of commonly used plan rooms. During CDP, decide the specific list for a project.

2. **Plan Deposit:** This should be approximately the actual cost of reproducing one set, rounded to the nearest $10 and, except in rare cases, neither less than $50 nor more than $1,000 for each set. For Limited Work and Non-Construction, it is typically zero.

3. **Where to submit bids:** Submit bids to the TBR’s Office of Facilities Development: 1 Bridgestone Park Nashville, TN. 37214.

4. **Deadline for Bid Submittal:** Except for locally managed Limited Work, the bidding coordinator will set the bid date and will make it known to the Designer and CPCA’s project manager.

B. Advertisement

The Project Manual does not require an Advertisement for Bids. Typically, TBR will prepare and issue a Public Notice form of advertisement based upon the Invitation.

C. Invitation to Bid or Request for GMP

1. The standards provide preferred wording and are formatted to provide space for filling in information for a particular job. The CPC A web site provides a downloadable document of each in Word™ format. Retype documents from scratch, or adapt a copy of the standard.

2. For General Work bidding, edit or emulate the standard section:

**00 11 16 Invitation to Bid.**

Fill-in the blank areas as follows:

a. **Project:** The SBC project number, institution name, and name of the Work as listed on the Title Page of the Project Manual.
b. **Designer**: The design firm name, address, contact number, and person who will be the primary source for obtaining Bidding Documents and channeling inquiries. Joint venture Designers should use a single address, contact person, and phone number.

c. **Brief Project Description**: Work description in 25 words or less.

d. **Bids will be received**:

e. **Bidding Documents may be examined**: List applicable plan rooms, giving name and city, omitting address and phone number.

f. **Bidding Documents may be obtained**: Indicate amount of plans deposit or fee for purchase, if any, as agreed with CPCA project manager.

g. **Prevailing Wage Law** do not apply. If Federal or TDOT funding is part of the project, those wage rated might apply, but CPCA will make the determination.

3. **For GMP Trade Bidding Packages**, edit or emulate the standard:

   00 11 19 Request for GMP.
   
   Fill-in the blank areas as follows:

   a. **Project**: The SBC project number, institution name, and name of the Work as listed on the Title Page of the Project Manual.

   b. **New Contract or Amendment**: mark one based on CPCA project manager’s instruction.

   c. **Voluntary Alternates**: mark one, and if any allowed, stipulate limit or “no limit” based on CPCA project manager’s instruction. Proper design will eliminate the need for alternates. Never use the term “options.”

   d. **Roof Bond**: Fill-in as would be done for bid form (see those instructions at 00 40 / A.7.b on page 8 of this Project Manual Guide).

   e. **Contract Time**: Fill-in as would be done for bid form (see those instructions at 00 40 / A.9 on page 8 of this Project Manual Guide).

4. **For Non-Construction**, edit or emulate the standard section:

   00 11 66 Invitation to Bid.
   
   Fill-in the blank areas as follows:

   a. **Owner**: Middle Tennessee State University.

   b. **Owner’s Representative**: Fill in the design firm name, address, phone number, and contact person who will be the primary source for obtaining Bidding Documents and channeling inquiries. Joint venture Designers should use a single address, contact person, and phone number.

   c. **Project**: Fill-in the official project title and include the SBC number.

   d. **Brief Project Description**: Fill-in a Work description in 25 words or less.

   e. **Plan Rooms**: Fill-in list of applicable plan rooms, giving name and city. Omit address and phone number.

   f. **Cost of a hardcopy set of Bidding Documents**: Fill-in the amount that has been allowed by the Owner. Also include any related information about payment terms and third-party source.

   g. **Where to submit bids**: Office of Facilities Development: 1 Bridgestone Park Nashville, TN. 37214.
h. If by mail, submit to attention of the following: Fill-in additional mailing information, such as contact person and P. O. Box number, per the indicated version of *Bidding Documents* Section 00 22 20.

i. **Deadline for Bid Submittal:** the Bidding Coordinator will fill-in time and date.

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**00 20 INSTRUCTIONS FOR PROCUREMENT**

A. For *General Work* bidding, use

**00 21 13 Instructions to Bidders.**

B. For *General Work* request for a CM/GC GMP proposal, use

**00 21 19 Instructions for Producing GMP.**

C. For *Non-Construction*, use

**00 21 63 Instructions to Bidders.**

D. For investigation of existing conditions, bidders might need access to the site separate from a Pre-Bid Conference. The Owner will establish the restrictions, procedures, persons to contact, and other job-specific requirements for the project in a written section:

**00 22 13 Supplementary Instructions to Bidders.**

E. For *General Work* RFPs for Best-Value, add the standard

**00 22 16 Supplementary Instructions to Proposers.**

F. Add the appropriate location-specific version of

**00 22 20 Map to the Bid Opening Location.**

G. Hold a Pre-Bid Conference. If agreed to by the CPCA project manager, attendance might be mandatory, in which case the Designer shall be responsible for keeping a record of attendance and enforcing the requirement in evaluating the bids. Typically, the Conference will include a tour of the site or other opportunities for prospective bidders to investigate existing conditions. Provide a preliminary agenda. The Owner will establish job-specific requirements in a written section:

**00 25 13 Pre-Bid Meetings.**

H. Perform a detailed review with CPCA before using other instructions.

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**00 30 AVAILABLE INFORMATION**

A. In addition to the Bidding Documents, provide any pertinent information to bidders. Such information could include preliminary scheduling, geotechnical data, description of existing conditions, photographs, pre-existing drawings, etc.

I. Whenever providing such additional information, stipulate the following:
a. The information was gathered solely for the use of the Designer and not for use as a basis for calculations in preparing a bid.
b. Therefore, the using party accepts all responsibility for any interpretation of this information.

2. An example of asbestos survey information. It is available as

   00 31 26 Asbestos Survey Data.

3. An example of geotechnical report information. It is available as

   00 31 32 Geotechnical Data.

B. Include the standard section:

   00 36 66 Owner’s Central Office Accessibility.

C. Unless the current version lists no one, include the standard section:

   00 38 60 Disqualified Contractors & Subcontractors.

00 40 PROCUREMENT FORMS AND SUPPLEMENTS

A. For General Work bidding (not including CM/GC trade bidding), use

   00 41 13 Bid Form.

1. A Word™ document of the standard form is available for download from the CPCA website. Adhere to the standard wording and format as much as possible while editing the standard.

2. If combining subparagraphs to save space or adjust pagination, or omitting unneeded portions, renumber after completing edits to retain correlation of the instructions that follow.

3. Identify the project on each page by SBC Project Number, including subscript when applicable, then the institution name, and the work name. This is the same as instructed in 00 01 / B for the Project Manual title page. Preferred method is to put this in three lines in the space provided near the top of page 1. Put the same three lines in small font in the left side of the footer, which replaces the standard Posted, Class, and Edition (see 00 00 / D.1.c) information.

4. Subparagraphs A.1 – A.8. Do not alter; except, to save space. For example: A.1 & A.2 can be combined, A3 & A.4 can be combined, and A.5 – A.7 can be combined.

5. Subparagraph A.9 for addenda acknowledgement:

   a. If more than three lines are needed, add additional lines for the acknowledgement of Addenda.

   b. If issuing a new Bid Form by addendum, provide the acknowledgement information for addenda to date and provide a few extra blank acknowledgement spaces.


7. Subparagraph B.3 for roof bond:

   a. If project provides no roof, or the CPCA project manager does not request a roof bond, then delete this subparagraph.
b. If project includes installation of a roof, require a roof bond (See 00 60 / B of this Project Manual Guide) and stipulate criteria for the amount. Fill-in a criteria such as "an amount equal to the Base Bid"; "an amount equal to Alternate No. 1"; "an amount equal to __% of the Base Bid" (filling-in a percentage based upon the Designer's estimate); or, as a last resort, an actual dollar figure. An actual dollar figure runs an unnecessary risk of being inaccurate.


9. Subparagraph B.5 – B.7 for Contract Time:
   a. Liquidated Damages, whether for a single-duration project or with phases, shall reflect “a reasonable estimate of those damages that could result from delay”.
   b. For simple Contract Time with a single commencement, duration, and completion:
      1) In B.5, fill-in a number of days.
      2) In B.6, fill-in a dollar value for liquidated damages.
      3) Delete B.7, including the Phases table.
   c. For phased Contract Time with multiple commencements, durations, or completions:
      1) See Section 01 11 00 Summary of Work for Phase numbers (“1”, “2”, etc.).
      2) Delete B.5 and B.6.
      3) In B.7, fill-in the table with the specified Phase number, commencement criteria, number of calendar-days duration, and a dollar amount for liquidated damages.
         a) Commencement can be with a “general notice to proceed” or a “phase-specific notice to proceed” or substantial completion of a preceding phase or an activity outside the Contract; however, tying commencement to an activity outside the Contract, such as Spring Break or a fixed date, requires determining that the uncertainty of the bid and award timing will not affect it.
         b) Liquidated damages on a Phase can be zero if the only effect of late delivery is to delay the start of a subsequent Phase; however, this is rarely the case.

10. Paragraph D for Alternates:
    1) See Section 01 23 00 Alternates for Alternate numbers (“1”, “2”, etc.) and names.
    2) Add the Alternate name where space is provided after its number.
    3) Delete unused alternates or delete the entire Alternates portion if soliciting none.

11. For Unit Prices:
    1) See Section 01 22 15 List of Unit Price Items for Unit Price numbers (“1”, “2”, etc.) and names. See also the admonitions regarding administration of allowances in this Chapter and Chapter 6.
    2) Add the Unit Price name where space is provided after its number and add the unit at far right where space is provided after “per”.
    3) Add to or delete from the list to match the specification or delete the entire unit prices portion if soliciting none.
B. For *Non-Construction*, use

**00 41 63 Bid and Agreement Form.**

1. The CPCA website provides the standard form in a downloadable Word™ document. This Bid Form also acts as the Form of Agreement. When completing it, compare it to the printed or web-posted standard and take care to preserve the formatted layout.

2. On page 1, fill-in the following:
   a. **Project:** the official project title and SBC number.
   b. **Owner’s Representative:** name and address of the design firm or other entity that will be serving in this capacity during bidding and the performance of the Work. Joint venture Designers shall use a single address.
   c. **Contract Time:** number of calendar days.
   d. **Liquidated Damages:** number of dollars per calendar day.
   e. **Terms of Agreement:** enumeration of the Contract Documents as released for bidding.

C. For *GMP Trade Bidding Packages*, the CM/GC will provide its own bid forms and bid envelopes to its trade bidders, separate from the documents prepared by the Designer. Also include the following unedited items:

1. **00 42 23 GMP Summary**
2. **00 42 71 GMP List of Trade Subcontracts**
3. **00 42 75 GMP Disclosure of General Conditions**

D. **Bid Envelope:**

1. For *General Work* bidding (not including CM/GC trade bidding), include

   **00 47 13 Construction Bid Envelope.**

2. For *Non-Construction*, include

   **00 47 63 Non-Construction Bid Envelope.**
00 50 CONTRACTING FORMS AND SUPPLEMENTS

A. The Instructions to Bidders contains Stipulations as to the form and completion of the Agreement and amendments.

B. For General Work, include the standard blank of the actual construction Agreement form

**00 52 13 Standard Form of Agreement.**

C. For Non-Construction, the Bid Form is the Agreement Form. See **00 40 / B**.

D. Include the sub-agreement for payment direct deposit

**00 54 33 ACH Credits Form.**

00 60 PROJECT FORMS

A. The State Building Commission requires bonds on awards over $100,000. Including the forms will not impose the requirement on lesser contracts. Project Manuals for Construction Management normally need only the bond forms on the initial GMP trade bidding package release; or, when a scope of work is being added that includes a roof, then a roof bond form might be needed. Otherwise, the bond is already established.

B. Include the standard State of Tennessee Contract Bond, which serves the dual purposes of a Performance Bond and a Labor and Material Payment Bond:

**00 61 13 Contract Bond.**

C. **Bond extension for roofs:** If the project installs a roof, coordinate the related provisions described at **00 10 / C.3.e** for a GMP or **00 40 / A.7** for a bid and include the standard roof bond. This adds two years for the roof system to the bond coverage of the basic one year correction period:

**00 61 43 Three Year Roof Bond.**
00 70 CONDITIONS OF THE CONTRACT

A. Include the standard sections:
   1. For General Work, use the AIA document A201 modified by CPCA:
      00 72 13 General Conditions.
   2. For Non-Construction use
      00 72 63 General Conditions.

B. For General Work, use
   00 73 16 Supplementary Conditions.

C. Prevailing Wage Rates Determination for General Work:
   1. In documents for a CM/GC amendment RFP, to produce trade bids for a GMP package that
      will be added to an existing Contract, include the same conditions.
   2. If a State Highway prevailing wage decision is issued, include:
      00 73 43 Supplementary Conditions: State Wages
      AND, include the state wage determination as provided by the Project Manager. It is the
      Project Manager’s responsibility to determine applicability and instruct the Designer.
   3. If required because of project funding that includes federal funds, include
      00 73 45 Supplementary Conditions: Fed Wages
      AND, include the federal wage determination as provided by the Project Manager. It is the
      Project Manager’s responsibility to determine applicability and instruct the Designer.

D. Unless the Owner specifically reviews and approves them, no other modifications or conditions
   are allowed. If approved, integrate them in proper sequence and referenced to the appropriate
   paragraph.
01 00 GENERAL REQUIREMENTS FOR ALL SPECIFICATIONS

A. Sections of Division 01 are unique as specifications in that they relate directly to Bidding Requirements and to all parts of the written Contract Documents. Sections of Divisions 02 through 49 constitute basic units of the total specification, covering requirements for one portion of the Work. Complex projects will require a complete and thorough Division 01. Simpler projects might not require much more than the standard sections for Division 01. Refer to CSI MasterFormat for a master list of section titles and numbers. Specific examples of specifying in accordance with the CSI format are given in the Manual of Practice. Throughout this Project Manual Guide there are instructions for coordinating standard sections.

B. Format specification sections in 3 parts: General, Products, and Execution. The page format as described by CSI is recommended. Augment, but do not repeat, the provisions already contained in the Bidding Requirements and Contracting Requirements. Tailor and coordinate Division 01 to the size and complexity of the project and to the requirements of Divisions 02 through 49. In Divisions 02 through 49, likewise do not repeat provisions already in Division 01. Do not assign work to trades in the specifications. The Conditions of the Contract establish the Contractor as responsible for all Work and expressly excludes the Designer from control of construction means, methods, and techniques. Specifications may establish qualifications for those performing a specific task.

C. Avoid Proprietary Specifications in the following manner:

1. Name a specific manufacturer only to establish a level of quality. Do not make Specifications proprietary unless there is sufficient justification that is well documented and must have CPCA’s approval.

2. Use Performance, Descriptive, or Reference Standard specifications to the greatest extent possible. Avoid de facto proprietary specifying by virtue of overly restrictive requirements. Whenever possible, include the names of three or more acceptable manufacturers that are of equal in quality and actually meet the specification.

3. When the Owner specifically permits, a specification may restrict manufacturers to a single source or short list of sources. In such cases, the specification must state the restriction explicitly. Standard language in CPCA documents makes all specifications generally subject to substitutions (with normal approval procedures) unless explicitly restricted. Similarly, if consideration of substitutions must be limited to pre-bid or another time frame, state it explicitly.

4. CPCA intends to promote the substitution of products of equal or better quality whenever possible, within a process of obtaining Designer approval before making the substitution. Standard Conditions and guide specifications provide a mechanism for this, even after the award of contract. The Contractor who submits a bid depending on post-bid approval of a substitution, however, does so at risk.
01 10 SUMMARY

A. Appropriate topics for the Summary include

1. Summary of Work:
   a. Work covered by Contract Documents (see B below)
   b. Phases (see D below)
   c. Work by Owner

2. Multiple Contract Summary:
   a. Summary of Contracts
   b. Work Sequence
   c. Contract Interface

3. Work Restrictions:
   a. Access to Site, and use of site and premises
      1) for Work, including parking, and staging
      2) restrictions on work hours
   b. Coordination with Occupants
      1) disruptions in services
      2) adjacent activities
      3) continuing egress for Owner and Owner’s clientele, when required

4. Project Utility Sources

B. Include in Summary at least a brief description of the work of the Base Bid.

C. Asbestos: Specify here whether the Work includes removal or abatement of friable or non-friable asbestos, in addition to the more detailed specifications in 02 82 00 – 99. Conditions clauses addressing abatement-hazards insurance set forth different requirements based on the form of asbestos. The person administering the award of contract shall rely on the description here when determining which insurance requirements apply.

D. Phases are distinct portions of Work with time requirements stipulated in the General Work Bid Form and not in the specification. Non-Construction can only use Phases that set a sequence dependency without set durations or liquidated damages.

If dividing the Work and Time into Phases:

1. Specify that each phase includes general mobilization, administration, demobilization, closeout, and other incidentals associated with it that are not specifically assigned to another Phase.

2. Specify that the Work includes the following Phases and list each Phase providing,
   a. numerically ordered name
      (i.e., Phase 1, Phase 2, etc.; no roman numerals or other alphabetic characters)
   b. a caption name (such as “Paving Parking Lots”)
   c. a specific description (such as “including site-prep, paving, striping, curbs, and appurtenances as shown on sheet A9 and applicable specifications”).

3. Ensure that all Work is assigned to a Phase.

E. Inform the Contractor of related conditions that could affect the intended Work. Address related work, restrictions, future phases and similar known factors.
F. Describe restrictions to access and use of premises. MTSU might have security regulations that could affect the Contractor's schedule. Have the Owner acquaint you with the controls at the facility. Describe the conditions for partial occupancy, if MTSU permits or requires any. Identify the extent of the Owner's on-site operations, if the Owner intends to continue these during construction. The Owner might have provided standard specifications of the institution or campus in the 01 14 00 series or written guidelines for development into specifications, such as the following:

1. Continuing occupancy during construction
2. Worker Conduct, such as Tobacco and Alcohol Restrictions, Worker Attire, and Interaction with students, employees, and the public
3. Coordination with campus safety and operations authorities
4. Curtailment of Work, such as Campus academic calendar, Special scheduled events restrictions on work hours, Systems interruptions, and Use of site
5. Facilities available to Contractor (unless complex enough to warrant specs in the 01 50s), such as loading docks, elevators, stairways, staging areas, worker parking, and utilities.

G. In Non-Construction jobs, particularly a contract for furniture to be delivered while a separate contract for new construction or renovations is still ongoing, establish clear expectations regarding close coordination of deliveries with another contractor controlling the site regarding the ability to move products directly into their final destination. If temporarily storing items on site before separately moving them to a final destination, or even having to store and stage off-site, ensure coordination with the controlling contractor.

01 20 PRICE AND PAYMENT PROCEDURES

A. Allowances (in General Work only):
   1. By specifying an allowance, the Designer assumes responsibility to monitor and control the use of the allowance and to ensure that Work does not exceed the allowance.
   2. Specify no unassigned or discretionary allowances. Use allowances only when unavoidable and with the CPCAC's approval. Preface allowance with the standard section:
      **01 21 13 Allowances.**
   3. In addition to the above as-is for administrative requirements, create a Section to list the allowances that specify the amount included in Contract Sum for Contractor's costs, procedures for selection, and reference to the appropriate detail specification Section. Create this list Section in the
      **01 21 15 List of Allowances.**
   4. If the project has phases or alternates, clearly define in which phase or alternate or both that each allowance occurs. Allowances that occur in more than one phase of the Work should be specified as a separate allowance for each Phase. When the acceptance of an alternate changes Allowances, specify the change according to their base work. Specify the increase associated with the alternate in the alternates section 01 23 00.
   5. In the appropriate referenced sections of later Divisions, specify the products or services and their incorporation into the Work as completely as known factors allow. Do not repeat the value of allowances; rather, refer back to these Division 01 sections for the values.
B. **Unit Prices** (in *General Work* only):

1. Use unit prices only if unavoidable and with CPCA’s approval. In discussing the possible use of unit prices on a project, consider the following issues:

   a. Do not use Unit Prices that require price proposal in the bid form into *Non-Construction*. Stipulated unit prices may be used or provisions for a bid form attachment or supplement that makes unit prices available.

   b. Are there questions to clarify which require specification in the listing or technical sections, such as Designer approval to proceed within the allowance?

   c. Should there be a cap on the degree of change allowed in unit prices under the renegotiation clause, perhaps expressed as a percent of the initial unit price?

   d. Should there be a time limit for invoking unit price work? Does relative nearness to the beginning or end of the job affect the validity of the unit price?

   e. Specifying a unit price requires also specifying a base quantity that results in an allowance equal to the unit price times the base quantity. The Designer assumes responsibility to monitor and control the use of the allowance and to ensure that Work does not exceed the allowance.

2. If unit prices are used, include:

   a. As-is the administrative requirements of
      
      **01 22 13 Unit Prices**

   b. A job-specific list of unit price items, as instructed below, based on
      
      **01 22 15 List of Unit Price Items.**

3. Specify unit price items with an item number, a reference to related sections, a Base Quantity, a Unit of measure, a Unit Price per unit, and a caption for the Work included that relates to a complete description in the related sections, following the example:

<table>
<thead>
<tr>
<th>Item</th>
<th>Related Sections</th>
<th>Base Quantity</th>
<th>Unit</th>
<th>Unit Price per unit</th>
<th>Work included</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>06 12 50</td>
<td>200</td>
<td>S.F.</td>
<td>$1.75</td>
<td>Replace door stops</td>
</tr>
<tr>
<td>2</td>
<td>07 50 70</td>
<td>1,000</td>
<td>S.F.</td>
<td>$1.25</td>
<td>Light switches</td>
</tr>
</tbody>
</table>

   a. **Item**: numeration for the list of items.

   b. **Related Sections**: the section number(s) in which detailed specification is found.

   c. **Base Quantity** is an allowance of units included in the contract:

      1). In related sections, distinguish Unit Price portions from portions not subject to unit price. For example, if 1,000 L.F. of pipe is shown in drawings, plus 200 to 300 L.F. of identical pipe is to be placed according to on-site directions of the Designer at a Unit Price, then a Base Quantity of 250 L.F. might be used. The related sections specify that the pipe shown in drawings is not part of the Base Quantity allowance for the Unit Price, but both (1,250 L.F.) are included in the Contract Sum.

      2) If a base quantity is intended to occur in more than one Phase, specify a separate unit price and base quantity for the portion occurring in each Phase.
3) If the acceptance of an alternate affects the base quantity, specify either:
   a) only the Base work in this section, and the increase in base quantity in the alternate section 01 23 00; or
   b) a separate unit price and base quantity in this section 01 22 15 with the description of work specifying that the base quantity is a part of the alternate and the alternate specification referring back to this section.

4) Never specify a base quantity of zero.

d. **Unit Price per unit:** In most unit price cases, the bid will solicit a price, and “(S)” will appear in the column in accordance with the specification. If stipulating a unit price in the specification, it shall reflect a current survey of actual local prevailing market costs, including direct and indirect costs except overhead and profit.

e. **Work included:** This can range from a one-word caption to a complete technical description. It is preferable to provide a brief caption. In the related section, in the “Summary” Article, in the “Unit Prices” paragraph, provide a fully descriptive subparagraph headlined by the same caption.

C. **Alternates (in General Work only):**

1. Use of alternates is discouraged and not accommodated at all in the Non-Construction bid and agreement form. Refer to the guidelines for alternates in the Design chapter of the Administrative Procedures. If sufficient cause exists to warrant the use of alternates, incorporate the standard section:

   **01 23 00 Alternates.**

2. Coordinate this Section with solicitation of alternate prices in Bid Form (See 00 40) and applicable specifications and details. Adhere to standard text for articles 1.01 through 1.03 and in Article 1.04:

   a. List and number alternates in order of priority after the Base Bid. Alternates shall be additive and limited in number in accordance with the policies of the State Architect and the State Building Commission.

   b. Give each Alternate a simple, brief, unique name, suitable for reference in the Bid Form and eventual Agreement. Provide a concise definition with reference to applicable specifications and Drawing details. Avoid alternates that are complex or involve several trades unless a complete unit. If the Work is divided into Phases (see 01 10/D), specify in which Phase the Alternate is performed.

D. **Product Substitution Procedures:** Include the following standard documents:

   **01 25 13 Product Substitution Procedures**
   **01 25 33 Product Substitution Request Form.**
E. Contract Modification Procedures: Include the procedures for Change Orders and weather delays, the Change Order Form, and the Cost Itemization form:

1. For General Work, but not for Non-Construction, include
   
   01 26 00 Contract Modification Procedures  
   01 26 20 Weather Delays  
   01 26 25 Weather Delay Report.

2. Include these items:
   
   01 26 40 Amendment, Change Order, or Directive  
   01 26 54 Form for Price Summary  
   01 26 55 Form for Price of Work  
   01 26 56 Form for Price of Time.

4. Sections 01 26 25, 01 26 54, 01 26 55, and 01 26 56 are posted on the website in their native Excel™ format, so that Contractors can copy them for use as specified during construction, but Designers should publish them to project manuals as is, without editing.

F. Payment Procedures (in General Work only): include the standards:

1. For General Work with a Construction Manager / General Contractor (CM/GC), include:
   
   01 29 16 CM/GC-GMP Contingency and Reserve  
   01 29 17 CM/GC-GMP Contingency Log  
   01 29 18 CM/GC-GMP Reserve Log.

2. For all General Work, with or without CM/GC include
   
   01 29 54 Retainage Escrow Initiation  
   01 29 73 Schedule of Values  
   01 29 76 Payment Procedures.
01 30 ADMINISTRATIVE REQUIREMENTS

A. As needed, describe coordination of the Work and its various parts and its coordination with other separate contracts or amongst multiple contracts. As needed in addition to the standard sections addressed here, specify requirements for project site administration, construction photographs, contract progress reporting, network analysis schedules, and periodic site observation.

B. Special meetings may be specified here or in sections of Divisions 02 through 49; however, unless CPCA agrees that the job needs a special section on Project Meetings:
   1. For General Work, include
      01 31 19 Project Meetings.
   2. For Non-Construction, the Conditions have project meetings requirements.

C. ADMINISTRATIVE LOGS:
   1. For General Work, include requirements for submittals log and visitor log, using the following:
      01 31 90 Administrative Logs
      01 31 93 Visitor Log.
   2. Some projects might have no significant submittals and need no submittals log. A visitor log might be impractical for a very small project or redundant where extensive entry and exit logs are used. It might be appropriate to modify the section or merge it into another section. Confer with CPCA before doing so. Changing the Section might also require changing Section 01 29 76 Payment Procedures that contains requirements bearing upon these logs.

D. Progress Schedules and Reports: Include requirements for initial progress and submittals schedules and updated progress schedules and reports.
   1. For General Work include
      01 32 15 Progress Schedules and Reports.
   2. For Non-Construction, their Conditions include schedule requirements.

E. Specify submittal procedures that are universal. Sections of Divisions 02 through 49 should reference these sections for the common requirements and expand on specific requirements unique to them. Few projects will require every one of the following to be addressed, but appropriate topics for Submittals include:
   1. Certificates
   2. Design Data
   3. Field Test Reports
   4. Shop Drawings, Product Data, and Samples
   5. Source Quality Control Reports
F. **Asbestos:** Require the Contractor to give written notice of impending commencement of asbestos removal work to the Pollution Control Division of the local and MTSU’s Department of Health & Environment or comparable local governmental agency having jurisdiction and also to

Tennessee Department of Environment & Conservation, Division of Air Pollution Control
9th Floor L&C Tower at 401 Church Street
Nashville, Tennessee 37243-1534

01 40 QUALITY REQUIREMENTS

A. **Regulatory Requirements:**

1. Include the list of codes and regulations used for State Building Commission projects:

   **01 41 15 Basic Regulatory Requirements.**

2. Depending on the use of the building, other codes or regulations might also apply. Add a separate section to enumerate any regulatory requirements in addition to those in the standard.

B. This broad-scope group is used to specify reference lists and requirements for quality assurance and control. Include specifications for testing on each project. Describe the extent of testing required. Requirements should include:

1. The cost of tests shall be paid by the Contractor.

2. The firm and personnel used to perform tests shall be approved in writing by the Designer.

3. Tests such as compaction, investigation of borrow areas, analysis of bearing conditions and similar work, shall be done under the direction of an engineer registered in Tennessee.

4. Identify test reports by project name, SBC number and require the seal and signature of an engineer registered in Tennessee.

5. Send copies of test reports to the Designer, the Contractor, and the Owner.

C. The standard section for a concrete testing laboratory may be included and may serve as guide for similar sections:

   **01 43 25 Testing Laboratory Services.**

D. **Asbestos Abatement Air Monitoring:** Specify that the Contractor shall employ properly qualified subcontractors to provide Air Monitoring. Specify minimum subcontractor qualifications and performance requirements. CPCA will consider unusual circumstances wherein the Designer might recommend that air monitoring be provided by the Designer or a consultant, but this would be an exceptional case.
01 50 TEMPORARY FACILITIES AND CONTROLS

A. The Contractor is typically responsible for all construction facilities and controls, including installation, maintenance, rental and service charges, and removal.

B. Temporary Utilities
   1. Subject to availability and Owner’s consent, the Contractor might be allowed to use available utilities, such as the Owner’s water, power, and possibly temporary heat if tied into a central system. Permission is subject to the following restrictions:
      a. The Owner will have the right to direct tap points and identify panels and other services that the Contractor may use.
      b. The Contractor shall be responsible for installation, maintenance, and removal of temporary services.
      c. The Owner will have the right to restrict use in time of emergency or for repeated abuse by the Contractor.
   2. To the extent that Owner utilities are unavailable as described in #1 above, require the Contractor to provide its own temporary utilities. Do not specify an allowance to cover the cost. Do not specify that the Owner will pay for temporary utilities.
   3. An outside telephone line or cellular phone is normally required at the Contractor’s expense.

C. Construction Facilities:
   1. If instructed by the Owner, such as when the Owner intends to have a full-time on-site observer or scheduler, specify requirements for the contractor to provide an Owner’s field office. Typically, this is adequately specified by
      **01 52 25 Owner’s Field Office.**
   2. On some projects, it may be advantageous to assign existing toilets, temporary offices and storage areas for the Contractor's use. Check with the Owner to identify what temporary facilities are available and how they may use them. If this is done, make the Contractor responsible for the maintenance of the spaces. Specify that the Owner can revoke these privileges in the face of repeated abuse.

D. If a Tennessee Department of Environment and Conservation (TDEC) Storm Water Pollution Prevention Plan (SWPPP) and Construction General Permit Notice of Coverage (CGP-NOC) apply:
   1. Obtain approval of the SWPPP from TDEC.
   2. Submit the Notice of Intent (NOI) to and obtain the preliminary NOC from TDEC.
   3. Include the standard section
      **01 57 23 Temporary Storm Water Pollution Control.**
   4. The section is intended to be used as-is. It is posted in editable format, in case it must be. If editing Articles 1.01 – 03, do not alter without CPCA’s express consent.
   5. Include a copy of the NOC and the SWPPP following the Section. They become a part of the Section by reference in Paragraph 1.02.A.

E. As needed, specify Temporary Construction, Construction Aids, Vehicular Access and Parking, Temporary Barriers and Enclosures, and Temporary Controls.

F. The Owner might have specific requirements for a project sign, such as requiring a certain logo, size, or style. Check for institutional restrictions and needs before specifying a project sign.
01 60 PRODUCT REQUIREMENTS

Product Options and Substitutions: Specify general requirements for product options and substitutions that neither conflict with nor repeat provisions already included in Conditions and that take into account the instructions to avoid proprietary specifications. Included the following for General Work, but it can be omitted for Non-Construction:

01 62 25 Product Options.

01 70 EXECUTION AND CLOSEOUT REQUIREMENTS

A. Field Engineering

1. Specify Contractor's responsibilities for providing and paying for engineering services required during construction. Set basic requirements for survey work based on Contract Conditions requiring Owner to provide initial survey control points and property lines.

2. Field engineering by the Contractor, such as structural design of formwork, scaffolding, special earthwork, hydraulic groundwater control design, or other civil engineering work, are only broadly covered because of the specialized requirements of portions of the Work. Specify applicable requirements in other appropriate sections.

B. Cleaning

1. Specify the Contractor's general responsibilities during construction for regular cleaning that are distinct from the provisions for temporary barriers and enclosures, which are specified within sections on temporary facilities and controls.

2. Specify the Contractor's general responsibilities at the end of the project for final cleaning and removal of debris, waste materials, rubbish, tools, construction equipment, machinery, and surplus materials. Do not repeat the provisions stated in this Section in other Divisions. Specified any cleaning that is unique to a product in the same Section as the product and reference it to the general requirements of Division 01.

C. For General Work, include requirements for establishing Substantial Completion and closing-out, as provided in the standard section

01 77 70 Close-out Procedures.

D. Closeout Submittals

1. For General Work, include one of the following to complement Conditions dictating the Contractor's responsibilities to maintain a record of actual construction, compile data binders, and to submit these to Designer for review before delivery to Owner.

   a. Minimum requirements are included in the standard section:

   01 78 21 Closeout Submittals.

   b. Some projects are relatively complex or of varied scope. The following section shows several possible specific data items common to all projects suitable for editing:

   01 78 21E Closeout Submittals.

2. For General Work, include

   01 78 25 Data Binder Receipt.
3. **Spare parts and extra stock materials** can be as much a burden as a help to facility staff. Ensure that the Owner actually wants the stock items and specify them in the applicable sections of Divisions 02 through 49. Provide a summary tabulation about midway through construction, per Section 01 77 70 subparagraph 1.01.B.3.

4. With input from the CPCA project manager, develop specifications for implementing the High Performance Building Guidelines (HPBG) final verification by the following:

   a. Create from scratch an instructional section:
   
   **01 78 53 High Performance Building Design Closeout Documentation.**
   
   b. Using the HPG Project Closeout and Credit Verification Form, create
   
   **01 78 56 High Performance Building Design Verification Form.**
   
5. Include

   **01 78 88 Report of Subcontractors and Suppliers.**

E. ** Demonstration and Training:**

   1. For Work of any appreciable complexity, write a job-specific specification, incorporating the standard. For a few jobs, there might be no need for a Section. However, even simple jobs usually benefit from including at least the standard section:

   **01 79 21 Demonstration and Training.**

   2. In *Part 3 – Execution* of related sections, specify requirements for starting, testing, adjusting, balancing, demonstrations, and training. At least 30 days before substantial completion, provide demonstrations of each system to Designer's and Owner's representatives, using the operating and maintenance data as the basis of instruction to ensure that Owner's personnel are properly trained to operate, adjust, and maintain equipment and systems. The purpose is to ensure that Owner will be able to occupy or utilize the Work or designated portion thereof for its intended use.

   3. In *General Work*, require a summary tabulation of the equipment and systems, for which the Contractor shall provide training that also identifies the applicable sections of Divisions 02 through 49 and the intended audience. Require this about midway through construction, per Section 01 77 70 subparagraph 1.01.B.1.

   4. For most jobs that have any appreciable degree of demonstration and training requirements, include the standard section:

   **01 79 25 Demonstration and Training Verification.**

F. Contractors have difficulty providing videography of training, and the Owner normally provides its own. Ascertain whether the Owner intends to video-record or audio-record the training. If required, mention this in the particular specifications. Ascertain in advance whether the manufacturer has produced instructional videos; and if so, require them for Owner training.
**01 90 LIFE CYCLE ACTIVITIES**

A. Review provisions in *Administrative Procedures* Chapter 6 Construction, Conditions Article 9, and closeout specifications regarding startup and Substantial Completion.

B. **Commissioning:**

1. Commissioning is required on all State projects as further explained in Administrative Procedures Chapter 2 High Performance Building Guidelines.
   - a. Enhanced commissioning requires the Owner to engage a Commissioning Agent, who will consult during design and lead commissioning activities in construction.
   - b. Basic commissioning occurs on other work that involves heating, ventilating, air conditioning, and refrigeration systems and equipment, lighting controls, and domestic hot water.
   - c. No commissioning is required on other projects.

2. If enhanced commissioning has been approved for the project, the Commissioning Agent, will provide detailed commissioning specifications for the Designer to include in the project manual.

3. When basic commissioning is required, coordinate with Divisions 23 and 26 and include at least the standard sections:
   - **01 91 13 Commissioning**
   - **01 91 23 Performance Testing Identification Form**
   - **01 91 26 Performance Testing Procedures Form**
   - **01 91 29 Functional Performance Test Certification**.

4. When basic commissioning is specified, provide a summary list of equipment and systems to be commissioned as a companion section numbered in sequence to follow the standard. In the summary list, identify the applicable section numbers of Divisions 2 through 49 and the generic names of the equipment and systems to be commissioned. In *Part 3 – Execution* of related sections, in addition to basic starting, testing, adjusting, balancing, demonstrations, and training, specify requirements for commissioning particular to the section not already covered in the 01 90, 23 00, and 26 00 standards. In some cases, those standard sections may serve as a model for others not yet standardized. For instance, *Non-Construction* commissioning may be appropriate for installations of control systems, audio-visual, or other electronic equipment.

**02 00 DIVISION 02 EXISTING CONDITIONS**

For *General Work*, review Conditions §3.7.4 of the CPCA 00 72 13 adaptation of the 2007 A201, which is comparable to §4.3.6 in prior versions based on 1997 A201, on concealed conditions. Conditions for *Limited Work* and *Non-Construction* have minimal language on concealed conditions. Do not use them except when such risks are exceedingly slight. See heading 30 00 00 below.
04 00 DIVISION 04 MASONRY
Check masonry requirements for consistency with *Administrative Procedures* Appendix 3.

07 00 DIVISION 07 THERMAL AND MOISTURE PROTECTION

A. Check roofing and flashing requirements for consistency with *Administrative Procedures* Appendix 3.

B. For work that penetrates, modifies, or patches an existing roof that is under warranty, include the following:
   1. Include a copy of the existing warranty that is in effect, typically as section 07 50 35.
   2. Specify in an applicable section that the provider of the existing warranty is to be engaged
      a) to supervise and approve the work affecting the warranted roofing system, and
      b) to provide a letter certifying that
         1) the work performed upon the warranted roofing system was provided in accordance
            with the warrantor’s requirements
         2) the work performed does not compromise the existing warranty
         3) the existing warranty remains in full force and effect.

C. For a new or replacement roof, specify the Owner’s standard form for manufacturer’s warranty:
   1. For any project involving application of a low-sloped (i.e.: flat) roofing system, review the
      standard Total Roofing System Warranty and specify the manufacturer's warranty by
      including:

      **07 50 35 Total Roofing System Warranty Instructions
      07 50 36 Total Roofing System Warranty.**

   2. Do not alter or otherwise mark on either section. Do not include multiple copies or versions
      when multiple roofs are involved.

   3. In the appropriate Division 07 specification, typically Level 2 Sections 07 50 00 or Level 3
      Section 07 53 23 for EPDM, specify (this first subparagraph “a” can be used verbatim):
      a. Provided a total roofing system warranty in accordance with the instructions specified
         in Section 07 50 35.
      b. For each separate warranty, specify appropriate “Roofing System Components” to be
         included under this Warranty and list one or more of the component options listed in the
         middle of page 1 of the standard warranty form. Name them exactly to avoid
         confusion. Also, explicitly list the components that are named in the Warranty form but
         are excluded. Then, list additional components not named in the Warranty form that are
         to be added.
      c. Bear in mind, in order to get a thirty-year warranty, the roof design must incorporate a
         sufficient system. Typically, this includes a 90 mil membrane and specifically
         compatible components. Therefore, the Total Roofing System design must take the
         Warranty requirements into account.
23 00 DIVISION 23 HEATING, VENTILATING, AND AIR CONDITIONING

A. Commissioning:

1. If enhanced commissioning has been approved for the project, the Commissioning Agent, shall provide detailed commissioning specifications for the Designer to include in the project manual.

2. If basic commissioning is required

   a. Include the standard section:
      23 08 00 Mech’l & Control Systems Commissioning.

   b. Include these to the extent such systems are involved:
      23 08 13 Sensor Point Calibration Check Sheet
      23 08 16 Terminal Box Point Calibration Check Sheet.

26 00 DIVISION 26 ELECTRICAL

A. Commissioning:

1. If enhanced commissioning has been approved for the project, the Commissioning Agent, shall provide detailed commissioning specifications for the Designer to include in the project manual

2. If basic commissioning is required, include the standard section:

   26 08 00 Electrical & Lighting Commissioning.

   b. Include these to the extent such systems are involved:
      26 08 06 Panel-board Check Sheet
      26 08 13 Power Circuit Check Sheet
      26 08 30 Generator Testing Procedures Form
      26 08 32 Generator Testing Findings Form
      26 08 50 Lighting Check Sheet.

30 00 DIVISIONS 30–39 SITE & INFRASTRUCTURE SUBGROUP

See 02 00 of this guide. Coordinate with Drawings. Take care when specifying and detailing site work to set bearing and excavation elevations diligently. Do not contradict the principle of unclassified subsurface conditions to design depth.

End of Project Manual Guide