

PROJECT MANUAL GUIDE

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00 00 GENERAL GUIDELINES

A. This Guide is provided to aid the Designer in preparing the Project Manual so that it complies with requirements and customary practices of the State Building Commission. The staff of the Office of Facilities Development (OFD) is available to discuss these requirements.

B. Hardcopy publishing:

Project Manuals shall be printed 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. Wire, glue, or crimp bindings are not acceptable.

C. Class of Documents: Before assembling the Project Manual, most likely at the time outline specifications are developed, consult OFD 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:

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. Alternates, unit prices, and allowances options are not provided.

D. Standard Bidding Documents

1. Become familiar with the standards OFD 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	← how posted on website	title →	Commissioning
General Work	← documents class		
Oct 11 OFD s004113 page 1 of 1	← edition, source, file, page	number and page →	01 91 13 – 1

b. **June 2011** documents lack the documents class identification in the left side second line, and instead show.

Posted in PDF format	← how posted on website	title →	Commissioning
Jun 11 OFD s019113	← edition, source, file name		
Page 1 of 1	← page count	number and page →	01 91 13 – 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:

J a n 0 9	O F D	0 1 2 9 1 6 E	P a g e 1 o f 1
↑	↑	↑	↑
<i>Date of issue</i>	<i>Source</i>	<i>Section Number</i>	<i>Version</i>



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 OFD footer, as the document will no longer be standard. Standards which are intended to be edited can be copied from the OFD website, where they are posted in native Word™ or Excel™ format.

- E.** Prepare the Project Manual in accordance with the *CSI Manual of Practice* or *Project Resource Manual*, unless approved otherwise. This *Project Manual Guide* and the standard *Bidding Documents* in the *Designers' Manual* are written to comply with CSI Masterformat 2004. All bidding documents are to be numbered and organized 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 ➤
- 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 ➤
- D.** The DESIGNER'S SEAL AND SIGNATURE is to be affixed to only the cover and/or title page that provides the prescribed content, or a specific Seals Page (normally 00 01 07). The Designer's seal and signature are required by statute, and 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

*Enormous State University
Nuclear Reactor New Construction*

COUNTY

County names(s)

OWNER

Tennessee Board of Regents

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 discouraged as redundant.
- 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, so as to be consistent 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), and 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 specifications, in keeping with 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. The specific list for a project should be decided during CDP.
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:** document F545 of the *Administrative Forms* provides a statewide map of bidding regions. A version of Section 00 22 20 is provided in the *Bidding Documents* for each Region, giving bid opening location addressing and contact information.
4. **Deadline for Bid Submittal:** Except for locally managed *Limited Work*, the bid date will be set by OFD's bidding coordinator, who will make it known to the Designer and OFD's project manager.

B. Advertisement

An advertisement for Bids is not required in the Project Manual. Typically, OFD 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. A Word™ document of each can be downloaded from the OFD website. Retype from scratch, or adapt a copy of the standard.
2. For *General Work* bidding, edit or emulate the standard:

00 11 16 Invitation to Bid

filling in the blank areas thus:

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



- b. **Designer:** The design firm name and address, contact person, and phone number, to 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:**
For locations of TBR bid openings, refer to **00 10 / A.3** above, *Administrative Forms* F545, and the indicated version of *Bidding Documents* Section 00 22 20.
- 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 and/or fee for purchase, if any, as agreed with OFD project manager.
- g. Mention of **Prevailing Wage Law** should be deleted unless the OFD project manager has verified that they will apply. Building rates no longer are issued and do not apply to contracts awarded after January 1, 2014. Highway rates normally only apply to road work funded specifically from the State Highway Fund.

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

00 11 19 Request for GMP Proposal

filling in the blank areas thus:

- a. **Project:** The SBC project number, institution name, and name of the Work, the same as given on the Title Page of the Project Manual.
- b. **New Contract or Amendment:** mark one based on OFD project manager instruction.
- c. **Voluntary Alternates:** mark one, and if any allowed, stipulate limit or “no limit” based on OFD project manager instruction.
If everyone has done a good job, no alternates will be needed.
Do not refer to alternates as “options”. That’s just bunk.
- 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:

00 11 66 Invitation to Bid

filling in the blank areas thus:

- a. **Owner:** Tennessee Board of Regents.
- b. **Owner’s Representative:** Fill in the design firm name and address, contact person, and phone number, to 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, including 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, omitting address and phone number.



- f. **Cost of a hardcopy set of Bidding Documents:** Fill in the amount that has been allowed by the Owner. Related information about payment terms and third-party source can be included also.
- g. **Where to submit bids:** Refer to **00 10 / A.3** above, *Administrative Forms F545*, and the indicated version of *Bidding Documents* Section 00 22 20.
- h. **If by mail, submit to attention of:** 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:** Fill in time and date provided by OFD's bidding coordinator.

00 20 INSTRUCTIONS FOR PROCUREMENT

- A. For *General Work* bidding, use the standard:

00 21 13 Instructions to Bidders

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

00 21 19 Instructions to GMP Proposer

- C. For *Non-Construction*, use the standard:

00 21 63 Instructions to Bidders

- D. For **investigation of existing conditions**, bidders may need access to the site separate from a Pre-Bid Conference. The restrictions, procedures, persons to contact, and other job-specific requirements should be determined by discussions with the Owner, and written for the job as a 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. A **Pre-Bid Conference** should be held. If agreed to by the OFD project manager, attendance can be made mandatory, in which case the Designer will 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. A preliminary agenda should be provided. The job-specific requirements should be determined by discussions with the Owner, and written for the job as a section:

00 25 13 Pre-Bid Meetings

- H. Detailed review with OFD is required before using other instructions.



00 30 AVAILABLE INFORMATION

- A. Identify information that is available in addition to the Bidding Documents for review by bidders. Such information may include preliminary scheduling, geotechnical data, description of existing conditions, photographs, pre-existing drawings, etc.

1. Whenever such additional information is to be available, stipulate that:
 - 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; and,
 - b. the use and interpretation of this information for any purpose will be entirely the responsibility of the using party.
2. An example of this as would be provided regarding an asbestos survey report is available as:

00 31 26 Asbestos Survey Data

3. An example of this as would be provided regarding a geotechnical report is available as:

00 31 32 Geotechnical Data

- B. Include the standard:

00 36 66 Owner's Central Office Accessibility

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

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 OFD 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 not lose correlation to the instructions below.
3. Identify the project on each page, by SBC Project Number, including subscript when applicable, then the institution name, then the work name, 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, then the same three lines in small font in the left side of the footer, replacing the standard *Posted*, *Class*, and *Edition* (see **00 00 / D.1.c**) information.
4. Subparagraphs **A.1 – A.8** should not be altered; except, to save space, A.1 & A.2 can be combined, A.3 & A.4 can be combined, and A.5 – A.7 can be combined.
5. Subparagraph **A.9** for **addenda acknowledgement**:
 - a. Additional lines can be added to provide for acknowledgement of more Addenda than the three that have been accommodated.
 - 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.
6. Subparagraphs **B.1 & B.2** should not be altered.



7. Subparagraph **B.3** for **roof bond**:

- a. If project provides no roof, or the OFD project manager instructs that a roof bond is not required, then delete this subparagraph.
- b. If project includes installation of a roof, a roof bond will be required (See **00 60 / B** of this *Project Manual Guide*) and criteria for the amount must be stipulated. 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 too high or too low.

8. Subparagraph **B.4** should not be altered.

9. Subparagraph **B.5 – B.7** for **Contract Time**:

- a. **Liquidated Damages**, whether for a single-duration project or phases, should be set according to "a reasonable estimate of those damages which 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 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 that commencement.
 - 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. A Word™ document of the standard form is available for download from the OFD website. This Bid Form also acts as the Form of Agreement. When filling it in, compare it to the printed or web-posted standard, and take care to preserve the formatted layout.
2. On page 1, fill in:
 - a. **Project:** the official project title, including 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 should 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 Proposal 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, but include, unedited:

00 42 23 Proposal Summary

00 42 71 Proposal of Trade Subcontracts

00 42 75 Proposal of General Conditions

00 42 79 Proposal of Self-Performance

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



CONTRACTING REQUIREMENTS

00 50 CONTRACTING FORMS AND SUPPLEMENTS

A. Stipulations as to the form and completion of the Agreement and attachments are made in the Instructions to Bidders.

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, and the federal tax information form:

00 54 33 ACH Credits Form

00 54 35 W-9 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 only need 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 may be needed. Otherwise, the bond will have already been 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, which 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:

1. For *General Work*, the AIA document A201 modified by OFD:

00 72 13 General Conditions

2. For *Non-Construction*:

00 72 63 General Conditions

B. For *General Work*, include:

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. If the existing Contract was executed prior to 2014, and thus has an active State building prevailing wage determination, then include those supplementary conditions and the wage determination with rate schedules as used in the initial GMP package

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. No modifications or other conditions are acceptable unless specifically reviewed and approved by the Owner. If approved, integrate them in proper sequence and referenced to the appropriate paragraph.

SPECIFICATIONS



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 may not require much more than the standard sections for Division 01. A master list of section titles and numbers can be found in **CSI MasterFormat**. 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 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:**
1. Naming a specific manufacturer should be used only to establish a level of quality. Specifications should not be made proprietary unless there is sufficient justification, which must be well documented and specifically approved by OFD.
 2. Use Performance, Descriptive, or Reference Standard specifications to the greatest extent possible. Avoid de facto proprietary specifying by virtue of overly restrictive requirements. Include whenever possible the names of three or more acceptable manufacturers that have been evaluated and found equal in quality to the specification.
 3. When specifically permitted by the Owner, 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 OFD 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, this must be explicitly stated.
 4. OFD 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 have been written to provide a mechanism for this, even after the award of contract, though the Contractor who submits a bid depending on post-bid approval of a substitution 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 will 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, then 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 under which the Work will be performed. Address related work, restrictions, future phases and similar known factors.



- F. Describe **restrictions to access and use of premises**. Institutions may have security regulations that may affect the Contractor's schedule. Have the Owner acquaint you with the controls at the facility. Describe the conditions for partial occupancy, if any will be permitted or required. Identify the extent of the Owner's on-site operations, if the Owner intends to continue these during construction. The Owner may have provided standard specifications of the institution or campus in the 01 14 00 series, or written guidelines for development into specifications, such as:
1. Continuing occupancy during construction
 2. Worker Conduct
 - a. Tobacco and Alcohol Restrictions
 - b. Worker Attire
 - c. Interaction with students, employees, and the public
 3. Coordination with campus safety and operations authorities
 4. Curtailment of Work
 - a. Campus academic calendar
 - b. Special scheduled events
 - c. Restrictions on work hours
 - d. Systems interruptions
 - e. Use of site
 5. Facilities available to Contractor (unless complex enough to warrant specs in the 01 50s):
 - a. loading docks
 - b. elevators
 - c. stairways
 - d. staging areas
 - e. worker parking
 - f. 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, ensure that clear expectations are established regarding close coordination of deliveries with another contractor controlling the site, and the ability to move products directly into their final destination, or having to temporarily store on site before separately moving products to a final destination, or even having to store & stage off-site.

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 specifically approved by OFD, and preface 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, specifying 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 manner of:

01 21 15 List of Allowances

4. In 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 specifically approved by OFD. In discussing the possible use of unit prices on a project, consider the following issues:
 - a. Unit Prices that require price proposal in the bid form are not allowed in *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 issues 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 to be permitted 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, which results in an allowance equal to the unit price times the base quantity, and 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, reference to related sections, Base Quantity, Unit of measure, Unit Price per unit, and a caption for the Work included which relates to a complete description in the related sections, following the example of:

Item	Related Sections	Base Quantity	Unit	Unit Price per unit	Work included
1	06 12 50	200	S.F.	\$1.75	Replace doomaflitchies
2	07 50 70	1,000	S.F.	\$1.25	Whatchamacallits

- a. **Item:** numeration for the list of items.
- b. **Related Sections:** the section number(s) in which detailed specification is found.
- c. **Base Quantity:** an allowance of units included in the contract. 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, a Base Quantity of 250 L.F. might be used, and the related section 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. Never specify a base quantity of zero.
- d. **Unit Price per unit:** In most unit price cases, the price will be solicited in the bid, and “(S)” will appear in the column in accordance with the specification. If stipulating a unit price in the specification, it should 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; and, 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; and, if sufficient cause exists to warrant the use of alternates, incorporate the standard:

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, and a concise definition with reference to applicable specifications and Drawing details. Avoid alternates which 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: The following standard documents should be included:

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:

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 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 OFD 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:
01 31 90 Administrative Logs
01 31 93 Visitor Log
 2. Some projects may have no significant submittals, and need no submittals log. A visitor log may be impractical for a very small project, or redundant where extensive entry/exit logs are used. It may then be appropriate to modify the section or merge it into another section. Confer with OFD before doing so. Changing the Section may also require changing Section 01 29 76 *Payment Procedures*, which 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*:
01 32 15 Progress Schedules and Reports
 2. For *Non-Construction*, their Conditions include schedule requirements.



- E. Specify submittal procedures which 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 Contractor to give written notice of impending commencement of asbestos removal work to the Pollution Control Division of the local Department of Health & Environment, or comparable local governmental agency having jurisdiction, and to the:
- 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 may also apply. Regulatory requirements in addition to those in the standard section should be enumerated by adding a separate section.

B. This broadscope 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. Test reports shall be identified by project name and SBC number, and bear the seal and signature of an engineer registered in Tennessee.
5. Copies of test reports shall be sent 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 Air Monitoring is to be performed by a properly qualified subcontractor provided by Contractor. Specify minimum subcontractor qualifications and performance requirements. OFD will consider unusual circumstances wherein the Designer might recommend that air monitoring be provided by the Designer or a consultant, but such would be the 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 may be allowed to use available utilities, such as the Owner's water, power, and possibly temporary heat if tied into a central system, subject to restrictions such as the following:
 - 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 will 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.

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 be used. If this is done, make the Contractor responsible for the maintenance of the spaces, and specify that the Owner may 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:

01 57 23 Temporary Storm Water Pollution Control

4. The section is intended to be used as-is, but is posted in editable format, in case it must be. If editing, Articles 1.01 - 03 should not be altered without express consent of OFD.
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. Owner may 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 which neither conflict with nor repeat provisions already included in Conditions, and which take into account the instructions to **avoid proprietary specifications**. The following should be included for *General Work*, but 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 due to the specialized requirements of portions of the Work, and some requirements should be specified in other appropriate sections.

B. Cleaning

1. Specify the Contractor's general responsibilities during construction for regular cleaning, distinct from the provisions for temporary barriers and enclosures 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. Cleaning which is unique to a product should be specified in the same Section as the product, with reference 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:

01 77 70 Close-out Procedures

D. Closeout Submittals

1. For *General Work*, include one of the following to complement Conditions with regard to Contractor's responsibilities for maintaining a record of actual construction, compiling data binders, and submitting these to Designer for review prior to delivery to Owner.
 - a. Minimum requirements are included in the standard:

01 78 21 Closeout Submittals

- b. For projects which are relatively complex or of varied scope, essential elements common to all projects and (in *italics*) several possible specific data items for editing to suit the project are shown in:

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 any that are to be provided are in fact wanted by the Owner, and specify them in the applicable sections of Divisions 02 through 49. A summary tabulation will be required about midway through construction, per Section 01 77 70 subparagraph 1.01.B.3.
4. With input from the OFD project manager, develop specifications for implementing the Sustainable Design Guidelines (SDG) final verification:
 - a. Create from scratch an instructional section:

01 78 53 Sustainable Design Closeout Documentation

- b. And from the SDG Project Closeout and Credit Verification Form, create:

01 78 56 Sustainable 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 may be no need for a Section. However, even simple jobs can usually benefit from including at least the standard:

01 79 21 Demonstration and Training

2. In *Part 3 – Execution* of related sections, specify requirements for starting, testing, adjusting, balancing, demonstrations, and training. Demonstrations of each system to Designer's and Owner's representatives, using the operating and maintenance data as the basis of instruction, shall be provided prior to substantial completion inspection, and should occur at least 30 days prior, to ensure that Owner's personnel are properly trained to operate, adjust, and maintain equipment and systems, so that Owner will be able to occupy or utilize the Work or designated portion thereof for the use for which it is intended.
3. In *General Work*, a summary tabulation of the equipment and systems for which the Contractor shall provide training, identifying the applicable sections of Divisions 02 through 49, and the intended audience, will be required 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:

01 79 25 Demonstration and Training Verification

- F. Specifying for the Contractor to provide videography of training can be difficult, and the Owner normally can make its own. Ascertain whether the Owner intends to video-record or audio-record the training; and if so, mention this in the particular specifications. Ascertain whether instructional videos have been produced in advance by the manufacturer; and if so, specify that they be provided at the time of 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 Sustainable Design 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 with 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.
3. When basic commissioning is required, coordinate with Divisions 23 and 26, and include at least the standard:

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 that have not already been 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 OFD 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, and should not be used 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:
 - 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 warranter's requirements,
 - 2) the work performed does not compromise the existing warranty, and
 - 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, and 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. A total roofing system warranty shall be provided 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, listing 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 to be excluded / stricken, and additional components not named in the Warranty form that are to be added.
 - c. Lastly, bear in mind that in order to get a thirty-year warranty, the roof design itself will have to incorporate a sufficient system. Typically, this includes a 90 mil membrane, and specifically compatible components. So, the Total Roofing System design must take the Warranty into account.
- 4. A sign should be specified to identify the roof as being under a special warranty.



23 00 DIVISION 23 HEATING, VENTILATING, AND AIR CONDITIONING

A. Commissioning:

1. If enhanced commissioning has been approved for the project, the Commissioning Agent, will provide detailed commissioning specifications for the Designer to include.
2. If basic commissioning is required:

- a. Include the standard:

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, will provide detailed commissioning specifications for the Designer to include.
2. If basic commissioning is required:

- a. Include the standard:

26 08 00 Electrical & Lighting Commissioning

- b. Include these to the extent such systems are involved.

26 08 06 Panelboard 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 diligently set bearing and excavation elevations. Do not contradict the principle of unclassified subsurface conditions to design depth.

End of Project Manual Guide

