

**Chapter Four**  
**PROJECT MANUAL GUIDE**  
for General Work using STREAM Standard documents

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## 00 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 (SBC). The staff of the State of Tennessee Real Estate Asset Management (STREAM) is available to discuss these requirements. Where applicable, the website link is listed beside each document.
- B. **Standard Bidding and Contract Documents** (<https://www.tn.gov/generalservices/real-estate/redirect-stream/designers-consultants/designers--manual1.html> )
1. **Standard documents and guides** are available for many of the Procurement/Bidding Requirements, Contracting Requirements, Conditions of the Contract, and General Requirements. Become thoroughly familiar with these documents, and use them as provided when text is appropriate.
  2. **Bidding documents by the Owner are identifiable by their footer** in which the document number and name are prefaced with the Owner mark "STREAM", and a three-character set identifier "Std" for Standard. The document number, name, and version date follow. These are referenced in this guide without preface.
  3. **Example text for documents requiring editing** is provided in this chapter, and example guide ("Gde") documents are included in Appendix 2 - *Bidding Documents*. Do not retype others unless so approved by the Owner. When using an example guide, remove "gde" from footer after modifying.
  4. **All most-current documents are downloadable from the STREAM website.** Edit/Gde documents can be downloaded as a "MSWord" (.doc) electronic file. Refer to the Appendix 2 Reference Table for documents having the ".doc" File Code.
  5. **Special usage bidding documents needed for certain projects** are referenced in this guide for their appropriate usage, and on the STREAM website. Refer to the Appendix 2 Reference Table for documents having a non-Std special Use Code.
- C. Be familiar with applicable portions of:
1. **AIA Handbook of Professional Practice**  
Available from: The American Institute of Architects (615) 259-9664  
Middle Tennessee Chapter  
49 Music Square West, Suite 610  
Nashville, Tennessee 37203  
<http://aiamidtn.org/>
  2. **CSI Manual of Practice**  
Available from: Construction Specifications Institute (800) 689-2900  
123 North Pitt Street, Suite 450  
Alexandria, Virginia 22314  
<http://csinet.org/>
- D. Prepare the Project Manual in accordance with the **2016 CSI Manual of Practice**, or latest version, **AIA** documents are available for review at the The American Institute of Architects, Middle Tennessee Chapter, and **CSI** documents are usually available for review in the Business Section of many public libraries.
- E. Tailor the Project Manual to the project. Do not include provisions that are inapplicable to the project. Ensure that Bidding and Construction Documents are thoroughly coordinated, complete, concise, and free from redundancy.
- F. It is the intent of the SBC that construction contracts are procured through procedures promoting competition to the greatest extent possible. Language in the Procurement/Bidding Documents placing limitations contrary to this intent is not normally allowed.
- G. Throughout the documents, the Designer shall use the term "Designer" as indicated in Article 4 of the General Conditions of the Contract for Construction. "Designer" is the licensed prime design professional or firm lawfully practicing architecture, landscape architecture, or engineering, identified in the Procurement/Bidding Documents and Agreement form for project. The term "Designer" means the Designer or the Designer's authorized representative.

**00 01 01 COVER AND TITLE PAGE**

- 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, which matches the project title listed on the Designer agreement.
- B. The title page may be omitted if the cover provides the prescribed content. A title page, if used, shall always provide the prescribed content.
- C. The Designer’s seal and signature is to be affixed to only the cover and/or title page that follow the prescribed format. 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)).
- D. PRESCRIBED FORMAT AND CONTENT: EXAMPLE:

**PROJECT MANUAL**  
*Date of Reference*

For the Project Titled:  
*A brief name for the Work*  
*Name of facility where the Work is located*  
*Facility location (city, county, state)*  
*SBC Project No.*

**OWNER**  
 STATE OF TENNESSEE,  
*Contracting Agency*  
*for User Agency*

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

**PROJECT MANUAL**  
 March 12, 2008

For the Project Titled:  
**MUSEUM ADDITION**  
**GREEN ACRES STATE PARK**  
**GRANDVIEW, GRANDE COUNTY, TENNESSEE**  
**SBC PROJECT NO. 126/099-02-2007**

**OWNER**  
**STATE OF TENNESSEE,**  
 Department of General Services  
 for Department of Environment & Conservation

**DESIGNER**  
**Archie Tekt & Associates, Inc.**  
 123 Godaddy Pike, Comesee, TN 37777  
 Tel (615) 123-4567 Fax (615) 123-4568

Additional graphics and information are acceptable, provided the standardized content requirements are met. For example, the Designer should add:

**CONSULTING ENGINEERS**  
*Name of discipline (i.e.: STRUCTURAL)*  
*Name of consulting firm or individual*  
*Name of second discipline*  
*etc.*

**00 01 10 TABLE OF CONTENTS**

Provide a table of contents for the entire Project Manual. Do not refer to the table of contents as an “Index”. Also, do **NOT** provide a table of contents for each division at its beginning.

**00 01 15 LIST OF DRAWINGS**

Provide a list of drawings for each drawing sheet within the drawing set. The list of drawings should match exactly each drawing sheet number and title.



**00 11 16 INVITATION TO BID**

A. Use or follow the standard:

[Invitation to Bid](#)

*(Editable .doc)*

B. The standard uses preferred wording and is formatted to provide space for filling in information for a particular job. Retype without modifying any standard wording, or type on a copy of the standard, filling in the blank areas thus:

1. **Project:** The official project title that matches the project title listed on the Designer agreement, including SBC number.
  2. **Designer:** The design firm name and address, contact person, phone number, and e-mail address, to be the primary source for obtaining bidding documents and channeling inquiries. Joint venture Designers should use a single address, contact person, phone number, and e-mail address.
  3. **Brief Project Description:** Work description in twenty-five words or less.
  4. **Pre-Bid Conference:** Where and when. Also include specific room, if applicable.
  5. **Bids sent by mail:** To whom and where: Refer to following No. 6.
  6. **Bids will be received and opened:** ~~Where and when: Page 5.10 provides a map delineating regional bidding locations. The maps are for informational purposes to the Designer and should not be included in the Project Manual. Appropriate wording corresponding to each location is given on page 4.04. The Owner, who also establishes time and date, should settle questions about where. Currently this information is pre-provided on the Invitation to Bid. Page 5.10 still shows maps, but regional bidding locations are not currently being used.~~
  7. **Bidding Documents may be examined...:** List applicable plan rooms, giving name and city, omitting address and phone number. A list of commonly used plan rooms is given on page 4.05.
  8. **Bidding Documents may be obtained...:** Indicate amount of plans deposit. This should be approximately 1/1000th of the estimated construction cost rounded to the nearest \$10, but neither less than \$50 nor more than \$1,000 for each set.
- C. Mention of Prevailing Wage Law should be deleted if (i) there is no federal funding involved; and/or (ii) the project is significantly less than \$50,000 in value.

**Bids will be received:**

[\(See 00 11 16\)](#)

**Bids will be received by  
the State of Tennessee at:**

**a. For all projects use:**

William R. Snodgrass Tennessee Tower  
Bid Room to be released at CDP Review  
3<sup>rd</sup> Floor, 312 Rosa L. Parks Avenue  
Nashville, Tennessee 37243-1102

**Bids sent by mail should be  
directed to the attention of the location  
coordinator:**

Ms. Penny DiPiazza, Bidding and Contract  
Officer  
William R. Snodgrass Tennessee Tower  
24<sup>th</sup> Floor, 312 Rosa L. Parks Avenue  
Nashville, Tennessee 37243-1102

**Major market PLAN ROOMS used by the State Building Commission:**

(See [00 11 16](#))

Do not include *italicized* portions in Invitation to Bid.

- a. TRI - CITIES:**  
Associated General Contractors, Tri-Cities Branch  
249 Neal Drive  
Blountville, Tennessee 37617  
*(423) 323 – 7121*
- 
- b. KNOXVILLE:**  
Knoxville Builders Exchange  
300 Clark Street  
Knoxville, Tennessee 37921-6328  
[reporter@bxtn.gov](mailto:reporter@bxtn.gov)  
*(865) 525 – 0443*
- c. CHATTANOOGA:**  
Associated General Contractors  
101 West 21st Street  
Chattanooga, Tennessee 37408  
[cathy@ageetn.org](mailto:cathy@ageetn.org)  
*(423) 265 – 1111*
- d. NASHVILLE:**  
Nashville Contractors Association  
P. O. Box 2048  
Smyrna, Tennessee 37167  
[becky@ncaplanroom.com](mailto:becky@ncaplanroom.com)  
*(615) 254-8346*
- Associated General Contractors  
2924 Foster Creighton Drive  
Nashville, Tennessee 37216  
*(615) 244-6344*  
Jennifer Finley  
[jfinley@tnagc.org](mailto:jfinley@tnagc.org)
- e. JACKSON:**  
West Tennessee Plan Room  
439 Airways Blvd.  
Jackson, Tennessee 38301  
*(731) 427 - 2573*
- f. MEMPHIS:**  
Memphis Builders Exchange  
642 South Cooper Street  
Memphis, Tennessee 38104  
*(901) 272 - 7495*
- g. ALL REGIONS:**  
ConstructConnect  
30 Technology Pkwy South, Suite 500  
Norcross, Georgia 30092-2912  
*(800) 901-8667*  
[docprocessing@cmdgroup.com](mailto:docprocessing@cmdgroup.com)
- Dodge Data and Analytics  
4300 Beltway Place, Suite 180  
Arlington, Texas 76018-5253  
[support@construction.com](mailto:support@construction.com)

## 00 21 13 INSTRUCTIONS TO BIDDERS

- A. Include the standard or IDIQ:

[00 21 13 Instructions to Bidders](#)

- B. Detailed review with the Owner is required before using supplementary or other instructions.

## 00 22 00 SPECIAL SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

- A. **NGB-FUNDED MILITARY PROJECTS.** For Department of Military projects in which certain major portions of the work is funded by the National Guard Bureau, and requires a bid breakdown of these portions of the work so to determine actual funding amounts to be apportioned. Include the standard:

[00 22 13.13 Supplementary Instructions to Bidders](#)

- B. **SPECIAL REGULATORY CERTIFICATION.** For projects in which the Work includes the installation or removal of underground storage tanks, removal of asbestos containing materials (ACM) or of lead-containing materials (lead paint), or the installation of radioactive devices (x-rays) or combustion machinery (boilers/generators), Tennessee Department of Environment and Conservation rules require contractor certification. Include the standard:

[00 22 13.19 Supplementary Instructions to Bidders](#)

- C. **MULTI-SITE PROJECTS.** This applies to projects in which the Work involves two or more sites in distinctly separate business regions, and a bidder may choose to list a different subcontractor for each trade for each site. Consult with the Owner on its use. Include the standards:

[00 22 13.23 Supplementary Instructions to Bidders](#)

and

[00 22 13.26 Subcontractor Multi-Site Bidding Form](#) (*Editable .doc*)

And, on the form, fill in the appropriate spaces for each of the specific permissible sites.

## 00 30 00 INFORMATION AVAILABLE TO BIDDERS

**Whenever such information is to be made available, it should be stipulated that the information was gathered solely for the use of the Designer and not for use as a basis for preparing a bid; and, the use and interpretation of this information for any purpose will be entirely the responsibility of the using party.**

- 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.
- B. **HAZARDOUS MATERIALS DATA.** If a hazardous materials survey has been conducted and is available for review by bidders include in the project manual. **Do not bind the report in the Project Manual or release via addenda:**

[00 31 26 Hazardous Materials Data](#)

- C. **GEOTECHNICAL DATA.** An example of this as would be provided regarding a geotechnical report is available. **Do not bind the report in the Project Manual or release via addenda:**

[00 31 32 Geotechnical Data](#)

- D. **DISQUALIFICATION INFORMATION.** Current lists have been established (regarding this information) and are available for review by bidders at the STREAM Web Site. Include in the project manual:

[00 38 60 Disqualified Contractors and Subcontractors](#)



## 00 41 13 BID FORM

A. For soliciting a base bid only, without phases, Alternates, or Unit Prices, use the standard:

[00 41 13 Bid Form \(Std\)](#)

*(Editable .doc)*

B. Normal items to fill in on Bid Form:

1. Project title and SBC project number, appearing on all pages of Bid Form;
2. Roof Bond amount, if applicable ([see 00 61 43](#)), otherwise “Not Applicable”
3. Number of **calendar** days Contract Time; and,
4. Amount of Liquidated Damages.

C. Special items to edit into Bid Form when required:

1. Phasing of the Work,
2. Unit Price proposals ([See 01 22 19](#)), and/or
3. Alternate bids ([See 01 23 00](#)).

D. **GUIDE FOR EDITING BID FORM:**

1. The Bid Form will require editing in order to accommodate special items (see paragraph C) for the project. Normal fill-ins and several variations are illustrated in the guide:

[00 41 13G Bid Form Gde](#)

*(Editable .doc)*

2. Provide an edited Bid Form that suits the particular project, following the format and wording of the guide. Once form has been edited, remove “Gde” from footer as it is no longer a Guide.

## 00 43 00 SPECIAL BID DOCUMENT ENCLOSURES

**NGB-FUNDED MILITARY PROJECTS.** This applies to Department of Military projects in which certain major portions the Work is funded by the National Guard Bureau, and requires a bid breakdown of these portions of the Work so to determine actual funding amounts to be apportioned. Include the standard:

[00 43 99 Bid Breakdown](#)

*(Editable .doc)*

**00 45 00 CERTIFICATIONS.** This should be in every project manual. However, if the contractor fails to insert it in the Bid Envelope, it is a waivable informality and can be obtained after the bid, but before the contract can be executed. Include the standard:

[00 45 21 Drug-Free Workplace Affidavit](#)

**00 52 00 AGREEMENT FORMS**

- A. Include the standard introduction to the construction Agreement Form, which provides information on how the form will be used:  
[00 52 01 Agreement Form](#),
- B. **MILITARY CONSTRUCTION (MILCON) FUNDED PROJECT.** This applies to Department of Military projects in which work is funded in part or total by MILCON funding.
  - 1. Delete the standard:  
**00 52 01 Agreement Forms**
  - 2. Substitute:  
[00 52 01.13 Agreement Forms](#) *(Limited Editable .doc)*
- C. Include the standard blank of the actual construction Agreement Form:  
[00 52 13 Standard Form of Agreement](#) (This form is for informational purposes only and should not be edited.);

**00 54 00 SPECIAL AGREEMENT FORMS**

- A. Include the standard introduction to the State of Tennessee’s, Department of Finance & Administration, Supplier Direct Deposit Authorization form and the Internal Revenue Service’s (IRS) form W-9:  
[00 54 00 Agreement Form Supplements](#)
- B. **NGB-FUNDED MILITARY PROJECTS.** This applies to Department of Military projects in which certain major portions of the Work is funded by the National Guard Bureau:  
[00 54 39 Corporate Authority Certificate](#)

**00 60 00 PROJECT FORMS**

- A. If project is estimated near or in excess of \$100,000, 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](#) (This form is for informational purposes only and should not be edited.)
- B. If project requires application of a roofing system or any modification to a roof, include the Owner’s Std Three-Year Roof Bond. The roof bond adds two years to the basic one-year of bond coverage of the Contractor’s warranty for the roof system:  
[00 61 43 Three-Year Roof Bond](#) (This form is for informational purposes only and should not be edited.)
  - 1. In the space provided on the Bid Form indicate the penal sum of the roof bond. Appropriate indications may be "An amount equal to Alternate No. 1", "An amount equal to 85% of the Base Bid", or an actual dollar figure, deriving percentages or amounts from the Designer’s estimate for the roofing. If an actual dollar figure is entered, this amount should equal the total of all roofs in the project, the sum of the values of all, [Section 01 78 26, Form for Roof Data](#).
  - 2. Other roofing systems may prove applicable for including the roof bond but without the Owner’s Std [01 78 36.20 20-Year Roofing System Warranty](#), [01 78 36.30 30-Year Roofing System Warranty](#), or [01 78 39 Total Metal Building Roofing Warranty](#). Consult with the Owner as to its applicability for other such systems.
- C. All projects should include the following form and it should be completed and submitted by the Contractor with the closeout documents:  
[00 65 01 Non-Use of Asbestos Containing Materials Affidavit - Contractor](#)



**00 72 00 GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION**

A. Include:

[00 72 13 STREAM Modified AIA Document A201, Fifteenth Edition, 2017,](#)

This applies to projects in which federal funding of the project requires inclusion of federal acquisition regulations, such as Davis Bacon Act and Copeland Amendment clauses, including National Guard Bureau projects. Some federal grants permit the State to undertake Work without these additional requirements. The Project Manager is responsible for determining the applicability of these provisions.

A. Delete the standard:

**00 72 13 STREAM Modified AIA Document A201, Fifteenth Edition, 2017**

B. **CIVILIAN FEDERAL FUNDS.** For civilian construction projects involving federal funds, insert:

[00 72 13.29 Civ Fed STREAM Modified AIA Document A201, Fifteenth Edition, 2017](#)

C. **MILITARY FEDERAL FUNDS.** For military construction projects involving federal National Guard Bureau funds, insert:

[00 72 13.39 Fed NGB STREAM Modified AIA Document A201, Fifteenth Edition, 2017](#)

**00 73 00 SPECIAL SUPPLEMENTARY CONDITIONS**

Projects that do not require builder's risk "all-risk" policy. Owner's Contract Administration Group to approve before use of this section is allowed. Add:

[00 73 40.01 Supplementary Conditions](#)

**00 73 00 SUPPLEMENTARY CONDITIONS**

A. **PREVAILING WAGE DETERMINATION:**

**A federal wage rate determination may be required**, and if so, will be provided by the User Agency for incorporation in the **00 73 00s**. This applies to projects in which federal funding of the project requires inclusion of federal acquisition regulations, such as Davis Bacon Act and Copeland Amendment clauses, including National Guard Bureau projects. Some federal grants permit the state to undertake Work without these additional requirements. The Project Manager is responsible for determining the applicability of these provisions. Both Building Wage Rates and Highway Wage Rates may apply to projects containing federal funds.

B. 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.

**00 90 00 ADDENDA AND MODIFICATIONS**

- A. If Contract Documents are issued subsequent to the award of a contract, bind any addenda that are a part of the Contract Documents into such Project Manuals with a first page index to the addenda.
- B. It is not required that Contract Documents be recompiled at award of contract. Normally, compilation of Addenda as series **00 91 13** pages of the Project Manual is only done for the microfilm record. Refer to [Chapter 7 - Close-Out and Record Documents](#).
- C. In accordance with T.C.A. §12-4-126, no addenda shall be issued within less than forty-eight hours of the bid opening date. The only exception shall be to postpone the bid opening to allow for additional addenda to be issued within statute.
- D. In accordance with [Section 00 21 13, Instructions to Bidders](#), 3.3, no addenda that affect pricing will be issued less than three calendar days before bid opening date.
- E. All addenda shall be submitted to the Owner, Project Manager and Bidding and Contract Officer, for approval prior to release to plan holders.
- F. For clarifications, Designer shall instruct plan holders where to find the information within the Project Manual and/or Drawings. Do not answer questions directly unless using the exact information as found in the bidding documents.
- G. All addenda shall be sealed, signed and dated by the Designer prior to release.

**REQUIREMENTS FOR ALL SPECIFICATIONS**

- A. Format specification sections in 3 parts: General, Products, and Execution. A master list of section titles and numbers can be found in **CSI MasterFormat 2016** Edition, or latest version. Specific examples of specifying in accordance with the **CSI** format are given in the **Manual of Practice**.
- B. 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. Sections of Division 1 are unique as specifications in that they relate directly to Procurement/Bidding Requirements and to all parts of the written Contract Documents. Sections of Divisions 2 through 49 constitute basic units of the total specification, covering requirements for one portion of the Work.
- D. Tailor and coordinate Division 1 to the size and complexity of the project, and the requirements of Divisions 2 through 49. Complex projects will require a complete and thorough Division 1. Simpler projects may only require an abbreviated Division 1.
- E. **Avoid Proprietary and Sole Source Specifications:**
  - 1. When specific manufacturers are named, the naming of a specific manufacturer should serve 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 in writing by the Owner, and with OSA approval. The Designer shall complete a [Sole Source/Proprietary Procurement Request Form](#) for each proprietary product and submit to Owner.
  - 2. Use Performance, Descriptive, or Reference Standard specifications to the greatest extent possible. If a manufacturer's name is used to establish a level of quality, include whenever possible the names of three or more acceptable manufacturers that have been evaluated and found equal in quality to the specification. Add "or approved equal" language to product specifications that mention manufacturers by name but are not intended to be proprietary.
  - 3. When specifically permitted by the Owner, a specification may restrict manufacturers to a single source. In such cases, the specification must state the restriction explicitly. Standard language in the Owner's Std 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. The Owner 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. Article 3, paragraph 3.4.2 of the General Conditions and guide [Section 01 62 25 Product Options & Substitutions](#) 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.
- F. Augment, but do not repeat the provisions already contained in the Bidding Requirements, Contract Forms, and Conditions. In Divisions 02 through 49, likewise do not repeat provisions already in Division 01. Throughout this Project Manual Guide there are instructions for coordinating with other sections.
- G. Language for coordinating referencing specification sections should be in Project Manual.

## 01 10 00 SUMMARY

- A. Include as a minimum in Section **01 10 00** at least a brief description of the work of the Base Bid and inform the Contractor of related conditions under which the Work will be performed. Do not include work that will be included as an alternate to the project. This scope of work will be addressed in the Alternates Section. Address related work, restrictions, future work and similar known factors. Identify specific phasing or sequencing of the Work, if any.
- B. Describe restrictions to access and use of premises. Many State facilities have security regulations that may affect the Contractor's schedule. Have the Owner acquaint you with the controls at the facility.
- C. 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.
- D. An outline of appropriate topics for this section include:
  - 1. Summary of Work:
    - a. Work covered by Contract Documents; and,
    - b. Work by Owner.
  - 2. Multiple contracts:
    - a. Summary of other contracts;
    - b. Work sequence;
    - c. Construction by Owner; and,
    - d. Contract interface and coordination.
  - 3. Work sequence.
  - 4. Products:
    - a. Ordered in advance; and,
    - b. Owner furnished products.
  - 5. Future work.
  - 6. Work Restrictions: (Coordinate with the Special Project Procedures Section, if applicable)
    - a. Site access and security procedures;
    - b. Work hours and use of premises;
    - c. Owner occupancy details;
    - d. Owner maintenance and operation requirements; and,
    - e. Adjacent activities to the project site.
  - 7. Use of the site:
    - a. By Contractor for Work, including parking and staging;
    - b. By Owner and Owner's clientele, including egress; and,
    - c. Project utility sources.
- E. **Hazardous Materials.** If applicable, specify whether the Work includes removal or abatement of hazardous materials, such as friable or non-friable asbestos. It is important that this be clearly specified here because the Conditions clauses addressing abatement hazards insurance set forth different requirements based on the form of asbestos, and the person administering the award of contract will rely on the description here when determining which insurance requirements apply.
- F. **Phasing of Work.** If dividing the Work and Time into Phases, establish a primary element of the Work which will not be otherwise assigned to a Phase and assign it the "Total Time" of the Contract, even if this only includes general administrative portions of the Work. Specify that the Work also includes the following Phases, then list each Phase and a specific description (such as "Phase 3, Paving Parking Lots, including site-prep, paving, striping, curbs, and appurtenances as shown on sheet A-9 and applicable specifications").

## 01 21 00 ALLOWANCES

- A. Allowances are used only when unavoidable and specifically approved in writing by the Owner, in which case incorporate the standard:

[01 21 13 Allowances](#)

(*Editable .doc*)

- B. Unassigned or discretionary allowances should be avoided. Provide descriptions of each allowance (in Article 1.04 of the document). Specify amounts included in Contract Sum for Contractor's costs.
- C. In appropriate sections of Divisions 02 through 49, specify products and their incorporation into the Work as completely as known factors allow. Do not include the value of allowances within these sections, but refer to the Allowances section.
- D. **CONTAMINATED/HAZARDOUS MATERIALS DISPOSAL WORK.** If disposal of contaminated or hazardous materials of unknown quantities is likely, such as impacted soils and groundwater associated with underground storage tank removal work, then a cash allowance for removal, treatment and disposal of materials may be applicable. This is due to the possible high costs associated with such work. The staff of the Owner is available to discuss the potential incorporation of the special section:

[01 21 46 Disposal Allowances](#)

(*Editable .doc*)

## 01 22 00 UNIT PRICES

- A. Using Unit Prices is **discouraged**. Use Unit Prices only if unavoidable and specifically approved in writing by the Owner. Unit Prices are generally only used for unforeseen conditions.

- B. If unit prices are used, incorporate the standard:

[01 22 19 Unit Prices](#)

(*Editable .doc*)

- C. Provide descriptions of each unit price (in Article 1.03 of standard). Include an item number, reference to related sections, Base Quantity allowance, 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 is an example of preferred format and wording:

Item	Related Section(s) and/or Drawing(s)	Base Quantity	Unit Price per Unit	Unit	Work Included
1	061600	2000		S.F.	Replace doomafitchies
2	074000	100		Each	Whatchamacallits

- Item:** numeration for the list of items.
- Related Section(s) and/or Drawing(s):** give the number of the section(s) and/or drawing sheet(s) in which detailed information is found.
- Base Quantity:** This is an allowance of units included initially in the contract, and should be a "best guess" of the number actually needed. In "Related Section(s) and/or Drawing(s)", the allowance should be distinguished from like units in the work and not subject to unit price. For example, if 1,000 linear feet of pipe is shown in drawings plus 200 to 300 linear feet of identical pipe is to be placed according to on-site directions of the Designer at a Unit Price, a Base Quantity of 250 linear feet might be used, with the related section specifying that the quantity of pipe shown in drawings is not part of the Base Quantity allowance for the Unit Price.
- Work Included:** The description should be short as it should be completely described within the Related Section(s) and/or Drawing(s). 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. The short description as listed in work Included shall match, verbatim, the Unit Price items on the [Bid Form, Section 00 41 13](#).

5. Article 1.03 of the document is the only language that should be edited in this document.
- D. In discussing the possible use of unit prices on a project, consider the following issues:
1. Are there issues to clarify about unit price items that require specification in the Summary?
  2. Are unit price items and/or their base quantities affected by Alternates or other factors?
  3. The possibilities of actual unit price(s) units exceeding the base quantity (whether more than or less than) by more than 25%, and 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?

#### 01 23 00 ALTERNATES

- A. Use of alternates is discouraged. If sufficient cause exists to warrant the use of alternates, incorporate the standard:

[01 23 00 Alternates](#)

*(Editable .doc)*

- B. If retyping the section, adhere to standardized text for Articles 1.01 through 1.03.

- C. In Article 1.04:

1. List alternates in descending order of priority after the Base Bid. Alternates shall be additive and limited to four in number.
2. List each alternate with a brief heading then provide specific details defining each Alternate, with reference to applicable specification(s) and Drawing sheet(s) and details. If unit prices are affected, include details as to their effect. Avoid alternates which are complex or involve several trades unless a complete unit.
3. Article 1.04 of the document is the only language that should be edited in this document.

- D. Coordinate this section with solicitation of alternate prices in [Bid Form \(See 00 41 13\)](#), and applicable specifications and details. The brief heading is the only thing listed on the Bid Form for each alternate.

#### 01 26 00 CONTRACT MODIFICATION PROCEDURES

- A. Include the standard section on Change Orders:

[01 26 00 Modification Procedures](#)

- B. Additionally, though it may be omitted with the Owner's approval, normally include the standard:

[01 26 20 Weather Delays](#)

or, if the Work is reroofing, use instead:

[01 26 23 Reroofing Weather Delays](#)

Any claims for weather delays shall use this form.

[01 26 25 Monthly Weather Delay Report](#)

- C. Include the standard Field Order, Change Order, Cost Itemization, and Labor Burden Calculation forms:

[01 26 39 Form for Field Order](#)

and

[01 26 40 Form for Amendment, Change Order, or Directive](#)

and

[01 26 54 Form for Price Summary](#)

and

[01 26 55 Form for Price of Work](#)

and

[01 26 56 Form for Price of Time](#)



and

[01 26 57 Labor Burden Calculation](#)

**01 29 00 PAYMENT PROCEDURES**

Unless otherwise approved by the Owner, include the standard sections:

[01 29 73 Schedule of Values](#)

and,

[01 29 76 Payment Procedures,](#)

or

[01 29 76.01 Payment Procedures for TDOT FHWA projects](#)

and,

[01 29 76.13 Personnel Used in Contract Performance](#)

**01 31 00 PROJECT MANAGEMENT AND COORDINATION**

A. Coordination of the Work and its various parts, and coordination with other separate contracts, or amongst multiple contracts, and special meetings may be specified in **01 31 00** section or in appropriate sections of Divisions 02 through 49.

B. If a Commissioning Agent is included as part of the Owner's team, include the standard:

[01 31 13.91 Commissioning Coordination](#)

C. Unless the Owner agrees that the particular needs of a job dictate developing a special Section **01 31 00** Project Meetings, include the standard:

[01 31 19 Project Meetings](#)

D. Include requirements for submittals log and visitor log, at least as set forth in the standard:

[01 31 90 Administrative Logs](#)

E. If hazardous materials abatement or removal is involved:

Delete:

**01 31 90 Administrative Logs**

Include in its place:

[01 31 93 Administrative Logs](#)

F. Some projects may have no significant submittals and need no submittals log. Visitor Log may be impractical for very small projects, 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 the Owner before doing so.

**01 32 00 CONSTRUCTION PROGRESS DOCUMENTATION**

A. If Owner-assisted scheduling is involved:

[01 32 13 Scheduling of Work](#)

B. Include requirements for initial progress and submittals schedules and updated progress schedules and reports. For projects not utilizing Owner-assisted scheduling:

[01 32 15 Progress Schedules and Reports,](#)

or

[01 32 15.01 Progress Schedules and Reports for TDOT FHWA projects](#)

C. If Owner-assisted scheduling is involved:

Delete:

**01 32 15 Progress Schedules and Reports**

Include in its place:

[01 32 16 Progress Schedules and Reports](#)

- D. Include Form to calculate and report schedule performance

[01 32 26.13 Schedule Performance Report](#)



## 01 33 00 SUBMITTAL PROCEDURES

- A. Address requirements common to all submittals. Sections of Divisions 02 through 49 should reference these sections for the common requirements, and then 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
6. Environmental Permits and Storm Water Pollution Prevention Plans

**B. BUILDING DEMOLITION or HAZARDOUS MATERIALS ABATEMENT WORK:**

1. If building demolition or hazardous materials abatement or removal is involved to the extent that regulatory notification is required, require Contractor to give proper written notice of impending commencement of such work to the Tennessee Division of Air Pollution Control.
2. For certain projects where abatement is considered significant in scope, the Owner will recommend including the standard:

[01 33 43 Abatement Submittals](#)

**C. COMMISSIONING AGENT:**

If a Commissioning Agent is included as part of the Owner's team, include the standard:

[01 33 91 Commissioning Submittals](#)

## 01 35 00 SPECIAL PROJECT PROCEDURES

- A. **DETENTION PROJECTS.** On most projects in which work takes place inside the secure perimeter of a detention facility, such as a state prison or juvenile facility, due to the unusual conditions in a detention facility, include one of the following, the Project Manager will assist in determining the correct version for the project:

[01 35 13.16 Detention Project Procedures](#)

[01 35 13.17 Youth Development Center Project Procedures](#)

[01 35 13.30 Limited Scope Detention Project Procedures](#)

[01 35 13.32 Non-Institutional Detention Project Procedures](#)

- B. **MENTAL HEALTH & DEVELOPMENTAL DISABILITIES PROJECTS.** On most projects in which work takes place inside the secure perimeter of a mental health or mental retardation facility, such as a mental health hospital, due to the unusual conditions in such a facility, include:

[01 35 13.19 Mental Health and Developmental Disabilities Project Procedures](#)

- C. **SPECIAL SCHOOL PROJECTS.** On most projects in which work takes place inside the perimeter of a School for the Blind, School for the Deaf, or Alvin C. York Agricultural Institute, due to the unusual conditions in such a facility, include the following:

[01 35 13.22 Special Schools' Project Procedures](#)

- D. **TENNESSEE STATE VETERANS' HOMES BOARD PROJECTS.** On most projects in which work takes place inside State Veterans' Home facility, due to unusual conditions in such a facility, include the following:

[01 35 13.24 Tennessee State Veterans' Homes Board Project Procedures](#)

- E. **DEPARTMENT OF MILITARY PROJECTS.** On most projects in which work takes place at a Department of Military facility, due to unusual conditions in such a facility, include the following:

[01 35 13.28 Department of Military Project Procedures](#)

- F. Verify with the Owner whether any of these sections may not be needed, has been updated, or requires additional provisions specific to the facility in an accompanying section.

**01 41 00 REGULATORY REQUIREMENTS**

- A. Include the list of building codes and regulations used for State Building Commission projects:

[01 41 15 Regulatory Requirements](#)

- B. 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.

**01 43 00 QUALITY CONTROL**

- A. **For a concrete testing laboratory**, the standard section may be included, and may serve as guide for similar sections:

[01 43 25 Testing Laboratory Services](#)

- B. This broad scope group specifies contractor's quality control, tests required by code, and tests by independent testing laboratory. 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 contracted directly by the General Contractor. Testing agency shall be a third party to the separate subcontractor of whose work is being tested.
  2. The firm engaged and personnel used to perform tests shall be approved in writing by 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. HAZARDOUS MATERIALS ABATEMENT WORK.**

1. If asbestos or lead based paint abatement or removal is involved, specify that Air Monitoring is to be performed by a properly qualified subcontractor provided by Contractor. Specify minimum subcontractor qualifications and performance requirements. Air monitoring standards may be specified in other broad scope sections such as [01 41 15 Basic Regulatory Requirements](#) and [02 82 13 Hazardous Materials Abatement](#).
2. The Owner 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. If such recommendation is approved, include the standard:

[01 43 28 Testing Laboratory Services](#)

NOTE: If the project includes concrete and hazardous materials abatement work, include both sections in the project manual.

**01 50 00 TEMPORARY FACILITIES AND CONTROLS**

- A. Temporary Utilities

1. The Contractor is normally responsible for installation, maintenance, rental and service charges, and removal of temporary utilities.

2. If the project is at a State-owned facility where services are adequate, the Contractor may be allowed to use available utilities.
    - a. The Owner may pay for water, power, and possibly temporary heat.
    - b. The Owner will have the right to direct tap points, identify panels and other services that the Contractor may use.
    - c. The Owner will have the right to restrict use in time of emergency or for repeated abuse by the Contractor.
    - d. Installation, maintenance, and removal of temporary services is Contractor's responsibility.
  3. An outside telephone line is normally required.
- B. Construction Facilities**
1. The Contractor is typically responsible for all construction facilities, such as toilets, offices, and sheds; including installation, maintenance, rental and service charges, and removal.
  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.
- C. Cleaning during construction, distinct from final cleaning, should be addressed. This is normally found within the topic of Temporary Controls.**
- D. Owner may have specific requirements for a project sign, such as requiring a certain logo, size, or style. Some agencies have policies forbidding signs, or at least disallowing the requirement of a sign. Check for such agency restrictions and needs before specifying a project sign. See Appendix 1 for sign examples.**
1. If a project sign is not required or allowed, it will be the responsibility of the contractor to properly display emergency contact information for the site.
  2. If a project sign is to be provided, it should generally follow these requirements unless specifically approved otherwise:
    - a. Project signs shall normally not exceed 4' x 8' (32 square feet);
    - b. Project signs should be divided into three equally sized areas displaying owner information, contractor information, and designer information;
    - c. Owner information shall contain:
      - i. Tennessee logo with DGS & STREAM or Military modifiers,
      - ii. Official project name,
      - iii. Official project SBC number, and
      - iv. Project address; and
    - d. Designer and Contractor information shall contain:
      - i. Company logo,
      - ii. Company name,
      - iii. Company contact information, and
      - iv. Project specific contact phone number.
- E. Any related items that will be required should be addressed. Appropriate topics include mobilization and: Temporary utilities (See paragraph A)**
1. Temporary construction and construction aids (See paragraph B)

2. Security, barriers, and enclosures
3. Traffic regulations, access roads and parking areas
4. Temporary controls (See paragraph C)
5. Project identification and signs (See paragraph D)
6. Field offices and sheds

**NOTE: This Section should be applicable to the project and not include information and requirements that are not necessary for the size and scope of work of the project.**

- F. FACILITIES PROVIDED FOR OWNER & DESIGNER.** On projects as determined by the Owner in which field office facilities for the Owner Representative and Designer are to be provided by the Contractor, normally on large and complex projects. Add:

[01 52 25 Owner's Field Offices](#)

## **01 60 00 PRODUCT REQUIREMENTS**

- A.** Specify general requirements for materials and equipment. Appropriate topics, if needed, include: transportation and handling, storage and protection, product options and substitutions.
- B. Product Options and Substitutions:** Specified general requirements for product options and substitutions should neither conflict with nor repeat provisions already included in paragraph 3.4.2 of the General Conditions and should take into account the instructions to **avoid proprietary or sole source specifications**. It is preferable that contractors submit substitution requests prior to bid so that all contractors can have access and price same products.
- C.** The following standard documents are recommended either as guidelines or sections:

[01 62 25 Product Options and Substitutions](#)

[01 62 32 Substitution Request Form](#)

## **01 70 00 EXECUTION AND CLOSEOUT REQUIREMENTS**

### **A. Field Engineering (Section 01 71 23)**

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, storm water pollution prevention plans 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 (Section 01 74 00)**

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 in Division 01.

### **C. Starting and Adjusting (Section 01 75 00 or within the Technical Specification)**

When applicable, and always if commissioning of building systems is involved, specify initial checkout and startup procedures, and initial adjusting to ensure safe operation during acceptance testing and commissioning. When commissioning is involved, the Owner's Commissioning Agent will provide assistance on developing this section.

## 01 77 00 CLOSEOUT PROCEDURES

- A. Include requirements for establishing substantial completion and closeout, as provided in the standard:

[01 77 70 Contract Closeout](#)

- B. If commissioning of building systems is involved, include:

[01 77 70.91 Contract Commissioning Closeout](#)

## 01 78 00 CLOSEOUT SUBMITTALS

- A. This Section complements Conditions paragraph 3.11 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.

- B. Additionally, this Section complements Conditions paragraph 3.20 with regard to Contractor's responsibilities for reporting diversity-owned businesses.

- C. Use the following:

[01 78 21 Closeout Submittals](#)

- D. If roofing work is involved, include the standard:

[01 78 26 Form for Roof Data](#)

*(Fillable .pdf)*

Fill in project information, building information, and designer information.

- E. For any project involving application of a roofing system to a roof or a metal roofing system, include:

[01 78 36.20 20-year Roofing System Warranty](#)

*(Fillable .pdf)*

[01 78 36.30 30-year Roofing System Warranty](#)

*(Fillable .pdf)*

[01 78 39 20 Year Total Metal Building Roofing Warranty](#)

*(Fillable .pdf)*

Fill in all information, with the exception of the General Contractor information, at areas above the Roofing System Information. Make sure that the "Designer's Roof Cost Estimate", or total of this for every warranty, match the roof bond amount on the Bid Form. A separate Roofing System Warranty should be done for each building to be included in the project.

1. Refer to the **DIVISION 7 THERMAL AND MOISTURE PROTECTION** specification guidelines that follow in this Guide to ensure proper coordination with the standard warranty.

2. Include [00 61 43 Three-Year Roof Bond](#)

- F. Include:

[01 78 88 Report of Subcontractors and Suppliers](#)

## 01 79 00 DEMONSTRATION AND TRAINING

- A. This applies to projects in which Work includes the installation of any major equipment and systems for which a comprehensive demonstration and training is warranted. 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, to ensure that Owner's personnel are properly instructed in operation, adjustment, and maintenance of 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.

- B. Specify Contractor duties for demonstrating newly provided equipment and systems, and providing videotaped training to facility personnel, by including:

[01 79 00 Demonstration and Training](#)



## 01 81 00 PERFORMANCE REQUIREMENTS

### [01 81 14 High Performance Building Requirements](#)

#### TECHNICAL SPECIFICATIONS

#### STATE OF TENNESSEE (OWNED) – INTERIOR CONSTRUCTION GUIDELINES

State of Tennessee (Owned) – Interior Construction Guidelines are contained within the Designers' Manual. These guidelines shall be used for projects involving this work. The intent of this guideline is to maintain a level of standardization with all State-owned facilities. This guideline shall be utilized for developing the specifications and drawings required for this work. See attached document.

#### DIVISION 7 THERMAL AND MOISTURE PROTECTION

- A. For any project involving the application of a roofing system to a low-sloped (i.e. flat) roof, or a metal roof of any slope, review the standard documents [00 61 43 Three-Year Roof Bond](#), [01 78 26 Form for Roof Data](#), [01 78 36.20 20-Year Roofing System Warranty](#), [01 78 36.30 30-Year Roofing System Warranty](#), or [01 78 39 Total Metal Building Roofing Warranty](#) and the related parts in this chapter, and coordinate specifications accordingly.
- B. **Specify the manufacturer's warranty:**
1. The roofing system warranty shall be provided on the Owner's form [01 78 36.20 20-Year Roofing System Warranty](#), [01 78 36.30 30-Year Roofing System Warranty](#) and/or [01 78 39 20 Year Total Metal Roofing Warranty](#).
  2. **Name the appropriate "Roofing System Components Included in the Work"**, listing one or more of the component options listed on the middle of page 1 of [01 78 36.20 20-Year Roofing System Warranty](#), [01 78 36.30 30-Year Roofing System Warranty](#) and/or [01 78 39 20 Year Total Metal Roofing Warranty](#). Name them exactly to avoid confusion. All work related with the roofing system is required to be covered by this total system warranty. **Name the appropriate warranty term, a minimum of 20 years and minimum (3 second) peak wind speed of 72 mph.** Consult with the Owner regarding which of the terms are to be specified. Factors for determination will be system type, current industry acceptance, and cost differences; however, a minimum 20-year term is required. Whatever the case, a longer length term may be made a bid alternate by specifying an alternate time(s) substituting a longer term for the base bid term.
  3. **Specify to provide separate warranties if more than one roof or type of roof system** is being installed in a single project. For such cases, specify a separate component list for each separate warranty to be provided. Consult with specified membrane manufacturer to verify whether sheet metal items can be warranted under the [01 78 36.20 20-Year Roofing System Warranty](#), [01 78 36.30 30-Year Roofing System Warranty](#) and/or [01 78 39 20 Year Total Metal Roofing Warranty](#). If not, a separate sheet metal warranty is to be required. Sheet metal warranty should have a 20-year finish & 3-year contractor material and workmanship warranty.
  4. **Specify that warranty, [01 78 36.20 20-Year Roofing System Warranty](#), [01 78 36.30 30-Year Roofing System Warranty](#) and/or [01 78 39 20 Year Total Metal Roofing Warranty](#), shall supersede all other provided warranties** pertaining to same-covered systems and/or components.
  5. **Other warranties may be specified** covering same systems as warranty [01 78 36.20 20-Year Roofing System Warranty](#), [01 78 36.30 30-Year Roofing System Warranty](#) and/or [01 78 39 20 Year Total Metal Roofing Warranty](#) and having longer terms, but only when stipulating such would become effective only upon the term end of the warranty [01 78 36.20 20-Year Roofing System Warranty](#), [01 78 36.30 30-Year Roofing System Warranty](#) and/or [01 78 39 20 Year Total Metal Roofing Warranty](#). If other such warranties are specified, stipulate precisely the minimum warranty requirements.
- C. The STREAM *Roofing / Re-roofing Design Guideline 07 00 00* (contained within the Designers' Manual) shall be used for projects involving this work. The intent of this guideline is to maintain a level of



standardization with all State-owned roofs. This guideline shall be utilized for developing the specifications and drawings required for this work.



# State of Tennessee Real Estate Asset Management DESIGN GUIDELINES

## ***07 00 00 DIVISION 7 Thermal and Moisture Protection - ROOFING & RE-ROOFING***

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- A.** The Owner intends to provide roofing products that maximize the life of State roofs. Products alone do not make a good roof. A good roof requires: appropriate design; suitable materials (vapor retarders, insulations, fasteners, membranes, flashings, accessories, perimeter metal); an adequate budget; a qualified, well-financed, trained applicator knowledgeable and experienced with the system specified; field quality assurance; and, a solid relationship between roof manufacturer and applicator.
- B.** To facilitate the above stated intent, the Owner has developed the following design guidelines:
- 1.** Provide one-eighth inch per foot or greater slope for drainage on existing structures. One-quarter inch per foot or greater is required on new construction. Crickets shall be two times height of slope.
  - 2.** Ensure that roof drains are located at low points in the roof and not adjacent to columns, particularly for steel deck construction.
  - 3.** Wherever possible slope the structural elements rather than using tapered insulation. If re-roofing existing structure and positive slope is not present, consider tapered insulation and/or crickets.
  - 4.** Whenever a roof plane intersects a vertical wall or other vertical surface, or an expansion joint is required a minimum of an eight-inch rise in height is required, and a twelve inch rise is preferred.
  - 5.** The following roofing products are preferred, though other types can be submitted for evaluation with formation and recommendations:
    - a.** Shingles or metal on adequately sloped roof befitting the overall building design;
    - b.** Fully adhered 60 mil EPDM single membrane roof system;
    - c.** Mechanically fastened 60 mil EPDM single membrane roof system;
    - d.** Ballasted 60 mil EPDM single membrane roof system (must be checked for additional roof load and wind velocities must be checked to prevent the ballast from becoming air born); or,
    - e.** Modified Bitumen Roof System (two ply system with a heavy base sheet and Class "A" granulated or metal-surfaced cap sheet.)
    - f.** Coal Tar Pitch Built-up Roof
  - 6.** Ensure that parapet walls are watertight and roof scuppers are provided for emergency relief in accordance with IBC 1406.
- C.** To facilitate the above stated intent, the Owner has developed the following contractor qualifications guidelines:
- 1.** The roofing subcontractor and the manufacturer must work together and be considered as one and the same certifying and providing:
    - a.** Roofing products for the purpose of designing, developing and marketing a complete roofing system.
    - b.** Recommendations, specifications, and details for the roofing system materials and installation.
    - c.** Training for and approval of applicators of the roof system.
    - d.** Technical assistance to applicators during the application of the roof.
    - e.** Approval and preparation of shop drawings for the roof system.
    - f.** A qualified technical representative employed by the Manufacturer for the final inspection, and all inspections required by the Roofing System Warranty.
    - g.** All materials used with the roof system must be approved by or purchased from the roof manufacturer.

2. In order to meet the above criteria roofing manufacturers must submit the following information for approval by the Designer in order to be considered as an approved equal:
- a. A list of approved applicators indicating name, address, phone number, and year first licensed as an applicator.
  - b. Application form, required by the Manufacturer, establishing the past experience, reputation, and financial stability of the roofing subcontractor.
  - c. Training session(s) taught by the manufacturer and certification that the installers have attended and passed the training program.
  - d. Indication that the roofing subcontractor has displayed adequate experience and knowledge to be licensed by the manufacturer to install the roofing system. The license must be renewed annually. The on-the-job superintendent must be licensed as a qualified installer.
  - e. A comprehensive list of references indicating the name, location, address, phone number approximate number of square feet and name of Designer and/or Owner of the project.
  - f. Certification that the company has been manufacturing the considered product for five years or more.
  - g. A letter, signed by a company representative authorized to legally bind contracts, stating that they have reviewed and accept all terms and conditions as stated, without modifications, in [01 78 36.20 20-Year Roofing System Warranty](#), [01 78 36.30 30-Year Roofing System Warranty](#) and/or [01 78 39 20 Year Total Metal Roofing Warranty](#).

## DIVISION 23 HVAC (COMMISSIONING)

If commissioning of building HVAC systems is involved, consult with Owner's Commissioning Agent in development of the following sections:

- A. [01 91 13 – Commissioning](#). This section may be provided by the Commissioning Agent. If no Commissioning Agent is assigned to the Project, then use this Section.
- B. [23 08 00 – Mechanical & Control Systems Commissioning](#)
- C. [23 08 13 – Sensor Point Calibration Check Sheet](#)
- D. [23 08 16 – Terminal Box Point Calibration Check Sheet](#)

## DIVISION 26 ELECTRICAL (COMMISSIONING)

If commissioning of building electrical systems is involved, consult with Owner's Commissioning Agent in development of the following sections:

- A. [26 08 00 – Electrical & Lighting Systems Commissioning](#)
- B. [26 08 06 – Panelboard Check Sheet](#)
- C. [26 08 13 –Power Circuit Check Sheet](#)
- D. [26 08 30 –Generator Testing Procedures Form](#)
- E. [26 08 32 –Generator Testing Findings Form](#)
- F. [26 08 50 –Lighting Check Set](#)

## DIVISION 31 EARTHWORK

Take care when specifying and detailing site work to diligently set bearing and excavation elevations. Do not provide specifications that contradict the principle of unclassified subsurface conditions to design depth.

## DIVISION 33 UNDERGROUND STORAGE TANK INSTALLATION

The Owner's *Underground Storage Tank Installation Design Guideline* shall be used for projects involving this work. The intent of this guideline is to maintain a level of standardization with all State-owned tanks in their compliance with related federal and state regulations. This guideline shall be utilized for developing the specifications and drawings required for this work. The staff of the Owner shall provide this document and is available to discuss this requirement.

CHAPTER 4 END