

**Instructions for use****Construction Specification 83—Timber Fabrication and Installation****1. Applicability**

Construction Specification 83 is applicable to all types of timber construction (except pile driving or the use of round timber) that are normally an integral part of structures designed and installed under agency programs. Supplementary specifications will be required for works of a special nature, such as bridges or buildings.

**2. Material specifications**

Material Specifications 581, 582, 584, and 585, and Construction Specification 84 complement Construction Specification 83.

**3. Included items**

Items to be included in contract specifications and drawings follow:

- a. Plans and dimensions of all structural elements.
- b. Complete details of all connections including number, type, size, and kind of nails or spikes or bolts with nuts if the design requires that these be specified; depth of embedment of screws and pins, and other such information.
- c. For lumber and timber, specify:
  - (1) Stress grade
  - (2) Species according to standard commercial name
  - (3) Heartwood requirements or other special requirements
  - (4) Nominal size and dress requirements (rough or dressed)
  - (5) For preservative treated wood, specify the type of preservative and the use category. For guidance in determining the applicable use category, refer to the American Wood-Preservers' Association Standard U1 at <http://www.awpa.com>. Preservatives may be creosote, water-born preservatives, or oil-born preservatives. With respect to where they may be used, water-born

preservatives are generally less restricted than creosote and oil-born preservatives. Thus, water-born preservatives are generally preferred over creosote and oil-born preservatives. Common water-born preservatives are: acid copper chromate (ACC); ammoniacal copper zinc arsenate (ACZA); chromated copper arsenate (CCA); alkyl ammonium compound (AAC); alkaline copper quaternary (ACQ); copper azole (CA); and copper naphthenate, waterborne (CuN-W). Common oil-born preservatives are pentachlorophenol (penta) and copper naphthenate (CuN). All types of preservatives should be restricted from contact with feed for animal consumption and food and water for human consumption. Some preservatives such as creosote and penta should also be restricted from contact with skin (human or animal) and animal drinking water. Refer to the applicable material safety data sheet (MSDS) for information on preservative restrictions.

- (6) Applicable grading rule, including the name of the agency that sponsors the rule (such as National Hardwood Lumber Association), the paragraph number, and year of issue.
- d. For plywood and chipboard, specify:
  - (1) Number of plies, width and length of sheet
  - (2) Species or group according to PS 1
  - (3) Grade
  - (4) Type (exterior, interior)
  - (5) Finished thickness
  - (6) Finish requirements (such as sanded or unsanded)
- e. Designation of surfaces to be painted.
- f. Special instructions concerning cutting of treated lumber or timber, if such operations are to be allowed.

- g. Any deviation from the requirement in Material Specification 585 to use stainless steel for all fasteners, connectors, and any other metal contacting alkali copper quaternary (ACQ) or copper azole (CA) treated wood. See Guidelines for Selecting Corrosion-Resistant Fasteners for Use with Preservative-treated Wood.

#### 4. Methods

##### Section 6, Measurement and payment

**Method 1**—Intended for use in cases where the quantities of lumber and timber are large and the measurement of structural elements is feasible.

**Method 2**—Considered more appropriate for structures of moderate size.

**Method 3**—Provides a flexible method of payment when there are some structure units that can be paid for as completed structures and also structures that

lend themselves to partial payment on a linear foot basis.

When specifications are prepared using electronic procedures and all methods but one are deleted for use in a contract specification, delete from the last paragraph, ***All Methods The following provisions apply to all methods of measurement and payment.*** Left justify the remaining text.

#### 5. Items of work and construction details

Starting at the top of page 83-2, prepare and outline job specific "Items of Work and Construction Details" (IWCD) in accordance with these instructions.