

<b>AMTRAK ENGINEERING PRACTICES</b> <b>Structures Department</b> <b>Standard Design Practices (SDP)</b>	<b>Section 3 – Minimum Building Technical Requirements</b>	<b>EP4000</b>
	<b>Chapter 6 – Woods, Plastics, and Composites</b>	<b>SDP: 3.06</b>
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## **Woods, Plastics, and Composites**

### **I. Rough Carpentry**

#### **A. Materials**

1. All wood in contact with masonry or concrete, exposed to the weather, or within 8" of grade shall be preservative pressure-treated or a naturally rot resistant species of wood.
2. Lumber for miscellaneous uses:
  - a. Unless otherwise indicated, use standard grade lumber for support of other work, including bucks, Nailers, blocking, furring, grounds, fire blocking, stripping and similar members.
  - b. Fire-resistant wood grounds, furring, blocking, Nailers, etc. to be used in non-combustible constructions.
3. All plywood shall be exterior rated or marine grade.

#### **B. Accessories**

1. Fasteners and anchors:
2. All connectors, nails, lag bolts, thru-bolts being used in contact with alkaline copper quaternary (ACQ) treated lumber are to be Type 304 stainless steel or Type 316 stainless steel.

#### **C. Accessory/equipment support**

1. Where accessories, fixtures, equipment, or any other components are to be installed and supported at stud walls, provide continuous 5/8" exterior rated plywood backup behind gypsum board and/or tile backer board or as required by manufacturer of component to be installed.

### **II. Heavy Timber Construction**

#### **A. Materials**

1. Structural timber shall have the have the following properties as minimums, Fb = 850 psi, Fv = 75 psi, E = 1300 ksi.
2. Glued laminated members shall conform to AITC 117-2004 and shall have the following properties as minimums, Fb = 2200 psi, Fv = 165 psi, E = 1500 ksi.
3. Parallam beams shall have the following properties as minimums, Fb = 2900 psi, Fv = 290 psi, E = 2000 ksi.

#### **B. Installation**

1. Installation to be in strict accordance with manufacturer's recommendations.

### **III. Interior Architectural Woodwork**

#### **A. General**

1. Fabricate and install all millwork in accordance with Premium Grade quality as specified in AWI Quality Standards Illustrated (QSI), current edition.

#### **B. Execution**

1. Examination
  - a. Verify all on-site dimensions.
  - b. Verify adequacy of backing and support framing.

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c. Verify mechanical, electrical, and building items affecting work of this section are in place and ready to receive this work.

d. Verify adequacy of backing and support framing.

## 2. Installation

a. Install additional support as per section, ROUGH CARPENTRY

b. Set and secure materials and components in place, plumb and level.

c. Countertops are to be scribed to fit to ensure no gaps remain.

## 3. Adjusting and Cleaning

a. Adjust moving or operating parts to function smoothly and correctly

b. Clean cabinets and leave in perfect working order with all doors, shelves and drawers aligned and plumb

## C. Stations Ticket Window Millwork

1. General: Provide built-in cabinets, counters, and accommodate the equipment of the ticket agents as indicated in the Station Program and Planning: Standards and Guidelines, as specified herein and as needed for a complete and proper installation.

## 2. Cabinets

a. Core

i. Plywood

ii. Moisture-resistant MDF made from wood, straw, or other rapidly renewable fibers acceptable to veneer or laminate manufacturer.

b. Veneer

i. Wood veneer

ii. Plastic Laminate

iii. Edge banding to be hardwood, minimum of ¼" thick.

## 3. Transactional Counter:

a. Solid Surfacing:

i. A durable solid surface material is the required countertop material unless historic conditions prevent such material.

ii. Solid surface materials must have an edge depth of not less than 1-1/4"

iii. All solid surface seams must be located at inconspicuous locations and must be fully adhered or welded as per manufacturer instructions.

b. Plastic laminate:

i. i. Plastic laminate must not be used for countertops.

c. Wood:

i. Wood must only be used where required to meet historic commission requirements or where intended to match existing construction.

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- ii. Where it is determined that a stone countertop must be used, the stone finish must be durable and suitable for use as a countertop and, in cases where intended to match existing construction, of a similar finish color and pattern.

d. Stone:

- i. Stone must only be used where required to meet historic commission requirements or where intended to match existing construction.
- ii. Where it is determined that a wood countertop must be used, the wood species and finish must be a durable hardwood suitable for use as a countertop and, in cases where intended to match existing construction, of a similar species with matching grain.

4. Ticket Window Opening

- a. Refer to the graphic standards and general notes in the 2025 Amtrak SC&F Design Manual for more information.
- b. Any changes to the Amtrak program must be approved by the Amtrak Project Manager.
- c. In some station locations, a bullet-resistant transaction window and enclosure may be required. The Amtrak Project Manager will coordinate enclosure protection requirements with Amtrak Police and Corporate Security departments and provide it to the Design Contractor.
  - i. Bullet-resistant glazing must be minimum Level 3 as per UL standard 752
  - ii. At ticket counters, or similar assemblies, where bullet-resistant glazing is employed, the wall surface below the countertop should be outfitted with bullet-resistant fiberglass panels that comply with the requirements of UL 752 or with the associated level of protection to match the level of protection provided by the glazing. The panel joints are to be reinforced with matching material of the same thickness, overlapping with the adjoining panels, as required to maintain the bullet resistance of the assembly.

5. Baggage Door

- a. Where baggage checking is available at the station, provide a baggage door as per the standard details, notes listed below, and Division 8 of this document.
- b. Opening must be 36" clear in width and height minimum
- c. Stainless steel door with 2" matching frame; door to swing in towards agent.
- d. Hardware to include magnetic hold open and lock function on agent side of counter.

6. Data and Electrical Outlets

- a. Provide data and electrical outlets for each ticket agent position. Verify requirements with Amtrak Digital Technologies (D.T.). See Station Program and Planning: Standards and Guidelines for general locations.

7. Equipment

- a. Computers, printers, monitors and cable connections will be supplied by Amtrak. See Station Program and Planning: Standards and Guidelines for general locations and space requirements.
- b. Baggage Scale
  - i. Where baggage checking is available at the station, provide a baggage scale as per Chapter 11, under Section, Commercial Equipment.
- c. Security Panic Button

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- i. Include a security/panic button as part of the ticket counter design to notify local authorities to dispatch police immediately to the location.
- ii. Coordinate with Amtrak Police and/or local law enforcement for connectivity requirements