

# STRUCTURAL WOOD SYSTEMS

DIVISION OF HARRISON INDUSTRIES, INC.



## OUTDOOR LIVING SHELTERS, PAVILIONS, & BRIDGES



# CUSTOM LAMINATED WOOD PAVILIONS

- Shelters
- Pavilions
- Stage Covers
- Gazebos
- Entry Canopies
- Arbors
- Pergolas
- Amphitheaters
- Playground Covers



State Park Beach Pavilion - Orange Beach, AL

**Glued laminated members are made from #1 Grade Southern Pine lumber. Lumber can be preservative pressure treated prior to gluing, providing lasting durability.**



Indianapolis Zoo Bicentennial Pavilion - Indianapolis, IN



Park Amphitheater - Stafford County, VA



Shackelford Ridge Soccer Complex - Signal Mountain, TN

**Pictured Front Cover Top: Hardin County Veterans Park - Elizabethtown, KY; Pictured Front Cover Bottom: City Park Bridge - Stuart, FL**

# SHELTERS TO MEET ALL YOUR NEEDS



**Pitched & Curved Shelter with Steel Columns**



**Hexagonal Shelter**



**Hip Shelter - Stuart, FL**



**Shelter Southside Baptist Church - Greenville, AL**

# PEDESTRIAN BRIDGES



Arlington Memorial Gardens Bridge - Cincinnati, OH

**Whether assembled on-site or in the factory, pre-fabricated bridges provide aesthetically pleasing and reliable access between buildings or over roads and waterways.**



Hospital Crossover Bridge - Albany, GA



Harborwalk Pedestrian Bridge - Destin, FL



Assembly of Pedestrian Bridge with horizontal rails going to Magnolia, AR

# VEHICULAR BRIDGES



Laminated Wood Girder for Vehicular Bridge



Five Mile Bridge - Grundy County, IL



1/4 Scale Model of a Highway Bridge



Close Up View of Model Bridge Steel Diaphragms

# DIVISION 6 - GLUED-LAMINATED TIMBER SPECIFICATIONS

This specification guide is applicable to all glued laminated structural members.

## **Code & Reference**

### **Standards**

AITC "Timber Construction Manual", latest edition. ANSI / AF&PA "National Design Specifications For Wood Construction", latest edition.

### **Quality Assurance**

To comply with the "Structural Glued-Laminated Timber" ANSI A190.1-2017.

*Manufacturer:* Provide factory-glued timber units, produced by a single AITC licensed firm, qualified to issue the AITC "Quality Inspected" Mark. Factory mark each piece of glued-laminated timber with AITC Quality Inspected Mark. Place AITC Mark on timber surfaces that will not be exposed to view in completed work.

### **Submittals**

*Product Data:* Submit certification, indicating glued-laminated timbers comply with requirements of ANSI A 190.1-2017.

*Shop Drawings:* Submit shop drawings prepared under the supervision of a professional engineer, licensed in the state where the project is located, showing full dimensions of each member. Indicate species and stress grade of lumber, type of glue, and other variables in required work. Furnish electronic PDF set of shop drawings for approval by the buyers approving agency. The contractor shall verify dimensions and be responsible for coordinating same. Laminated timber manufacturer is required to have a licensed professional engineer on staff.

### **Materials**

*Lumber:* Comply with ANSI A190.1 and applicable lumber association standards cited therein for grades required to achieve glued-laminated timber requirements for allowable stress appearance, fabrication limitations and species. Laminating combinations shall be visually graded as determined by manufacturer.

*Preservative Treatment (option):* Where preservative treatment is specified or shown on plans, pressure treat lumber prior to gluing with Pentachlorophenol in mineral spirits in accordance with AITC 109 "Standard for Preservative Treatment of Structural Glued-Laminated Timber." (.3 pcf) above ground, (.6 pcf) ground contact.

*Lumber Species:* Southern Pine

*Adhesive:* Adhesives shall be wet-use (waterproof) complying with ANSI A190.1. Adhesives shall contain no Urea Formaldehyde.

## **Timber Design**

*General:* Glued-laminated members to be sized by manufacturer except as shown on drawings. Final cross sections will be based on manufacturer's standard widths and depths. Manufacturer to provide design values (stresses) to fulfill structural demand in accordance with applicable provisions of AITC 117 "Design, Standard Specifications for Structural Glued-Laminated Timber of Softwood Species."

*Camber:* Except as otherwise indicated, fabricate horizontal load bearing members with a camber as shown on the drawings.

*Steel Connections:* Laminated timber manufacturer to supply all fabricated steel connections to join laminated to laminated, and laminated to supports exclusive of items embedded into concrete or welded to structural steel or connected to stud walls. Hardware shall be pre-fit and match-marked in the manufacturing facility.

A. Steel work to conform to A.I.S.C. Specifications.

B. Steel shall conform to ASTM A-36/

C. Bolts shall conform to ASTM A-307, Zinc Plated.

D. Shop paint fabricated steel with one coat of rust inhibitive primer.

E. Where wet-use glulam work is indicated, finish fabricated assemblies with hot-dipped galvanized coating (ASTM A 153), including bolts and other fasteners.

## **Appearance Grade**

Provide *Premium Appearance Grade* timbers complying with AITC 110. Premium is the highest standard appearance grade.

## **Finish**

Factory applied temporary sealer.

*When stain is specified to be factory finished, use the following in lieu of the sealer specifications.*

Factory finished with (1) coat of manufacturer's semi-transparent, oil-based stain. Color to be chosen from manufacturer's standard stain colors. Manufacturer to submit color selection samples of finish for approval.

## **Factory Applied Protection**

Immediately after end-cutting each member to final length, apply a saturation coat of end sealer to ends and other cross-cut sections.

Individually wrap glued-laminated timbers with manufacturer's standard water-resistant, plastic coated paper.

Full copy of Structural Wood Systems  
Standard Specifications for Glued  
Laminated Timbers and Solid Timber  
Decking Available upon request.



## Glulam and SWS T&G Decking Stain Selection Chart

Standard one coat semi-transparent oil based wood stain options shown below.

Samples are on smooth surfaced glued-laminated southern yellow pine.

Contact Structural Wood Systems for inquiries on custom finish options.

Minor blemishes and field touch-up should be anticipated on factory finishes.

Field finishing is recommended due to marring during transportation and erection.



The colors shown are for reference purposes only. They have been reproduced using digital production techniques. These samples are from actual production, but color variation can occur due to light, age, and different textures of wood. Request an actual sample of color selection for final approval.

Pictured Back Cover Top: Amberly Glen Bridge - Cary, NC;  
 Pictured Back Cover Bottom: Elementary School Entrance - Sealy, TX



**NATURAL , RENEWABLE, AND SUSTAINABLE WOOD PRODUCTS**



**STRUCTURAL WOOD SYSTEMS**

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