

# ART THURESON INC

4000 West Walton Waterford, MI 48329

Phone: 248-623-8599 Fax: 8766



Ford Field Glue-Lam Covered Bridge-MI



South Gale Glue-Lam Girder Bridge-NH

## ***Glued-Laminated Timber Bridges***



Warm Springs Glue-Lam Longitudinal Bridge-WY



Paddy's Creek Glue-Lam Arch Bridge-SC

Art Thureson, Inc has been supplying glued laminated timber vehicle and pedestrian Bridges since 1980. Glued laminated timber bridges are naturally beautiful, durable and cost-effective. Engineered stamped drawings and calculations. Glued laminated timber bridges are pre-fabricated prior to pressure-treatment to ensure a long and useful service life.

*For additional photos, visit:*

[www.artthuresoninc.com](http://www.artthuresoninc.com)

# ***Glu-laminated Timber Bridge Specifications***

## **1.0 GENERAL REQUIREMENTS**

1.1 Description: This section includes the design, fabrication and supply of the pre-manufactured, glued-laminated pedestrian bridge(s) as shown and described on the contract drawings. The bridge is to be of pressure-treated glulam and timber construction, and the supplier shall furnish all materials including connecting steel and hardware for a complete installation.

## **1.2 Design Criteria:**

Vehicle Load: \_\_\_\_\_ psf (Infrequent load, CD=1.3333)

Dead Load: \_\_\_\_\_ psf

Live Load: \_\_\_\_\_ psf

Snow Load: \_\_\_\_\_ psf

Wind and seismic loads per local building code.

## **1.3 Qualifications:**

The bridge supplier must be a company specializing in the design and fabrication of timber bridges, with a minimum of five (5) years documented experience. Approved suppliers include:

**ART THURESON, INC**  
**4000 West Walton**  
**Waterford, MI 48329**  
**248-623-8599 Fax 8766**  
[www.artthuresoninc.com](http://www.artthuresoninc.com)

## **1.4 Submittals:**

1.4.1 Submit shop drawings and product data under the provisions of section 01300. Shop drawings shall include: general layout of structure, footing plan, elevation and cross section, and fabrication details for all wood members and steel assemblies. Include all pertinent dimensions, wood grades, drilled holes, fasteners, cambers, connectors, and types of preservative treatment. Shop drawings to be stamped by a registered engineer, licensed to practice in the state where the bridge is being constructed.

1.4.2 Submit design calculations stamped by a registered engineer licensed to practice in the state where the bridge is being constructed.

1.4.3 Furnish an AITC or APA-EWS Certificate of Conformance stating that the glulams conform to the specifications.

1.4.4 Furnish a WCLIB or WWPA Certificate of Conformance for all sawn lumber

1.4.5 Furnish a Certificate of Treatment stating that the glulams and sawn timber have been pressure-treated in accordance with the specifications.

1.4.6 Provide a written warranty against defects in material and workmanship for a period of five (5) years.

## **2.0 PRODUCTS**

### **2.1 Materials:**

2.1.1 Glulam shall be West Coast Douglas Fir. Grades as required by the design. The appearance shall be Industrial, except handrails and rail posts to be Architectural. Adhesive shall be 100% water-proof phenolic resin glue. Nail Laminated Decks are not allowed.

2.1.2 Sawn timber shall be West Coast Douglas Fir, #1, S4S, unseasoned.

2.1.3 Steel and hardware. Manufacturer to supply all necessary steel and hardware required to assemble the bridge. Steel to be ASTM A-36 and hardware to be ASTM A-307. Welding by certified welders per AWS specifications D1.5. All steel and hardware to be hot-dipped galvanized per ASTM A-123.

### **2.2 Fabrication:**

2.2.1 All glulam members and sawn timber to be incised and fully fabricated prior to preservative treatment in a plant with facilities for performing work specified. Factory drill all holes to the extent possible. Field cuts and bores to be treated with copper naphthenate per AWPA M4. The incising of handrails may be waived if appearance is important.

2.2.2 Pressure-treat glulam members in accordance with AWPA specifications C-28. Sawn timber to be pressure-treated per AWPA specifications C-2 and C-9. Follow Best Management Practices (BMP) for all treated material, as necessary.

## **3.0 EXECUTION**

### **3.1 Delivery, storage, and handling:**

3.1.1 The purchaser or installer is responsible for handling and protection of bridge members after arrival at destination. All bridge materials shall be unloaded and handled with a forklift or crane using nylon slings.

3.1.2 If bridge materials are to be stored at the site, they must be placed on a level surface and stickered to prevent warpage and twisting.

3.1.3 Any damage must be reported immediately to the bridge supplier's engineering department.

### **3.2 Installation:**

3.2.1 Install the timber bridge according to manufacturer's shop details and installation drawings. Set structural members in locations and to elevations indicated. Make provisions for erection loads and provide temporary bracing to maintain bridge true and plumb, and in true alignment until completion of erection.

3.2.2 Do not field cut, drill, or alter structural members without written approval from the timber bridge company's professional engineer.

## **4.0 FOUNDATIONS**

4.1 Bridge supplier shall provide bridge live load and dead load reactions, anchor bolt locations and abutment layout to purchaser. The purchaser is responsible for the final design of the bridge foundations.

4.2 Alternately, the purchaser may contract with the bridge supplier for the design of the bridge foundations. Purchaser is responsible for obtaining all needed soils, hydraulic and survey information required to design footings.