Timber Deck™ Roof System

General
The General Conditions, Supplementary General Conditions and Division 1 of the Specification apply to the Work of this Section.

Work Included
Furnish all materials, labor and equipment necessary to complete the Timber Deck™ Wood Roof System indicated in the Drawings and specified herein.

Quality Assurance
A. STANDARDS: Except as otherwise indicated, comply with PS 56 “Structural Glued Laminated Timber”. Specifications based on Timber Deck™ System by Timber Systems.
C. FACTORY MARK: each piece of glued laminated structural units with AITC/APA Quality Inspected mark. Place mark on upper non-exposed surface.
D. DESIGN BY MANUFACTURER: Where portions of final design Timber Deck™ Wood Roof System are indicated as manufacturer’s responsibility (any element of design consideration), comply with applicable provisions of AITC 117-“Design, Standard Specifications for Structural Glued Laminated Timber of Softwood Species.”

Submittals
A. PRODUCT DATA: Submit manufacturer’s data, specifications and installation instructions covering lumber, adhesives, fabrication process, accessories and protection.
   1. Submit certification, signed by an officer of the manufacturing firm, verifying that applicable portions of Timber Deck™ Wood Roof System comply with requirements of PS 56.
B. SHOP DRAWINGS: Submit shop drawings showing full dimensions and layout of all components of complete system. Show large scale details of all connections, connectors and other accessories. Indicate species and stress grade of lumber, type of glue and other variables in required work.
   1. Show loading, section, modulus, assumed allowable stress, stress diagrams and calculations and similar information needed for analysis.
Delivery, Storage and Handling
A. Keep glued laminated structural units dry during delivery, storage, handling and erection by maintaining factory applied protective covering in weather tight and light-proof condition or by applying other weather tight protection. Maintain protective covering until building enclosure is completed to extent necessary for protection of interior glued laminated structural work, and until finishing of exterior work is ready to proceed. Do not store glued laminated structural units in areas of either excessively high or excessively low relative humidity: comply with manufacturer’s instructions. Any material damaged or discolored by weather exposure shall be immediately removed and replaced.
B. Time delivery and installation of this work to avoid extended on site storage and to avoid delaying work of other trades whose work must follow erection of this work.

Materials
A. LUMBER: Comply with PS 56 and applicable lumber association standards cited herein for grades required to achieve GL-Structural requirements for allowable stress, appearance, fabrication limitations and species (if any).
B. LUMBER SPECIES: Douglas Fir or Southern Yellow Pine.
C. ADHESIVE: Comply with PS 56, using wet-use (waterproof) adhesive, unless otherwise indicated.
D. FINISH: Manufacturer’s standard non-toxic mildewcide-fungicide stained finishes,
E. CONNECTORS, ANCHORS, ACCESSORIES: Provide as required to meet Manufacturer’s standards and designed loads and as specified in Drawings. Minimum Nail Requirements:
   1. Tee’s and Flankers (7:12 slope or less): Two 16d common at each support.
   2. Staple Tees and Flankers as specified by Manufacturer.
   3. 2x4 Purlins: Two 10d common at each Tee.
   4. Sheathing: All supported edges at 6” o.c. with 8d common.
      Intermediate framing at 12” o.c. 8d common.
   5. Blocking: Two 6d into each Flanker and Tee.
F. TEES: 8 5/8” or 10 5/8” web glued to 2” nominal (1 ½” actual) thickness x 6 3/8” width Tongue and Groove Decking.
G. FLANKERS: 2” nominal (1 ½ actual) thickness x 6 3/8” width Tongue and Groove Decking.
H. BLOCKING: Full width and depth of Tee Web members cut to fit perpendicular to Tees.
I. PURLINS: No. 2 - 2 x 4’s at 24” o.c.
J. SHEATHING: 1/2” A.P.A. rated 40/20 exposure 1, OSB staggered panels to achieve a case 1 unblocked diaphragm. Refer to drawings.
K. INSULATION: 5 1/2” EPS blocks or R30.
L. Vapor barrier: 4mil poly vapor barrier installed above Timber-Deck™ and below insulation.

Fabrication
A. GENERAL: Comply with PS 56 in providing units indicated; where dimensions are not completely documented, provide manufacturer's standard sizes and shapes required to fulfill indicated performances.
B. APPEARANCE GRADE: Decorative Grade decking.

Installation
A. Comply with AITC “Standard for Heavy Timber Construction” and manufacturer’s instructions.
B. Avoid cutting structural members/decking during erection, to greatest extent possible. Apply heavy brush coat of end sealer complying with AWPA standard M4 to all end cuts and large penetrations.
C. Carefully handle all members to prevent visible surface damage.
D. Repair damaged surfaces and finishes after completion of erection, or replace damaged members as directed by Architect where damage is beyond satisfactory repair.
E. Interior decking shall have uniform finish, color texture, joint spacing and overall appearance throughout the entire project.
F. If required, finish color of decking shall be coordinated to match finish color of glued laminated structural units.
G. Roof felt and shingles must be installed promptly to protect system from moisture.
H. Roof space above insulation must be well ventilated.

Warranty
Manufacturer and Installer shall warranty materials and workmanship against defects for a period of one year from the date the Certificate of Substantial Completion is signed.