

CROSS LAMINATED TIMBER PANELS

PART 1 - GENERAL

1.01 SECTION INCLUDES:

NOTE TO SPECIFIER: Edit following paragraph accordingly to fit project requirements.

- A. Southern Yellow Pine (V3 Layup) Cross Laminated Timber (CLT) Panels for the following applications:
 - 1. Walls.
 - 2. Floors.
 - 3. Roof.

NOTE TO SPECIFIER: Edit following paragraph accordingly to fit project requirements.

- B. Products installed but not furnished under this section:
 - 1. Hanger brackets with bolts, nuts, washers.
 - 2. Steel connections to cross laminated panels construction.
 - 3. CLT panels connections to steel, concrete and other structures.

1.02 RELATED SECTIONS

NOTE TO SPECIFIER: Edit following paragraphs accordingly to fit project requirements.

- A. Division 1- General Requirements.
- B. Division 3 – Concrete.
- C. Division 5 - Metals.
- D. Division 6 – Woods, Plastics and Composites.
- E. Division 9 - Finishes.

1.03 REFERENCES

- A. 2017 ANSI/APA PRG 320. Standard for Performance-Rated Cross-Laminated Timber.
- B. CLT Design Handbook – US Edition.
- C. National Design Specification for Wood Construction NDS-2012.

1.04 SYSTEM DESCRIPTION

NOTE TO SPECIFIER: Edit following paragraph accordingly to fit project requirements.

- A. Product provided by this Section consists of cross laminated panels system for applications specified herein and the drawings.
- B. Provide Single Source Manufacture for all products.

1.05 SUBMITTALS

- A. Product Data: Submit manufacturer's product literature and installation instructions.
- B. Shop Drawings – Shop Drawings shall include:
 - 1. Panels: Include panel layout, dimensions, shapes, sections, openings and support conditions.
 - 2. Material and appearance grade.
 - 3. Applicable fabrication details and CLT to CLT connection details.
 - 4. Indicate lifting connections location where applicable.

- C. Do not fabricate until shop drawings are reviewed and approved without further changes.
- D. Submit product data and material safety data sheet (MSDS) for the CLT adhesive used indicating chemical composition and VOC content.

NOTE TO SPECIFIER: Edit following paragraph accordingly if sample is not required.

- E. Product Samples: Provide a standard, 3 layers, 12"x12" sample panel. Sample shall be standard product sample and not from actual panel to be delivered for project.

1.06 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Certified by the American Plywood Association - Engineered Wood Systems (APA EWS).
- B. Minimum Design Standards: CLT Handbook- US Edition and National Design Specification for Wood Construction NDS-2012.

1.07 WARRANTY

- A. Upon completion and acceptance of the work required by this section, the manufacturer will issue a warranty agreeing to promptly replace defective materials for a period as determined by the manufacturer Terms and Conditions.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to project site in original, factory-sealed, unopened containers and or wrapping bearing manufacturer's name and label intact and legible.
- B. Arrange delivery of panels in accordance with construction schedule to designated delivery location.
- C. Affix authorized label to all panels supplied. Also identify each panel with mark number.
- D. Protect corners with wood blocking.
- E. Store materials in protected and well-ventilated area.
- F. Slit underside of membrane covering during storage at site. Do not deface members.
- G. Store CLT panels, blocked off ground and separated with striping, so air may circulate around all faces of members.
- H. Cover top and sides with opaque moisture resistant membrane if outside.
- I. Maintain protection of CLT panels during construction.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. IB X-LAM USA. 240 S Pineapple Avenue, Sarasota, Florida 34236. 1-844-422-3267.
www.internationalbeams.com

2.02 MATERIALS

- A. Lumber Species: Southern Yellow Pine as recognized by American Lumber Standards Committee (ALSC) under PS 20 with a minimum published specific gravity of 0.35, as published in the National Design Specification for Wood Construction (NDS).
- B. Lumber Grades: Minimum grade of lumber in the exposed layers of CLT shall be visual grade No. 2. The minimum grade of lumber in the non-exposed layers of CLT shall be visual grade No. 3.
- A. Moisture Content: As per Section 6.1.4 of the 2017 PRG 320 Standard for Performance Rated Cross-Laminated Timber.
- B. Face-bonding surface: As per Section 6.1.5 of the 2017 PRG 320 Standard for Performance Rated Cross-Laminated Timber.
- C. Face-bonding dimensional tolerances: As per Section 6.1.6 of the 2017 PRG 320 Standard for Performance Rated Cross-Laminated Timber.

2.03 ADHESIVES

- A. As per Section 6.3 of the 2017 PRG 320 Standard for Performance Rated Cross-Laminated Timber.

2.04 FABRICATION

- A. Fabricate CLT panels following ANSI/APA PRG 320 recommendations and guidelines.
- B. CLT panels shall be fabricated with 1/8" eased radius edges.
- C. Fabricate panels with lifting locations, required and indicated cuts, openings, voids as documented on the reviewed and approved shop drawings.
- D. After fabrication, mark members for identification during erection. Marks shall be visibly for erection and concealed in final assembly.

2.05 PANEL TYPES

NOTE TO SPECIFIER: Edit following paragraph accordingly to fit project requirements. Specifier to list required PANEL LAYOUT for each panel type used OR REFER TO DRAWINGS FOR THIS INFORMATION.

- A. 3ply TL (4 1/8")
- B. 3ply TT (4 1/8")
- C. 5ply TL (6 7/8")
- D. 5ply TT (6 7/8")
- E. 7ply TL (9 5/8")
- F. 7ply TT (9 5/8")
- G. 9ply TL (12 3/8")
- H. 9ply TT (12 3/8")

2.06 APPEARANCE CLASSIFICATIONS

NOTE TO SPECIFIER: Edit following paragraph accordingly to fit project requirements. Specifier to list required appearance classification for each panel type used.

- A. Industrial- As determined by X-LAM USA Appearance Classifications guidelines.
- B. Architectural 2- As determined by X-LAM USA Appearance Classifications guidelines.
- C. Architectural 1- As determined by X-LAM USA Appearance Classifications guidelines.

2.07 PANEL SCHEDULE

NOTE TO SPECIFIER: Edit following paragraph accordingly to fit project requirements. Specifier to list required PANEL THICKNESS, APPLICATION AND LAYUPS for each panel type used OR REFER TO DRAWINGS FOR THIS INFORMATION.

- I. Panel Type 1:
- J. Panel Type 2:
- K. Panel Type 3:

PART 3 - EXECUTION

3.01 INSPECTION

- A. General Contractor shall check and compare all dimensions with field conditions and shop drawings prior to releasing manufacturer for fabrication.

3.02 INSTALLATION

- A. CLT panels shall be erected from locations shown on shop drawings.
- B. Follow manufacturers recommendations for unloading, lifting, protection during construction and panels installation.
- C. Protect panels joints from water/moisture infiltration during construction.
- D. Protect and cover panel's end grains during construction.
- E. Set panels level and plumb.
- F. Brace panels and anchor in place to maintain plumb and level until final connections to structure are secured.
- G. Fit CLT panels in accordance with reviewed shop drawings and/or fabrication/erection drawings.
- H. CLT panels shall not be cut unless specifically indicated on shop drawings.

3.03 CLEANING

- A. Clean installed CLT panels in strict accordance to manufacturer's recommendations.
- B. Do not use cleaning agents without written approval from manufacturer.

END OF SECTION