

## SECTION 06 1753 - SHOP FABRICATED WOOD TRUSSES

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section includes:
  - 1. Shop fabricated wood roof trusses
  - 2. Bridging, bracing, and anchorage.
  - 3. Fire retardant wood treatment.
  - 4. Metal truss accessories.
  - 5. Preservative wood treatment.

#### 1.2 PERFORMANCE REQUIREMENTS

- A. Design Roof Live and Dead Load: As indicated on Drawings.
- B. Maximum Vertical Deflection:
  - 1. Live load  $L/360$  of span, Total Load  $L/240$  of Span.
- C. Minimum Truss Opening to Accommodate Mechanical Ducts: Provide truss openings sized to accommodate ducts and duct insulation at the location indicated on Drawings.

#### 1.3 SUBMITTALS

- A. Section 01330 - Submittal Procedures: Submittal procedures.
- B. Shop Drawings: Indicate sizes and spacing of trusses and associated components, web and chord sizes, plate sizes, fastener descriptions and spacings, loads and truss cambers, and framed openings
- C. Product Data: Submit truss configurations for each type and size truss, bearing and anchor details, bridging and bracing requirements.
- D. Design Data: Submit design calculations signed and sealed by Professional Engineer Registered in the State of Pennsylvania.

#### 1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with the following:
  - 1. Lumber Grading Agency: Certified by ALSC.
  - 2. Plywood Grading Agency: Certified by APA/EWA.
- B. Truss Design, Fabrication, and Installation: In accordance with ANSI/TPI 1 and TPI HIB-91.

## 1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. Design trusses under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed in the State of Pennsylvania.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 6000 - Product Requirements: Product storage and handling requirements.
- B. Handle and erect trusses in accordance with TPI HIB-91.
- C. Store truss depth in vertical position resting on intermittent bearing pads.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Manufacturers:
  - 1. Alpine Engineered Products, Inc.
  - 2. Shelter Systems Corporation.
  - 3. Warren Truss Co.
  - 4. Modu-Tech
  - 5. Trussway.
  - 6. Best Building Components.
  - 7. Substitutions: Section 01 6000 - Product Requirements.

### 2.2 MATERIALS

- A. Lumber Grading Rules: SPIB.
- B. Wood Members: Southern pine Number 2 or better grade; 19 percent maximum and 7 percent minimum moisture content; single top and bottom chord. Finger scarfing not permitted.
- C. Steel Plate Connectors: ANSI/TPI 1, Section 6; hot dip galvanized; die stamped with integral teeth.
- D. Truss Bridging: Type, size and spacing recommended by truss manufacturer, temporary and permanent.

### 2.3 ACCESSORIES

- A. Wood Framing for Openings: Softwood lumber as specified in Section 06100, fire retardant treated.

- B. Fasteners and Anchors:
  - 1. Fasteners: Hot dipped galvanized steel for high humidity and treated wood locations, unfinished steel elsewhere.
  - 2. Anchors: Toggle bolt type for anchorage to hollow masonry. Expansion shield and lag bolt type for anchorage to solid masonry or concrete.
- C. Bearing Plates: Hot dip galvanized.

## 2.4 FABRICATION

- A. Fabricate trusses to achieve structural requirements specified.
- B. Brace wood trusses for support in accordance with TPI HIB-91.
- C. Fabricate chord extensions as indicated on Drawings.
- D. Fabricate to achieve minimum end bearing of 4 inches or as indicated on Drawings.
- E. Frame special sized openings in web framing as indicated on Drawings.

## 2.5 WOOD TREATMENT

- A. Manufacturers:
  - 1. Hickson Corporation; Wolmanized preservative treated wood and Dricon fire retardant treated wood.
  - 2. Hoover Treated Wood Products Inc.; CCA preservative treated wood, and Exterior Fire-X and Pyro-Guard fire retardant treated wood.
  - 3. Substitutions: Section 01 6000 - Product Requirements.
- B. Fire Retardant Treatment: Pressure treatment, AWPAC20 for lumber and AWPAC27 for plywood, Interior Type, chemically treated and pressure impregnated; capable of providing a maximum flame spread/smoke development rating of 25/450.
- C. Shop pressure treat wood materials indicated on Drawings.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Section 01 3000 - Administrative Requirements: Coordination and project conditions.
- B. Verify supports and openings are ready to receive trusses.

### 3.2 PREPARATION

- A. Coordinate placement of bearing and support items for correct location and elevation.

### 3.3 ERECTION

- A. Set members level and plumb, in correct position.
- B. Make provisions for erection loads, and for sufficient temporary bracing to maintain structure plumb, and in alignment until completion of erection and installation of permanent bracing.
- C. Do not field cut or alter structural members without approval of Architect.
- D. Place headers and supports to frame openings.
- E. Coordinate placement of sheathing with work of this Section.
- F. After erection, touch-up damaged surfaces with primer consistent with shop coat

### 3.4 ERECTION TOLERANCES

- A. Section 01 4000 - Quality Requirements: Tolerances.
- B. Framing Members: 1/2 inch maximum, from indicated position.

END OF SECTION