

**SECTION 06130  
PAVILION STRUCTURE**

**PART 1 GENERAL**

**1.1 REFERENCES**

- A. The Contract Drawings indicate and show limits of construction for this project. These Specifications specify material and work requirements for this project. Both are complementary to each other, and both shall be followed to properly complete the work. Plans govern over technical specifications.

**1.2 WORK INCLUDED**

- A. Structural design, fabrication and installation of heavy timber beams, columns, purlins, bracing, columns, trusses and roofing.
- B. Perform all work required to properly complete the pavilion structure work as shown on the drawings and as specified herein.
- C. Provide all labor, materials, staging, scaffolding, temporary bracing, crane, hoists, rigging, equipment and services necessary to perform the Work of this Section. The work includes, but is not necessarily limited to the following:
  - 1. Timber components of every description, including beams, girts, purlins, plates, braces, ties, pegs and webs.
  - 2. Miscellaneous hardware for heavy timber construction, including but not limited to: Plate connections and bolts.
  - 3. Installation of granule surfaced asphalt shingle roofing.
  - 4. Secure all necessary permits from municipal, county and state departments having jurisdiction prior to the start of construction and furnish proof of acceptance upon completion of the work.

**1.3 SUBMITTALS**

- A. Shop Drawings: Furnish complete Shop Drawings which shall include the following:
  - 1. Small scale plans and elevations showing truss members, joints and methods of assembly. Shop Drawings shall include details for members and connection and shall show connector plates, pegs, mortises, tenons, angles of cut, etc.
- B. Truss design shall provide the required stability and resistance to gravity loads.

**1.4 MEASUREMENTS**

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- A. The Contractor shall obtain and verify all measurements and conditions at the building as required for the proper installation of his work. He shall be responsible for the accuracy and fit of the various parts of his work and the proper building in of same.

## **1.5 PROTECTION, STORAGE AND HANDLING**

- A. Protect trusses and keep under cover in transit and at the job site. Stack to ensure proper ventilation and drainage. Store under cover in a well ventilated area. Trusses damaged in shipment or at the job site shall be repaired or replaced at no cost to the Owner.

## **PART 2 PRODUCTS**

### **2.1 GENERAL**

- A. Trusses and all components for a complete installation to be supplied by:

The Barn Yard  
9 Village Street  
Ellington, CT 06029  
860-896-0636  
[www.barnyard.com](http://www.barnyard.com)

Or approved equal.

### **2.2 TRUSSES**

- A. Timber shall be sized according to engineering requirements. Minimum size shall be 6" x 6" in all directions.
- B. Timber species shall be Southern Yellow Pine or Douglas Fir Select Structural, S4S or #1 Better Douglas Fir, S4S, FOHC or Native Hemlock/Pine, Rough Sawn or S4S.
- C. Unless otherwise noted, all timber shall be per "Standard Grading Rules for Western Lumber" by the Northeastern Lumber Manufacturers Association. Records of grad marks and certificates indicating conformance with the Specifications shall be maintained by the Contractor.
- D. Structure shall be of the "King Post" truss design.

### **2.3 PEGS**

- A. Peg material shall be straight grained, all heartwood, knot free, and reaction free from Oak.

### **2.4 ROOFING MATERIALS**

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- A. Roof decking material shall be 2 x 8 T&G Southern Yellow Pine V-Grove roof decking.
- B. Roof material shall be granular surface asphalt shingle with roofing moisture shedding underlayment, eaves valley and ridge protection and associated metal flashing. Roofing shingles shall be as manufactured by Certain Teed, **Certain Teed Landmark Pro** or approved equal.

## **2.5 MISCELLANEOUS HARDWARE**

- A. Furnish and install all necessary hardware and metal shapes required for assembly and erection of the trusses.
- B. All steel shapes, plates, and tubes, unless otherwise specified, shall conform to ASTM A-36, as amended to date. Steel pipe shall conform to ASTM 53, Grade B.
- C. Where welding is called for, it shall be by the electric arc process in accordance with the American Welding Society's Code for Arc and Gas Welding in Building Construction.
- D. All other steel shapes, plates, tubes, etc. shall be thoroughly cleaned and given one heavy shop coat of an approved red lead primer (black), well worked into all joints and open spaces. After erection, touch-up as required. Surfaces which are not accessible for field painting shall have one shop coat of black paint before leaving the shop.

## **2.6 FINISH**

- A. Trusses shall be prefinished on all surfaces and joints with one coat of Heritage Timber Oil for Fir. TWP 1500 Series or equal for native material.

## **PART 3 EXECUTION**

### **3.1 INSTALLATION - GENERAL**

- A. Installation of trusses shall be in accordance with the details and notes on the Drawings, the approved Shop Drawings, code requirements, and the best trade practices.

### **3.2 JOINERY**

- A. CNC Cut Mortise and Tenon Joinery with hardwood oak pegs or steel as detailed on Structural Drawings.
- B. All joinery shall be accurately cut so as to make a neat, snug fit.

### **3.3 ERECTION**

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- A. Truss components and assemblies must be checked for dimension and anchorage accuracy before erection.
- B. Temporary bracing and guy lines shall be provided to adequately protect all persons and property and to insure proper alignment.
- C. Padding or non-marking slings shall be used, and corners shall be protected with locking.
- D. The assembled trusses shall be reasonably straight, plumb, level and square. Portions of the structure not adequately braced by design shall have temporary braces until the decking is applied.
- E. All joints shall be reasonably tight.
- F. All joints that require pegging shall have pegs driven until snug or flush. Pegs shall protrude 1' -2" on both sides of truss except where they should be flush as directed above. Broken pegs shall be removed and replaced. Pegs with a mushroomed head shall be cut off below that portion.
- G. Tools used to drive or pull joints together shall not permanently mar the finished surfaces of the trusses.

### **3.4 ROOF SHINGLES**

- A. Roof Deck Preparation: Follow shingle manufacturer's recommendations for acceptable roof material. Broom clean deck surfaces under eave protection and underlayment prior to their application.
- B. Eave Ice Dam Protection: Place eave edge and gable metal edge flashing with fascia boards. Weather lap joints 2 inches. Secure flange with nails spaced 8 inches on center.  
  
Apply CetainTeed " WinterGuard", or approved equal, waterproofing shingle underlayment as eave protection in accordance with manufacturer's instructions. Extend eave protection membrane minimum 24 inches (640 mm) up slope beyond interior face of exterior wall.
- C. Installation of Protective Underlayment: Prior to the installation of the roofing underlayments, all horizontal & vertical seems must be taped.  
  
Apply a 4-inch wide ASTM D1970 compliant self-adhering polymer-modified bitumen flashing tape or a 3-3/4 inch wide AAMA 711-13, Level 3 (for exposure up to 80°C/176°F) compliant self-adhering flexible flashing tape to seal all horizontal and vertical joints in the roof deck.
- D. Installation of Asphalt Shingles: Install all shingles in accordance with manufacturer's instructions for product type and application specified.

END OF SECTION 06130