SECTION 10 73 46
PRE-FABRICATED SITE SHELTERS

1.GENERAL

1.1. SUMMARY

A. Design, fabrication, finishing, and delivery of pre-engineered, glue laminated wood, factory-fabricated site shelter.

B. Site work related to installation, by Contractor or Owner, including:
1. Unloading and temporary storage, if any.
2. Soil testing, if necessary.
3. Site preparation.
4. Column foundations, rebar, anchor bolts, and anchor embedment.
5. Concrete slab and embedment.
6. Erection.
7. Field touch up painting of factory finishes, if necessary.

C. Site access for delivery vehicles shall be provided by Owner.

1.2. SYSTEM DESCRIPTION

A. Design shall meet or exceed applicable building code.

B. Pre-Engineered, pre-fabricated packages shall include laminated wood beams, structural glued laminated wood columns, T&G wood roof deck, wood fascia, and column to beam connection fasteners.

C. Pre-engineered, pre-fabricated package shall be designed as a fixed base, heavy timber construction structure. Superstructure components (columns, beams, & connection) shall be factory pre-cut and pre-drilled. Roof deck shall be delivered in specified lengths such that joints occur over beams for minimal cutting, Fascia and nailer shall be delivered in industry standard lengths and field cut by installer.

D. Field labor required to install the pre-fabricated parts. Structure is shipped knocked down. Onsite welding shall not be required or permitted.

1.3. REFERENCES

A. American National Standard for Wood Products – Structural Glued Laminated Timber (ANSI A-190.1)

B. American Institute of Timber Construction (AITC)

C. American Plywood Association (APA)

D. Engineered Wood Association (EWA)

E. American Society of Testing Material (ASTM)
   1. ASTM A307 - Standard Specification for Carbon Steel Bolts and Studs
   2. ASTM A500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
   3. ASTM A572 - Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel

F. American Institute of Steel Construction (AISC)

G. American Welding Society (AWS)

H. Steel Structures Painting Council (SSPC); SSPC-SP10 - Near-White Blast Cleaning

I. Leadership in Energy and Environmental Design (LEED)

1.4. QUALITY ASSURANCE

A. Designer Qualifications: Design under direct supervision of a Professional Engineer experienced in design of this type of work and licensed in the State where the Project is located.

B. Manufacturer Qualifications: Company experienced in design and manufacture of shelters of the type specified, and having the following:
   1. Minimum five years of experience in design and fabrication of pre-fabricated glued laminated wood shelters.
   2. Three references of similar shelters completed within the past two years within a 100 mile radius of project.
   3. Fabricator membership in American Institute of Steel Construction (AISC), requiring quality control documentation and procedures. Provide current AISC shop certification upon request.
   4. All welding shall be performed to AWS standards by AWS certified welders. Provide welding certification upon request.
   5. Fabricator membership in AITC and APA/EWS. Members shall be marked (in an unseen finish product location) with an AITC or APA/EWS Quality Mark. Additionally, a Certificate of Conformance shall be provided, indicating conformance with ANSI/AITC A190.1-2002.

C. Perform the work in accordance with applicable federal, State, and local building and safety codes and regulations.

1.5. SUBMITTALS

A. Minimum 5 sets of shop drawings, showing all details of construction, including foundation sizes, reinforcement, and locations. Drawings shall be furnished on minimum 22” x 34” paper. Prints on ledger, legal or letter size paper are unacceptable.
   1. Provide the licensed professional engineer’s state stamp or seal on the shop drawings.
   2. Provide the licensed professional engineer’s state stamp or seal on the structural calculations.

B. Selection Samples: For each finish product specified, color charts representing manufacturer's full range of available colors.

C. Warranty

1. Provide minimum five year warranty against manufacturer defects.
2. Provide roofing manufacturer's limited warranty.

1.6. DELIVERY, STORAGE, AND PROTECTION

A. Individually wrap factory-finished structural components in fiber reinforced paper to protect the finish during transit.

B. Wood roof deck shall be load wrapped and banded together in bundles that do not exceed 2,000 lbs.

C. Shipped knocked down for minimal shipping charges.

D. Deliver products to project site in manufacturer's protective packaging.

E. Follow shelter manufacturer's recommendations and instructions, including those printed on the shop drawings. To minimize damage during unloading, use only padded forks or non-marring slings.

F. Prefinished materials not being immediately installed must be protected from sunlight.

G. Store products in manufacturer's unopened packaging well off the ground and covered out of weather until ready for installation.

2.PRODUCTS

2.1. GENERAL

A. Model: LW-___-04 as manufactured by RCP Shelters, Inc.

B. Size and dimensions
1. Shape: _____
2. Dimensions: ___ diameter(reference preliminary drawings)
3. Roof Style: hip
4. Roof Pitch: __:12
5. Eave Height: minimum clearance at eave or beneath ornamentation shall be 7'-6"
6. Quantity: 1

C. Approved Manufacturer: RCP Shelters, Inc.
1. 2100 SE Rays Way, Stuart, FL 34994.
2. Toll Free: 800-525-0207
3. Direct Line: (772) 288-3600
4. Fax: 772-288-0207
5. Website: www.rcpshelters.com
6. Email: info@rcpshelters.com

D. Substitutions: Products other than specified must request in writing to Architect and receive approval, in writing, by addendum at least ten (10) days prior to the bid date. Unapproved alternates will not be allowed. See Instructions to Bidders for further instructions.

2.2. STRUCTURAL COMPONENTS

A. Steel
   1. Plates: ASTM A572 Grade 50
   2. Finish: Powder Coat
      a. Pre-blast inspection to catch and remove oil, grease, and other coatings impeding contaminants
      b. Steel grit blasted to near white condition in accordance with SSPC-SP10, removing all oil residue, mil scale, weld spatter, and slag
      c. Five stage phosphate wash (includes detergent, phosphate, rust protectant sealant)
      d. Epoxy powder coat primer
      e. Double topcoat TGIC polyester powder coat; color to be selected from manufacturer's standard color chart by Owner.
      f. Primer plus finish coats shall be 7-12 mils thick
      g. All materials inspected to meet 100% coating, proper cure, film thickness, and impact resistance
      h. Wet-coat alternatives shall not be acceptable.
   3. Bolts: hot-dipped galvanized, ASTM A307

B. Glued Laminated Wood
   1. Species: Southern Yellow Pine
   2. Appearance Grade: Architectural
   3. Lamination Thickness: 2" Nominal
   4. Adhesive: Resorcinol
   5. Stress Combination: 24F-V3
   6. Preservation Treatment: CCA 0.4 pcf prior to gluing (columns only)
   7. Size: Per engineered drawings

C. Structural Wood Roof Deck
   1. Species: #1 grade Southern Yellow Pine, kiln dried
   2. Treatment: none
   3. Size: nominal 2" x 8"
   4. Pattern: center matched, tongue and groove, with veed edges 1 side (EV1S)

D. Fascia
   1. Species: C or Better Clear Alaskan Yellow Cedar
   2. Size: nominal 2" x 6"

E. (Optional) Shingle Roof
   1. Owens Corning Oakridge, GAF Timberline HD, or equal
   2. Underlayment: GAF Feltbuster (or equivalent), installed per code
   3. Drip Edge: Continuous along eave

F. (Optional) Metal Roof System: Galvalume® metal roof panels with exposed fasteners.
   1. Profile: Max-Rib
   2. Panel Gauge: minimum 26-gauge
   3. Panel Width: 3'-0"
   4. Panel Length: Precut to the length from the eave to the ridge
   5. Panel Orientation: Ribs shall run with the pitch of the roof for proper drainage
   6. Trim: Matching roof trim and fasteners

7. Finish: Factory pre-finished with Kynar 500® paint system; color to be selected by Owner from standard color chart
8. Underlayment: HydraShell MAX
9. Drip Edge: Continuous along eave

3.EXECUTION

3.1. EXAMINATION

A. Verify that site earthwork has been performed as required for satisfactory installation.

3.2. PREPARATION

A. Install footings and columns as specified by shelter manufacturer on approved shop drawings.

3.3. INSTALLATION

A. Perform installation in accordance with applicable federal, State, and local building and safety codes.

B. Structural special inspections, if required, are shall be arranged and paid for by the Contractor or Owner.

C. Install shelter in accordance with manufacturer's approved shop drawing and good construction practices.

D. Install slab in accordance with shelter manufacturer's shop drawings. Slab perimeter dimensions determined by Owner.

3.4. CLEANING AND PROTECTION

A. Clean installed work to like-new condition.

B. Protect installed products until completion of project.

C. Touch-up, repair, or replace damaged finishes before Substantial Completion. Touch up paint provided by manufacturer.

END OF SECTION