

SECTION 10 73 46 PRE-FABRICATED SITE SHELTERS

PART 1 GENERAL

1.1 SUMMARY

- A. Design, fabrication, finishing, and delivery of pre-engineered, factory-fabricated site shelters.
- 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 to be provided by Owner.
- D. Related Sections: Section 033000 - Cast-In-Place Concrete: Concrete footings and slabs.

1.2 SYSTEM DESCRIPTION

- A. Design shall meet or exceed applicable building code.
- B. Pre-fabricated package shall include structural steel framing members, pre-cut roof panels, trim, and fasteners.
- C. All bolts shall be hidden, concealed inside the steel tubes.
- D. Field labor required to install the pre-fabricated parts. Onsite welding shall not be required or permitted.

1.3 REFERENCES

- A. American Society of Testing Material (ASTM)
 - 1. ASTM A325 - Standard Specification for Structural Bolts, Steel, Heat Treated
 - 2. ASTM A500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
 - 3. ASTM A563 - Standard Specification for Carbons and Alloy Steel Nuts
 - 4. ASTM A572 - Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel
 - 5. ASTM F1554 – Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength
- B. American Institute of Steel Construction (AISC)

- C. American Welding Society (AWS)
- D. Steel Structures Painting Council (SSPC); SSPC-SP10 - Near-White Blast Cleaning
- E. Leadership in Energy and Environmental Design (LEED)
- F. OSHA Standards 29 CFR, Part 1926, Subpart R (Steel Erection), Standard Number 1926.755: Compliance requires a minimum of four anchor bolts per column.

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 steel shelters.
 2. Three references of similar shelters completed within the past year.
 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 to be performed to AWS standards by AWS certified welders. Provide welding certification upon request.
 5. City of Los Angeles (CA) fabricator approval
 6. County of Clark County (NV) fabricator approval
 7. City of Houston (TX) fabricator approval
 8. City of Phoenix (AZ) fabricator approval
- 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.
 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 frame warranty against manufacturer defects.
 2. Provide roofing manufacturer's limited warranty.

1.6 DELIVERY, STORAGE, AND PROTECTION

- A. Package factory-finished steel components in foam, cardboard, and stretch wrap to protect the finish during transit.
- B. Shipped knocked down for minimal shipping charges.
- C. Deliver products to project site in manufacturer's protective packaging.
- D. 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.
- E. Store products in manufacturer's unopened packaging well off the ground and covered out of weather until ready for installation.

PART 2 PRODUCTS

2.1 GENERAL

- A. Model: TS-_____ as manufactured by RCP Shelters, Inc.
- B. Size and dimensions
 - 1. Shape: _____
 - 2. Dimensions: reference preliminary drawings
 - 3. Roof Style: _____
 - 4. Roof Pitch: _____
 - 5. Eave Height: minimum 7'-6"
 - 6. Quantity: reference bid package
- C. Approved Manufacturer: RCP Shelters, Inc.
 - 1. 2100 SE Rays Way, Stuart, FL 34994.
 - 2. Toll Free: 800-525-0207
 - 3. Fax: 772-288-0207
 - 4. Website: www.rcpshelters.com
 - 5. Email: info@rcpshelters.com
- D. Substitutions: Products other than specified must request and receive approval in writing by addendum at least ten (10) days prior to the bid date. See Instructions to Bidders for further instructions.

2.2 STEEL STRUCTURAL COMPONENTS

- A. Structural Framing: fabricated for field assembly using bolted connections with no welding required or permitted; cold-formed shapes prohibited.
 - 1. Columns & Beams: ASTM A500 Grade C structural steel tube. The following shapes are prohibited: I-beams, wide-flange beams, C-channels, Z-shapes.
 - 2. Plates: ASTM A572 Grade 50.
 - 3. Compression Ring: steel plate, ASTM A572 Grade 50.
 - 4. Fasteners

- a. Bolts: ASTM A325 high strength bolts.
- b. Nuts: ASTM A563 high strength nuts.
- 5. Column Anchors: ASTM F1554 Grade 36, provided by Contractor or Owner, attached to top of foundation, recessed below slab on grade.
- 6. Cap plates: factory bent and field installed with hidden fasteners on hip and ridge beams not normal to roof so that metal roof deck does not bear structurally on beam corner only
- 7. 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. Topcoat of TGIC polyester powder coat; color to be selected from manufacturer's standard color chart by Owner.
 - f. All materials inspected to meet 100% coating, proper cure, film thickness, and impact resistance
 - g. Wet-coat alternatives shall not be acceptable.
- B. Roof System: Galvalume® structural metal roof panels with exposed fasteners.
 - 1. Acceptable Panel Profiles:
 - a. Galvalume® panels with 1-3/16" high ribs, 12" on center.
 - b. Galvalume® panels with 1-1/2" high ribs, 7.2" on center.
 - 2. Panel Gauge: minimum 24-gauge.
 - 3. Panel Width: 3'-0".
 - 4. Panel Length: Precut to the length from the eave to the ridge; angles factory precut.
 - 5. Panel Orientation: Ribs shall run with the pitch of the roof for proper drainage.
 - 6. Trim: Provide 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.

PART 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 column anchors of size, design, and location 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 to 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