



SECTION F
PERFORMANCE SPECIFICATIONS

**BIG BEAR ALPINE ZOO SHADE
STRUCTURES PROJECT**

FOR

**BIG BEAR RECREATION AND PARK DISTRICT
BIG BEAR LAKE, CALIFORNIA**

PROJECT NO.: 30.30.0175

PERFORMANCE SPECIFICATIONS

01. MOBILIZATION

Mobilization shall consist of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies and incidentals to the project site; for the establishment of all offices, buildings and other facilities necessary for work on the project; and for all other work and operations which must be performed or costs incurred prior to beginning work on the various contract items on the project site.

Mobilization shall conform to the provisions in Section 9-1.16D, "Mobilization," of the 2015 Caltrans Standard Specifications.

The contract lump sum price for mobilization is "included in various items" and shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in mobilization as specified herein. No additional compensation will be allowed for additional mobilization/demobilization costs due to weather days or loss of production due to cold weather.

02. DUST CONTROL AND WATER SUPPLY

This work, Dust Control, shall consist of all operations necessary to control fugitive dust arising from construction operations, and due to any disturbance of natural ground covers resulting therefrom, in compliance with governing EPA and NPDES requirements and shall conform to the provisions in Section 10-5, "Dust Control," of the 2015 Caltrans Standard Specifications and these Specifications.

The CONTRACTOR is responsible for meeting and being in compliance with all of the requirements of the South Coast Air Quality Management District's (AQMD) "Rule 403, Fugitive Dust." Information on AQMD and "Rule 403, Fugitive Dust" can be found at <http://www.aqmd.gov>. Should the County be fined due to failure of the contractor to comply with Rule 403 requirements, the amount of any such fines will be withheld from payments due or to become due to the Contractor.

The compensation paid for Dust Control shall include, but not be limited to compensation for maintaining dust control and air contaminants within the project area. Watering site as needed to control dust during project duration, street sweeping as needed to control dust and maintain clean public roadways, and application of chemical dust stabilizers shall be included in the prices paid for **various contract items** of work and no additional compensation will be allowed therefor.

03. TRAFFIC CONTROL AND PUBLIC SAFETY

The Contractor shall provide for the safety of traffic and the public in conformance with the provisions in Section 7-1.04, "Public Safety," of the Standard Specifications and these provisions.

The Contractor shall furnish, erect and maintain those fences, temporary railing (Type K), barricades, lights, signs and other devices and take such other protective measures that are necessary to prevent accidents or damage or injury to the public, especially pedestrians who travel through the work zone area. Where no other means of pedestrian passage through construction area is available, the Contractor shall provide detours for pedestrian travel.

When applicable, the California MUTCD latest edition Figure 6H-28 "Sidewalk Detour or Diversion" Typical Application 28 and Figure 6H-29 "Crosswalk Closures and Pedestrian Detours" Typical Application 29 may be used and referenced as part of the project's Traffic Control Plan.

The Contractor shall be responsible to install and maintain a worksite traffic control system. This shall include any potential phasing of traffic control during the various phases of construction.

Placement of traffic control shall conform to the California MUTCD latest edition, as well as these provisions.

Adequate notice of any lane closures shall be given to all affected parties.

No road closure shall be implemented. Minimum of one lane in each direction shall be provided at all times and access remain open to all intersections and driveways.

During the time of construction, the Contractor shall be responsible for the maintenance of the road within the proposed limits.

Full compensation for conforming to the requirements of Section 7-1.04, "Public Safety," and the requirements of these provisions, including all costs for installation, modifications, maintenance and removal of traffic control over the course of the project is "included in various items" and shall be considered as included in the and no additional compensation will be allowed therefor. The lump sum cost shall include cost of the traffic control plans prepared by a Registered Engineer, if required.

04. PROTECTION OF EXISTING UTILITIES

The Contractor shall exercise his best effort and care to protect existing utilities (irrigation, water lines, gas mains, sewer lines and manholes, power poles, etc.) against damage from his operations. All damages shall be repaired by the Contractor at his own expense. Contractor shall contact Underground Service Alert at least 48 hours prior to commencement of any work, (800) 422-4133. No additional compensation will be paid to the Contractor for the delay or loss of efficiency due to having to coordinate his work with that of the utilities.

05. ACCIDENT PREVENTION

It shall be required that precautions shall be exercised at all times for the protection of any and all persons (including employees) and property and that the safety provisions of applicable laws, building, construction and traffic codes shall be observed and that all machinery, equipment, and all hazards shall be guarded or eliminated in accordance with the safety provisions of the Manual of Accident Prevention in Construction published by the Associated General Contractor of America, to the extent that such provisions are not in contravention of applicable laws

06. CANTILEVER SHADE STRUCTURES (DELIVERY AND INSTALL), INCLUDING FOOTINGS

The contractor is required to provide and install all permanent equipment as specified by this section, per manufacturer recommendations and as shown on "Exhibit Drawings". Cantilever shade structures shall be the following, or approved equal products:

SHADE STRUCTURE

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Wood Cantilever 14 feet by 74 feet at 16 foot eave height. Slope shall be 2:12 and structure shall include tongue and groove roof deck with mega-rib metal roofing. Qty. 1
- B. Wood Cantilever 14 feet by 35 feet at 16 foot eave height with mega-rib metal roofing. Slope shall be 2:12 and structure shall include tongue and groove roof deck with mega-rib metal roofing. Qty. 5
- C. Wood Cantilever 14 feet by 35 feet at 16 foot eave height with mega-rib metal roofing. Slope shall be 2:12 and structure shall include tongue and groove roof deck with mega-rib metal roofing. Qty. 1

BUILDING STRUCTURE AS FURNISHED BY SCENIC SHELTERS LLC, 7125 HEADLEY STREET SE #795, ADA, MICHIGAN, 49301, USA, 855-544-8439.

1.2 REFERENCES

A. REFERENCE STANDARDS:

1. AISC - American Institute of Steel Construction Manual of Steel Construction.
2. ASTM - American Society for Testing and Materials.
3. AWS - American Welding Society.
4. LEED - Leadership in Energy and Environmental Design.
5. OSHA – Occupational Safety and Health Administration Steel Erection Standard 29 CFR 1926 Subpart R-Steel Erection.
6. PCI - Powder Coating Institute.
7. SSPC - Steel Structures Painting Council.

1.3 SUBMITTALS

A. GENERAL SUBMITTAL:

1. Submit four sets of submittal drawings and two sets of calc books, both signed and sealed by a Professional Engineer licensed in the State of Michigan.

B. PRODUCT DESIGN LOADS:

The building shall be designed to meet the governing building code with the following design loads:

1. Building Code: 2018 International Building Code with local amendments.
2. Ground Snow Load (Pg): 30 pounds per square foot.
3. Basic Wind Speed (V): 90 miles per hour.
4. Seismic Design: as required for site specific conditions.

C. SUBMITTAL REQUIREMENTS:

Calculations and Submittal drawings shall include, at a minimum:

1. Calculations:
 - a. References to building codes and design manuals used for calculations.
 - b. Identification of lateral force resisting system.
 - c. Formulas used for determining snow, wind, and seismic loads to specific project

location.

- d. Three dimensional modeling input, model geometry, and analysis results.
- e. Member design results and controlling load combinations.
- f. Connection design for structural bolts, welds, plate thicknesses, and anchorage to the foundation.
- g. Foundation designs must include the required combinations of gravity and lateral loads.

D. SUBMITTAL DRAWINGS:

1. Foundation design.
2. Three dimensional views of frame.
3. Member sizes and locations.
4. Structural connection details, including bolt sizes and plate thicknesses.
5. Roof trim and connection details.

E. FOUNDATION DESIGN:

1. The shelter shall be set with foundations designed by manufacturer.
2. Foundation materials shall be provided by contractor.
3. Owner shall provide manufacturer with complete information about the site including soil bearing capacity and lateral load capacity.
4. If soil data are not provided, foundations will be designed to the minimum values identified in the governing building code.

1.4 QUALITY ASSURANCE

A. FABRICATOR QUALIFICATIONS:

1. Minimum of 10 years in the shelter construction industry.
2. Full time on-staff Quality Assurance Manager.
3. All welders AWS Certified.
4. Annual audit of Quality System by Third Party Agency.
5. Annual audit of powder coat finish system by Third Party Agency (PCI).

B. FABRICATOR CERTIFICATIONS:

1. City of Houston, TX Approved Steel Fabricator.
2. San Bernardino County, CA Approved Steel Fabricator.
3. Clark County, NV Approved Steel Fabricator.

1.5 STORAGE AND HANDLING

A. STORAGE AND HANDLING REQUIREMENTS:

1. Installer shall store product in a dry place or covered if out in the weather and keep product out of direct sun.
2. Installer shall store product elevated from soils to allow air circulation and to not introduce mold, fungi decay or insects to the product.
3. Product must be handled with protective straps or padded forks if lifting with mechanical equipment. Use of chain or cable to lift product into place will not be accepted.

1.6 FIELD OR SITE CONDITIONS

- A. Foundations shall be at the same elevation unless specifically noted otherwise on the drawings.

1.7 MANUFACTURER WARRANTY

- A. Shelter must have a 10-Year limited warranty on steel frame members
- B. Shelter must have a 10-year limited warranty on paint system.
- C. Pass through warranty of metal roof manufacturer to be provided upon request.

PART 2 - PRODUCTS

2.1 SHELTER SYSTEM AND MATERIALS

A. MANUFACTURERS:

1. Acceptable Manufacturer: Scenic Shelters, 7125 Headley Street SE #795, Ada, MI 49301; 855-544-8439; E-mail: info@scenicshelters.com; www.scenicshelters.com.

B. SUBSTITUTION LIMITATIONS:

1. Substitutions must be approved a minimum of ten (10) days before bid. All approved manufacturers shall be notified in writing before the bid date and shall not be allowed to bid without written notification.
2. Alternate suppliers must meet the qualifications and provide proof of certifications listed under section 1.4 QUALITY ASSURANCE.
3. Alternate suppliers must provide an equivalent paint system Scenic Shelters listed under Section 2.1 D. 7. FINISHES.

C. DESCRIPTION OF PRODUCT:

1. MODEL NUMBER: WCT1474-CUS, WCT1435-CUS, WCT1420-CUS
2. DESCRIPTION AND SIZE: Wood Cantilever 14' x 74', Wood Cantilever 14' x 35', Wood Cantilever 14' x 20'
3. ROOF SLOPE: 2:12
4. EAVE HEIGHT: 16'
5. ROOF MATERIAL: 24 Gauge Mega-Rib Metal Roofing
6. ROOF DECKING: 2" x 6" Tongue and Groove

D. PRODUCT REQUIREMENTS AND MATERIALS:

1. GENERAL: The pre-engineered package shall be pre-cut unless otherwise noted and prefabricated which will include all parts necessary to field construct the shelter. The shelter shall be shipped knocked to minimize shipping expenses. Field labor will be kept to a minimum by pre-manufactured parts. Onsite welding shall not be necessary.
2. REINFORCED CONCRETE:
 - a. Concrete shall have minimum 28-day compressive strength of 3,000 psi and slump of 4" (+/- 1"), unless otherwise noted on the drawings.
 - b. Reinforcing shall be ASTM A615, grade 60.
3. COLUMNS:
 - a. Material and quality assurance: Structural glue laminated timber shall be in conformance with ANSI/AITC A.190.1 (latest edition).
 - b. Species: Laminating lumber shall be kiln-dried pressure-treated Southern Yellow Pine, architectural appearance grade.
 - c. Laminated columns shall be sized to suit loading requirements. Manufacturers shall furnish connection steel and hardware for joining structural glue laminated timber

members to their supports.

4. STRUCTURAL FRAMING:

- a. Material and quality assurance: Structural glue laminated timber shall be in conformance with ANSI/AITC A.190.1 (latest edition).
- b. Species: Rafter, Purlin and Knee Brace Laminating lumber shall be kiln-dried pressure-treated Southern Yellow Pine, architectural appearance grade.
- c. Laminated Rafters, Purlins and Knee Braces shall be sized to suit loading requirements. Manufacturers shall furnish connection steel and hardware for joining structural glue laminated timber members to their supports.

5. CONNECTIONS:

- a. Steel connectors shall be powder coated per finish specification under Section 2.1 D. 7. FINISHES.
- b. Structural fasteners shall be hot dipped galvanized ASTM A325 high strength bolts and high strength nuts.
- c. All welds shall be free of burrs and inconsistencies.
- d. Manufacturer shall provide extra structural and roofing fasteners.

6. ROOFING MATERIALS:

a. ROOF SYSTEM OF “Mega-Rib” PANEL METAL ROOFING:

1. Roofing shall be 24 Gauge ribbed galvalume steel sheets, with ribs 1.5” high and 7.2” on center.
2. Roof surface shall be painted with Kynar 500 to the manufacturer’s standard color selected by the Owner. Ceiling surface shall be a “wash coat” primer.
3. Roof panels shall be factory precut to size and angled to provide ease of one-step installation.
4. Metal roofing trim shall match the color of the roof and shall be factory made of 24 gauge Kynar 500 painted steel.
5. Trim shall include panel eave trim and rake trim. Trim may need to be cut to length and notched. Reference drawings for additional information.
6. Manufacturer must supply painted screws with metal and neoprene washers.
7. Metal roofing shall be installed over 30lb. felt provided by shelter manufacturer.

7. FINISHES:

a. STANDARD POWDER COAT FINISH:

1. Steel shall be cleaned, pretreated, and finished at a facility directly supervised by the manufacturer.
2. Steel shall be shot blasted to SSPC-SP10 near-white blast cleaning. SSPC-SP2 hand tool cleaning will not be an acceptable alternative.
3. Parts shall be pretreated in a 3 stage iron phosphate or equal washer.
4. Epoxy primer powder coat to be applied to parts for superior corrosion protection.
5. Top coat of Super Durable TGIC powder coat shall be applied over the epoxy primer.
6. Finish shall not have any VOC emissions.
7. Sample production parts shall have been tested and meet the following criteria:
 - a) Salt spray resistance per ASTM B 117/ ASTM D 1654 to 5,000 hours with no creep from scribe line and rating of 10.
 - b) Humidity resistance per ASTM D2247-02 to 3,000 hours with no loss of adhesion or blistering.
 - c) Color/UV resistance per ASTM G154-04 to 2,000 hours exposure,

alternate cycles with results of no chalking, 75% color retention, color variation maximum 3.0 E variation CIE formula (before and after 2,000 hours exposure).

8. The manufacturer shall be PCI 4000 S Certified

8. ROOF DECK MATERIALS:

a. ROOF DECK SYSTEM OF 2X6 TONGUE AND GROOVE:

1. Roof deck shall be 2" x 6" (nominal), #1 grade, single tongue and groove with V-joint on bottom face.
2. Species: Roof deck shall be kiln-dried Southern Yellow Pine.
3. Maximum moisture content shall be 19% or less selected for decking, specified, lengths, with all joints over supports.

9. FASCIA:

- a. FASCIA shall be 2" x 8" Pressure Treated Southern Yellow Pine, "D" / Better Grade, kiln-dried and surfaced on four sides.

PART 3 - EXECUTION

3.1 INSTALLERS

- A. Protect building products after arrival at destination from weather, sunlight, and damage.
- B. Building products shall be placed on blocks well off the ground and separated with wood strips so that air can circulate around each member.
- C. Cover top and bottom with moisture-resistant paper.
- D. Non-marring slings and/or padded forks shall be used when handling.
- E. Installers are to use proper building practices recognized by OSHA and to have minimum 5 years experience in installing shelters of similar construction. These trades include but are not limited to: masonry work, steel construction, sheet metal work, carpentry, electrical and paint finishing.
- F. Examination of final work is done by verifying that the erection of the structure was done in conformance to the installation instructions provided by Scenic Shelters and local building codes.

3.2 ERECTION

A. FOUNDATIONS:

1. The shelter shall be placed on Scenic Shelters designed foundations with materials by others. Design approved by the Engineer of Record identified in Section 1.3 E. FOUNDATION DESIGN.

B. INSTALLATION:

1. Install all components according to manufacturer's installation instructions and these specifications.

C. GENERAL CONTRACTOR:

1. Interface with other work is to be coordinated by the customer or the customer's agent. Certain designs have electrical or other plumbing requirements that are not supplied by Scenic Shelters.

D. TOLERANCES:

1. No field slotting or opening of holes will be allowed. It is therefore essential that contractors conform to the tolerances specified on the installation drawings for anchor bolt or column

layout details.

E. OSHA COMPLIANCE:

1. OSHA Compliance to Steel Erection Standard 29CRF 1926 Subpart R-Steel Erection.

3.3 REPAIR

- A. Do not attempt any field repairs without first contacting Scenic Shelters.

3.4 FIELD OR SITE QUALITY CONTROL

- A. Field or Site Tests and Inspections are not required by Scenic Shelters but may be required by the customer or by the local building inspector.

This work and materials shall conform to the provisions in Sections 201 “Concrete, Mortar and Related Materials”, 206 “Miscellaneous Metal Items”, 210 “Paint and Protective Coatings”, 300 “Earthwork”, 303 “Concrete and Masonry Construction”, 304 “Metal Fabrication and Construction”, and 310 “Painting” of the Greenbook Specifications (Latest Edition).

07. WARRANTY

The shade structure manufacturer shall warrant their structure(s) to be free of design, material and workmanship defects for a period of ten years from the date of delivery.

This warranty shall not cover defects in the shade structures caused by abuse, misuse, overloading, accident, improper maintenance, alteration or any other cause not the result of defective materials or workmanship.

This warranty shall be void unless owner’s records can be supplied which shall indicate compliance with the minimum guidelines specified in the inspection and maintenance procedures.

Repair or replacement shall be the exclusive remedy for defects under this warranty. The shade structure manufacturer shall not be liable for any consequential or incidental damages for breach of any express or implied warranty on their structures.

08. MEASUREMENT AND PAYMENT

The Contractor warrants in his bid that he has contacted various sources and the specified material is available and the price for the material is included in his bid. Full compensation for furnishing and installing prefabricated cantilever shade structure, assemblies, inspection costs, and furnishing all labor, materials, equipment, tools and incidentals, to included mobilization, demobilization, bonds and insurance costs and for conforming with the requirements of the Specifications, and for doing the work, shall be consider included in the contract lump sum price paid for “**Cantilever Shade Structure (Delivery and Install), Including Footings**” and no additional compensation will be allowed therefor.

Full compensation for constructing the concrete footings, including associated excavation and backfill materials, compaction, import or export of material as required, and including design engineering costs,

if applicable, shall be considered as included in the contract lump sum price paid for **“Cantilever Shade Structure (Delivery and Install), Including Footings”** for constructing concrete footings, and including steel bar reinforcement.

END OF SECTION

END OF PERFORMANCE SPECIFICATIONS

NOT FOR BID