

## SECTION 02875 - SITE AND STREET SHELTERS

### PART A - GENERAL

#### A.1 RELATED DOCUMENTS

1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

#### A.2 SUMMARY

1. This Section includes prefabricated metal shelter/gazebo/pavilion.
2. Related Sections include the following:
  1. Division 3 Section "Cast-In-Place Concrete."

#### A.3 REFERENCES

1. American Institute of Steel Construction (AISC).
2. American Iron and Steel Institute (AISI) Specifications for Cold Formed Members.
3. American Society of Testing of Materials (ASTM).
4. American Welding Society (AWS).
5. Steel Structures Painting Council (SSPC-SP2) as outlined in AISC 6.5.
6. National Evaluation Report (NER).

#### A.4 SYSTEM DESCRIPTION

1. Design Loads: UBC (1994 edition) 30-psf snow load, 100-mph wind speed, Seismic Zone 4.
2. Design Method: per applicable building code. (Note: POLIGON uses three dimensional structural analysis to determine member load and forces.)
3. The pre-engineered package shall be shipped as a pre-cut and pre-fabricated package that shall include the structural frame members, roof material, fasteners, trim and installation instructions. The structure shall be shipped in knocked down for minimum shipping charges. Field labor will be kept to a minimum by pre-manufactured parts. No onsite welding will be required. Connection bolts shall be concealed within the tubing where possible.

A.5 SUBMITTALS

1. Submit 4 sets shop drawings and 2 sets structural calculations signed and sealed by a Professional Engineer licensed in the State of Kansas.
2. Structural calculations shall show the following code information: Building Code - 1997 UBC, 15 psf snow load, 80 mph wind speed, Seismic Zone 1.

A.6 QUALITY ASSURANCE

1. Provide evidence of commitment of quality craftsmanship as demonstrated by the following:
2. Supplier Qualifications:
  1. The product shall be designed and produced at a facility owned and directly supervised by the supplier. The product shall be shipped from a single source.
  2. The supplier shall have been making steel frame pre-manufactured shelters for a minimum of five years and list three similar projects in the territory.
  3. Membership in American Institute of Steel Construction.
  4. Membership in American Welding Society.
  5. Full-time, on-staff licensed engineer.
  6. Full-time, on-staff quality control manager.
  7. Published quality assurance manual.
  8. Full-time, on-staff AWS certified welding inspectors.
  9. Continued certification by an independent inspection agency.
  10. Maintain quality control program equivalent to U.S. Military's Mil I.
3. Certifications:
  1. City of Los Angeles (California) fabricator approval number.
  2. City of Houston (Texas) fabricator approval number.
  3. National Evaluation Report No. 467 for structural insulated panels.
  4. Welder certificates and AWS welding inspector certificates.

A.7 DELIVERY AND STORAGE

1. Unload materials with necessary equipment (no hand unloading), store covered out of weather, and keep out of direct sun. Inspect parts within 48 hours of delivery, compare with manufacturer's bill of material, and report any missing or non-conforming parts to manufacturer within this time.

A.8 WARRANTY

1. Supply manufacturer's standard five-year warranty.

## PART B - PRODUCTS

### B.1 ACCEPTABLE MANUFACTURER

1. POLIGON, a Division of W. H. Porter, Inc., Holland, Michigan, (616) 399-1963. Receive pricing from local sales office at (316) 775-1260.
2. Model Number: SQ16MR.
3. Substitutions must be approved a minimum of ten (10) days prior to Bid. All approved manufacturers shall be notified in writing before the Bid Date and shall not be allowed to bid without written notification.
4. Alternate suppliers must meet the qualifications and provide proof of certifications listed under paragraph 1.6.

### B.2 MATERIALS

1. Structural framing: structural steel tube minimum ASTM A500 Grade B or cold formed box sections minimum ASTM A570 Grade 55. "I" beams, tapered columns, open channels, or wood products shall not be accepted.
2. Compression ring: structural channel or welded plate minimum ASTM A36.
3. Fasteners: ASTM A325 structural bolts, ASTM A307 anchor bolts, self tapping screws, rivets.
4. Metal Roofing: 24-gauge galvalume factory finished with Kynar 500 paint system. Ribs shall be 1-3/16-inch high, 12 inches on center. Panels shall be 3 feet wide, and angles shall be factory cut. Ribs shall run with the pitch of the roof for proper drainage. Color shall be evergreen.
5. Metal roofing trim shall match the color of the roof, and shall be formed from 26-gauge painted galvalume steel as follows:
  1. Panel end caps shall be prebent to a "U" shape to fit over ridge end-of-roof panels. The inside of the "U" shall match the roof color.
  2. Ridge caps shall be preformed metal strips with a single central bend to match the roof pitch. They shall be hemmed on the sides. A preformed metal roof cap shall be supplied.
  3. "J" channel shall be shaped like a "J" with colored metal on the outside wrapped around 20-gauge galvanized core material. "J" channel shall be applied all along the eave to strengthen and straighten the eave. Both colored metal and galvanized core shall have 7/16-inch weep holes 6 inches on center.
  4. Eave splice channels shall be provided to fit behind "J" channel butt joints to create strength at the joint and maintain a straight eave line.
  5. Special "J" channel corner trim shall be provided which fits over the main "J" channel to simplify final detailing of corners.

### B.3 FABRICATION

1. All base plates, stiffener plates, U-clips, and end plates shall be factory welded into place and bolt connection holes shall be factory cut.
2. Welded connections shall be made by certified welders in accordance with AWS Specifications and be supervised by an AWS certified welding inspector.
3. Factory Frame Finish: red oxide rust-inhibitive modified alkyd primer on raw steel prepared according to SSPC-SP2.

## PART C - EXECUTION

### C.1 INSTALLATION

1. The shelter shall be set on prepared footings or concrete slab by others. Footing details shall be designed by an engineer retained by other than the manufacturer based on load information provided by the manufacturer. Foundation will be constructed to local codes and good construction practices for the specific site conditions. The structure shall be attached to the top of the concrete by use of anchor bolts furnished by the manufacturer. Anchor bolts shall be inside the column. (All "PAV" structures and other custom structures may require four external anchor bolts per column.)
2. Install according to manufacturer's plans and these Specifications. If installing a wood roof deck such as structural insulated panel or tongue and groove, underside of wood materials shall be sealed before installation per Architect's or Owner's recommendations.
3. Before installing roof deck, clean steel and touch up primer as needed. Apply two coats weather resistant paint per recommendation of local paint supplier.

END OF SECTION 02875