

Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI), MasterFormat™, SectionFormat, and PageFormat, contained in the CSI Manual of Practice, 2020.

The section must be carefully reviewed and edited by Polygon's Representative and/or the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the drawings. Remove all this yellow blocked text during the edit before presenting to a customer.

Specifier Notes: This section covers the Polygon steel shelter construction system. Consult your Polygon representative for assistance in editing this section for the specific application.

DIVISION 107300

SPECIALTIES MANUFACTURERS OF PROTECTIVE COVERS

PART 1 - GENERAL

[reference CSI 2020 MasterFormat™ Division 10
(Specialties Manufacturers) category 7300 (Protective Covers)]

1.01 DESCRIPTION OF PRODUCT

- A. [Building type][size] (Shelter name) with [secondary roof] over [primary roof].
- B. ROOF SLOPE: [Roof Slope].
- C. Minimum Clearance Height (MCH): [MCH] in ft. Minimum clearance height under the structure indicates the lowest height of a member from finish grade for clearance under the structure. This is generally the clearance under roof eave or frame, whichever is lower.

1.02 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 – The Society for Protective Coatings.
 - 8. Architecturally Exposed Structural Steel (AESS) – as defined by the American Institute of Steel Construction (AISC)

1.03 SUBMITTALS

*****CHOOSE*****IF Sealed Drawings are **NOT** Required*****

A. GENERAL SUBMITTAL:

Submit [] sets of engineered drawings and [] sets of engineered calculations.

*****OR*****CHOOSE*****IF Sealed Drawings **ARE** Required*****

A. GENERAL SUBMITTAL:

Submit [] sets of engineered drawings and [] sets of engineered calculations, both signed and sealed by a Professional Engineer licensed in the State of [].

B. PRODUCT DESIGN REQUIREMENTS:

The building shall meet the following design requirements as shown on the drawings:

1. Building Code: See drawings.
2. Ground Snow Load (Pg): See drawings.
3. Basic Wind Speed (V): See drawings.
4. Seismic Design: See drawings.

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 shall include the required combinations of gravity and lateral loads.
2. Submittal Drawings:
 - a. Anchor bolt layout.
 - b. Foundation design.
 - c. Three dimensional views of frame.
 - d. Member sizes and locations.
 - e. Structural connection details, including bolt sizes and plate thicknesses.
 - f. Roof trim and connection details for installation clarity.

*****CHOOSE*****IF Foundation is designed by **Poligon*******

D. FOUNDATION DESIGN:

1. The shelter shall be set on 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.

*****OR*****CHOOSE*****IF Foundation is designed by **OTHERS*******

D. FOUNDATION DESIGN:

The shelter shall be set on prepared foundations designed by an engineer retained by owner using the column reactions provided by manufacturer.

E. ANCHOR RODS:

Anchor rods shall be provided by manufacturer*****OR*****contractor.
Hooked anchors are not permitted per AISC requirements.

F. LEED SUBMITTALS:

*****IF SS Roof*****

1. LEED SS Credit 7.1: Sustainable Sites, Heat Island Effect/Non-Roof.
2. LEED SS Credit 7.2: Sustainable Sites, Heat Island Effect/Roof.

*****OR*****IF MR Roof*****

LEED MR Credit 4.0: Material and Resources, Recycled Content.

1.04 QUALITY ASSURANCE

A. MANUFACTURER QUALIFICATIONS:

1. Minimum of (10) years in the shelter construction industry.
2. Full time on-staff Licensed Engineer.
3. Full time on-staff Quality Assurance Manager.
4. Full time on-staff LEED AP.
5. All welders AWS Certified.
6. Manufacturer owned and controlled finishing system to include shot blast, pretreatment, primer, and top coat.
7. Published Quality Management System.
8. Annual audit of Quality System and Plant Processes by Third Party Agency.
9. Annual audit of powder coat finish system by Third Party Agency (PCI).

B. MANUFACTURER'S CERTIFICATONS:

1. AISC Certified Building Fabricator, (American Institute of Steel Construction) Certified Building Fabricator is an AISC Quality Management Systems (QMS) Certification which sets the quality standard for the structural steel industry.
2. PCI 4000 S Certified, Certification thru Powder Coating Institute for original equipment manufacturers (OEMs) to evaluate process on entire finish system to add powder coat over steel.
3. City of Los Angeles, CA Approved Fabricator Type I Steel.
4. Clark County, NV Approved Fabricator steel.
5. City of Houston, TX Approved Fabricator for Structural Steel.
6. Miami Dade County Certificate of Competency for Structural Steel.
7. State of Utah Approved Fabricator for Medium and High Strength Steel.
8. City of Riverside, CA Approved Fabricator Type I Steel.
9. City of Phoenix, AZ Approved Steel Fabricator.

*****If CPI installer is selected*****

C. INSTALLER QUALIFICATIONS:

Installer shall be classified as a Certified Installer as defined and certified by the shelter manufacturer.

1.05 FIELD OR SITE CONDITIONS

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

1.06 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.

*****IF Standing Seam OR Metal Roof*****

- C. Pass through warranty of Metal Roof manufacturer shall be provided upon request.

*****IF Shingle Roof*****

- C. Pass through warranty of Shingle manufacturer shall be provided upon request.

PART 2 - PRODUCTS

2.01 SHELTER SYSTEM AND MATERIALS

A. MANUFACTURERS:

- 1. Acceptable Manufacturer: Poligon, a Product of PorterCorp, 4240 N 136th Ave., Holland, MI 49424; 616.399.1963; E-mail: info@poligon.com; www.poligon.com.
- 2. Talk to a local rep agency. Receive pricing from [First Name] [Last Name] at [Phone].
- 3. The product shall be designed, produced, and finished at a facility operated and directly supervised by the supplier who has a minimum of (10) years in the business of making pre-manufactured shelters.
- 4. Manufacturer must be an AISC Certified Building Fabricator.

B. SUBSTITUTION LIMITATIONS:

- a. Substitutions
 - i. Substitutions for cause: Will only be considered when circumstances, outside of the contractor's control, will create a substantial delay in the completion of the project. Approval of substitution requests is at the discretion of the architect, owner, and/or their designated consultants. Architect will only consider contractor's request for substitution when the following conditions are satisfied:
 - 1. Requested substitution meets or exceeds requirements as per the Contract Documents and will produce indicated results
 - 2. Requested substitution provides equal design characteristics that specified product provides
 - 3. Substitution request is fully documented and properly submitted.
 - ii. If those conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements. It is required that the contractor provide the following:
 - 1. Documentation that the proposed substitution complies with all requirements as stated or shown in the contract documents and/or drawings
 - 2. Proof of meeting or exceeding specified warranty and/or certifications. Example: Fabricator Qualifications, such as AISC or PCI4000
 - 3. Detailed comparison of significant qualities of proposed substitutions with those of the specified product. Include annotated copy of applicable

- Specification Section. Product data, including drawings and descriptions of products and fabrication
4. Documentation of any deviations from the specified material/product
 5. Architect may request additional information and documentation prior to rendering a decision
 6. If substitution approval happens during bidding, Architect will approve substitution requests by issuing an Addendum. Substitutions not approved by addendum are rejected. This information will be provided in an expeditious manner.
 7. Substitutions for convenience: Will not be considered

The section must be carefully reviewed and edited by Poligon's Representative and/or the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the drawings. Remove all this yellow blocked text during the edit before presenting to a customer.

C. PRODUCT REQUIREMENTS AND MATERIALS:

1. GENERAL: The pre-engineered package shall be pre-cut unless otherwise noted and pre-fabricated which will include all parts necessary to field construct the shelter. The shelter shall be shipped knocked down to minimize shipping expenses. Field labor will be kept to a minimum by pre-manufactured parts. Onsite welding is not 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. STEEL COLUMNS:
 - a. Hollow structural steel tube minimum ASTM A500 grade B with a minimum wall thickness of 3/16".
 - b. Unless columns are direct buried, columns shall be anchored directly to concrete foundation with a minimum of four anchor rods to meet OSHA requirement 1926.755(a)(1).

*****OPTIONAL, delete section if choosing the standard Steel Column, otherwise choose only one type of custom Steel column*****

- c. CUSTOM STEEL COLUMNS:

Custom columns will replace the standard columns. Columns will be Poligon column model:*****CHOOSE only one style of column*****

Square generic (sized by engineers) style.
6" Square style.
8" Square style.
10" Square style.
12" Square style.
Round generic (sized by engineers) style.
6" Round style.
8" Round style.
10" Round style.
12" Round style.
Alma generic (sized by engineers) style.
6" Alma (Rnd w/ double bands at low & mid) style.
8" Alma (Rnd w/ double bands at low & mid) style.
10" Alma (Rnd w/ double bands at low & mid) style.

12" Alma (Rnd w/ double bands at low & mid) style.
Dallas generic (sized by engineers) style.
6" Dallas (Rnd w/ three bands) style.
8" Dallas (Rnd w/ three bands) style.
10" Dallas (Rnd w/ three bands) style.
12" Dallas (Rnd w/ three bands) style.
Neo Classic (sized by engineers) style.
San Jose generic (sized by engineers) style.
6" San Jose (6" Square-round-6" square) style.
8" San Jose (8" Square-round-8" square) style.
10" San Jose (10" Square-round-10" square) style.
12" San Jose (12" Square-round-12" square) style.
Westminster generic (sized by engineers) style.
6" Westminster (Rnd w/ three bands) style.
8" Westminster (Rnd w/ three bands) style.
10" Westminster (Rnd w/ three bands) style.
12" Westminster (Rnd w/ three bands) style.
Windsor generic (sized by engineers) style.
6" Windsor (Square w/ three bands, bottom band heavy) style.
8" Windsor (Square w/ three bands, bottom band heavy) style.
10" Windsor (Square w/ three bands, bottom band heavy) style.
12" Windsor (Square w/ three bands, bottom band heavy) style.
Wooster generic with outlays (sized by engineers) style.
6" Wooster (Square w/ outlays lower, upper 6" square) style.
8" Wooster (Square w/ outlays lower, upper 8" square) style.
10" Wooster (Square w/ outlays lower, upper 10" square) style.
12" Wooster (Square w/ outlays lower, upper 12" square) style.
12" Winchester (Quad column) style.
Stub (remainder by others) style.
Custom style.

4. STRUCTURAL FRAMING:

Hollow Structural Steel tube minimum ASTM500 grade B. "I" beams, tapered columns, or open channels shall not be accepted for primary beams. Frame will have a *****CHOOSE ONE*** STANDARD POLI-5000 ***OR*** HOT DIP GALVANIZED ***OR*** DUPLEX COATING** finish. *****If STANDARD POLI-5000 FINISH OR DUPLEX COATING***** Color chosen from manufacturer's standard color chart; textured colors not available: **[FrameColor]**.

5. COMPRESSION MEMBERS:

Compression rings of structural channel or welded plate minimum ASTM A36 or compression tubes or structural steel tube minimum ASTM A500 grade B shall only be used.

6. CONNECTION REQUIREMENTS:

- a. Anchor bolts shall be ASTM F1554 (Grade 36) unless otherwise noted.
- b. Structural fasteners shall be zinc plated ASTM A325 high strength bolts and A563 high strength nuts.
- c. Structural fasteners shall be hidden within framing members wherever possible.
- d. Structural fasteners shall be manufactured in the U.S
- e. No field welding shall be required to construct the shelter.
- f. All welds shall be free of burrs and inconsistencies.

- g. Exposed fasteners shall be powder coated by manufacturer prior to shipment to match frame or roof colors as applicable.
- h. Manufacturer shall provide extra structural and roofing fasteners.

7. ROOFING MATERIALS:

*****IF PROJECTS FALLS IN HVHZ (HIGH VELOCITY HURRICANE ZONE), ONLY AVAILABLE ROOFING MATERIALS ARE PBR ONLY, MR ONLY, OR TGSS BECAUSE ALL ROOFING MATERIAL MUST HAVE NOA (NOTICE OF ACCEPTANCE) FROM MIAMI-DADE COUNTY*****

*****CHOOSE A PRIMARY ROOF*****

a. PRIMARY ROOF DECK: STRUCTURAL INSULATED PANELS (SP):

- 1. Roof deck SIPs shall be 4 1/2" thick, incorporating a 3 5/8" thick EPS Foam with termiticide core laminated to both a 7/16" OSB top surface for nail or screw base and a ceiling interior surface of 5/8" thick reverse board and batten fir plywood core. The core foam conforms to the Type I specification defined in ASTM C578. Ceiling surface shall be grooved 4" O.C. and be plug free.
- 2. Panels shall be factory precut to shape and size.
- 3. Manufacturer shall supply foam filler, battens and cedar trim, including long fasteners as applicable for model selected.
- 4. Common T1-11 fir plywood is not acceptable.
- 5. Manufacturer shall supply 30 pound felt and drip edge if both primary and secondary roofs are being supplied by the manufacturer.
- 6. Panels shall be factory stained.

*****OR*****

a. PRIMARY ROOF DECK: TONGUE AND GROOVE (TG):

- 1. T&G shall be of 2x6 tongue and groove, southern yellow pine, kiln dried #1 grade or better, edge V'd on both sides to allow either side of board to be used for best side selection.
- 2. Manufacturer shall supply 30 pound felt and drip edge if both primary and secondary roofs are being supplied by the manufacturer.
- 3. Contractor shall cut T&G down to required lengths and shall seal underside of boards per architect's or owner's recommendations using coating supplier's instructions.

*****OR*****

a. PRIMARY ROOF DECK: FACTORY PRE-STAINED TONGUE AND GROOVE (TG):

- 1. T&G shall be of 2x6 tongue and groove, Hem Fir, Select Structural KD 15. Factory stained [ColorName].
- 2. Manufacturer shall supply 30 pound felt and drip edge if both primary and secondary roofs are being supplied by the manufacturer.
- 3. Contractor shall cut T&G down to required lengths.

*****OR*****

a. PRIMARY ROOF DECK: "R" PANEL METAL ROOFING (MR):

- 1. Roofing shall be 24 gauge ribbed galvalume steel sheets, with ribs 1 3/16" high and 12" on center.
- 2. Roof surface shall be painted with Kynar 500 to the manufacturer's standard color: [ColorName]. 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 26 gauge Kynar 500 painted steel.
5. Trim shall include panel ridge caps, hip caps, eave trim, splice channels, rake trim, roof peak cap, and corner trim as applicable for model selected. Trim may need to be cut to length and notched. Installation drawings shall have detailed information on how to cut and affix roof trim.
6. Ridge, hip, and valley caps shall be pre-formed with a single central bend to match the roof pitch and shall be hemmed on the sides.
7. Roof peak cap shall be pre-manufactured.
8. Manufacturer shall supply painted screws and butyl tape.

*****OR*****

a. PRIMARY ROOF DECK: MEGA RIB METAL ROOFING (MG):

1. Roofing shall be 24 gauge ribbed galvalume steel sheets, with ribs 1 1/2" high and 7.2" on center.
2. Roof surface shall be painted with Kynar 500 to the manufacturer's standard color: [ColorName]. 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 26 gauge Kynar 500 painted steel.
5. Trim shall include panel ridge caps, hip caps, eave trim, splice channels, rake trim, roof peak cap, and corner trim as applicable for model selected. Trim may need to be cut to length and notched. Installation drawings shall have detailed information on how to cut and affix roof trim. Note: rake trim is optional on curved MG roofs.
6. Ridge, hip, and valley caps shall be pre-formed with a single central bend to match the roof pitch and shall be hemmed on the sides.
7. Roof peak cap shall be pre-manufactured.
8. Manufacturer shall supply painted screws and butyl tape.

*****OR*****

a. PRIMARY ROOF DECK: STANDING SEAM METAL ROOFING (SS):

1. Standing seam metal roofing to be 22-gauge galvalume 16" wide with ribs 1-3/4" high.
2. Roof surface shall be painted with Kynar 500 to the manufacturer's standard color: [ColorName]. Ceiling surface shall be a "wash coat" primer.
3. Angles shall be cut in the field.
4. Metal roofing trim shall match the color of the roof and shall be factory made of 26 gauge Kynar 500 painted steel.
5. Roof panels have factory eave notch, simplifying installing around offset cleat.
6. Trim shall include panel ridge caps, hip caps, eave trim, splice channels, rake trim, roof peak cap, and corner trim as applicable for model selected. Trim may need to be cut to length and notched. Installation drawings shall have detailed information on how to cut and affix roof trim.
7. Ridge, hip, and valley caps shall be pre-formed with a single central bend to match the roof pitch and shall be hemmed on the sides.
8. Roof peak cap shall be pre-manufactured.
9. Manufacturer shall supply painted screws and butyl tape.

*****OR*****

a. PRIMARY ROOF DECK BY OTHERS

*****CHOOSE A SECONDARY ROOF*****

- b. SECONDARY ROOF SYSTEM: ASPHALT SHINGLES (AS):
1. Asphalt shingles shall be ASTM D3018 Type 1 and ASTM D3462 with a 25-year limited warranty or better.
 2. Color chosen from manufacturer's standard color chart: [ColorName].

A primary roof deck of SIPS OR T&G is required for this option

*****OR*****

- b. SECONDARY ROOF SYSTEM: MILLED CEDAR SHINGLES (CS):
- Cedar shingles shall be Number One Grade Certigrade Red Cedar clear heartwood; 100% edge grain, no defects.

A primary roof deck of SIPS OR T&G is required for this option

*****OR*****

- b. SECONDARY ROOF SYSTEM: "R" PANEL METAL ROOFING (MR):
1. Roofing shall be 24 gauge ribbed galvalume steel sheets, with ribs 1 3/16" high and 12" on center.
 2. Roof surface shall be painted with Kynar 500 to the manufacturer's standard color: [ColorName].
 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 26 gauge Kynar 500 painted steel.
 5. Trim shall include panel ridge caps, hip caps, eave trim, splice channels, rake trim, roof peak cap, and corner trim as applicable for model selected. Trim may need to be cut to length and notched. Installation drawings shall have detailed information on how to cut and affix roof trim.
 6. Ridge, hip, and valley caps shall be pre-formed with a single central bend to match the roof pitch and shall be hemmed on the sides.
 7. Roof peak cap shall be pre-manufactured.
 8. Manufacturer shall supply painted screws and butyl tape.

*****OR*****

- b. SECONDARY ROOF DECK: MEGA RIB METAL ROOFING (MG):
1. Roofing shall be 24 gauge ribbed galvalume steel sheets, with ribs 1 1/2" high and 7.2" on center.
 2. Roof surface shall be painted with Kynar 500 to the manufacturer's standard color: [ColorName].
 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 26 gauge Kynar 500 painted steel.
 5. Trim shall include panel ridge caps, hip caps, eave trim, splice channels, rake trim, roof peak cap, and corner trim as applicable for model selected. Trim may need to be cut to length and notched. Installation drawings shall have detailed information on how to cut and affix roof trim. Note: rake trim is optional on curved MG roofs.
 6. Ridge, hip, and valley caps shall be pre-formed with a single central bend to match the roof pitch and shall be hemmed on the sides.
 7. Roof peak cap shall be pre-manufactured.
 8. Manufacturer shall supply painted screws and butyl tape.

*****OR*****

- b. SECONDARY ROOF SYSTEM: STANDING SEAM METAL ROOFING (SS):

1. Standing seam metal roofing to be 24-gauge galvalume 16" wide with ribs 1-3/4" high.
2. Roof surface shall be painted with Kynar 500 to the manufacturer's standard color: [ColorName]. Ceiling surface shall be a "wash coat" primer.
3. Angles shall be cut in the field.
4. Metal roofing trim shall match the color of the roof and shall be factory made of 26 gauge Kynar 500 painted steel.
5. Trim shall include panel ridge caps, hip caps, eave trim, splice channels, rake trim, roof peak cap, and corner trim as applicable for model selected. Trim may need to be cut to length and notched. Installation drawings shall have detailed information on how to cut and affix roof trim.
6. Ridge, hip, and valley caps shall be pre-formed with a single central bend to match the roof pitch and shall be hemmed on the sides.
7. Roof peak cap shall be pre-manufactured.
8. Manufacturer shall supply painted screws and butyl tape.

*****OR*****

b. SECONDARY ROOF SYSTEM BY OTHERS

8. FINISHES:

***** CHOOSE ALL THE FINISHES BEING USED WITH THE SHELTER*****

a. STANDARD POLI-5000 FINISH:

- 1) Steel shall be cleaned, pretreated, and finished at a facility owned and 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 shall 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 10,000 hours with no creep from scribe line and rating of 10.
 - b) Humidity resistance per ASTM D2247-02 to 5,000 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
- 9) Exposed fasteners for frame and ornamentation shall be powder coated to match structure.

*****AND / OR*****

a. HOT DIP GALVANIZED FINISH:

- 1) Steel members, fabrications and assemblies shall be galvanized after welding by the hot dip process in accordance with ASTM A123. The composition of metal in the galvanizing bath shall be no less than 98% zinc.
- 2) The galvanized coating shall be continuous, adherent, and free from any detrimental defect.
- 3) Appearance of galvanized members shall be consistent with ASTM A123.

4) Hidden fasteners will need to be tapped by installer prior to erecting frame.

*****AND / OR*****

a. DUPLEX COATING

a. Both HOT DIP GALVANIZED FINISH and POWDER COATED FINISH

b. HOT DIP GALVANIZED FINISH

i. Defined above

c. POWDER COATED FINISH

i. Surface is Prepped per ASTM D7803 Standard Practice for Preparation of Zinc (Hot Dip Galvanized)

ii. Parts are washed with a zirconium pretreatment applied with a manual wand spray.

iii. Parts are preheated to prevent outgassing.

iv. Powder Coat is applied.

v. Sample production parts shall have been tested and meet the following criteria:

1. Salt spray: tested and meets ASTM B 117 + 1000 hrs < 2mm

2. Gloss loss: tested and meets AAMA 2604-05 40% @ 5 yrs (S. Florida)

3. Color change: tested and meets ASTM D2244 $\geq \Delta E$ 5.0 (Hunter Scale)

9. ACCESSORIES

Consult www.poligon.com, for the latest options available from Polygon

Delete the ornamentation that is not included with shelter

a. ORNAMENTATION:

1) RAILINGS:

a) Railings are added to between the columns which **CHOOSE ONE** conform to IBC (or other governing code) minimum height requirements of 42 inches. *****OR***** need not meet IBC (or other governing code) minimum height requirements.

b) Railing is to match Polygon **CHOOSE ONE** ornamentation.

Diamond

Carmel (36" railings)

Carmel (42" Code Compliant Railings)

San Jose

Sarasota

Tampa

Gulls

Fish

Sea Grass

Custom

c) Railing will have a ***CHOOSE ONE*** **STANDARD POLI-5000** ***OR*** **HOT DIP GALVANIZED** finish ***OR*** **DUPLEX COATING**. ***IF POLI-5000*** Color chosen from manufacturer's standard color chart: **[ColorName]**.

2) OVERHEAD ORNAMENTATION:

a) Shelter is to be equipped with overhead ornamentation between the column tops and is to match Polygon **CHOOSE ONE** ornamentation.

Diamond

Carmel
San Jose
Sarasota
Tampa
Gulls
Fish
Sea Grass
Custom

- b) Ornamentation will have a *****CHOOSE ONE*** STANDARD POLI-5000
OR HOT DIP GALVANIZED finish ***OR*** DUPLEX COATING. ***IF
POLI-5000 ***** Color chosen from manufacturer's standard color chart:
[ColorName].
- 3) INTERMEDIATE ORNAMENTATION:
- a) Shelter is to be equipped with intermediate ornamentation in the lower clerestory opening mounted between the juncture columns and is to match Polygon style ****CHOOSE ONE**** ornamentation.
- 001 Diamond**
002 Carmel
004 San Jose
005 Sarasota
006 Tampa
020 Gulls
021 Fish
022 Sea Grass
099 Custom
- b) Ornamentation will have a *****CHOOSE ONE*** STANDARD POLI-5000
OR HOT DIP GALVANIZED finish ***OR*** DUPLEX COATING ***IF
POLI- ***** Color chosen from manufacturer's standard color chart:
[ColorName].
- 4) UPPER ORNAMENTATION:
- a) Shelter is to be equipped with upper ornamentation in the top clerestory opening mounted between the juncture columns and is to match Polygon style ****CHOOSE ONE**** ornamentation.
- Diamond**
Carmel
San Jose
Sarasota
Tampa
Gulls
Fish
Sea Grass
Custom
- b) Ornamentation will have a *****CHOOSE ONE*** STANDARD POLI-5000
OR HOT DIP GALVANIZED finish ***OR*** DUPLEX COATING. ***IF
POLI-5000 ***** Color chosen from manufacturer's standard color chart:
[ColorName].
- 5) GABLE:
- a) Shelter is to be equipped with ornamentation on open gable shelters and is to match Polygon ****CHOOSE ONE**** ornamentation.
- Sunshine**

Arched Text and Medallion

Louvered

Truss

Circle

Custom

- b) Ornamentation will have a *****CHOOSE ONE*** STANDARD POLI-5000
OR HOT DIP GALVANIZED finish ***OR*** DUPLEX COATING. ***IF
POLI-5000 *** Color chosen from manufacturer's standard color chart:
[ColorName].**

****Delete if Electrical Access is not included****

b. ELECTRICAL ACCESS & CUTOUTS:

- 1) Electrical access to be provided through a 1 1/8" diameter hole in the column base plate and 3/4" diameter holes are provided through connection plates for wire access through columns, trusses, and into the compression ring/tube.

****Delete if Electrical Access and Electrical Cutouts are not included****

- 2) Electrical cutouts shall be provided in [Quantity] places for fixtures or wires.

*****Consult www.poligon.com, for the latest options available from Polygon*****

*****NOTES TO SPECIFIER: Not all cupolas can be used with all shelters. Please contact the factory for additional instructions or assistance*****

c. CUPOLA:

****Choose a Cupola or Delete all Cupolas if not included with shelter****

Cupola to be **M** style; sheet metal non-vented with **[6:12 **OR** 12:12 **OR** 18:12]** pitch. Colors chosen from manufacturer's standard color chart. Side color: **[Color Name]**. Roof color: **[Color Name]**.

*******OR*******

Cupola to be **F** style; frame with ****CHOOSE ONE**** ornamentation, with **[6:12 **OR** 12:12 **OR** 18:12]** pitch. Colors chosen from manufacturer's standard color chart. Frame color: **[ColorName]**. Roof color: **[ColorName]**. Ornamentation color: **[ColorName]**.

Diamond

Carmel

San Jose

Sarasota

Tampa

Gulls

Fish

Sea Grass

Custom

*******OR*******

Cupola to be **F** style; frame without ornamentation, with **[6:12 **OR** 12:12 **OR** 18:12]** pitch. Colors chosen from manufacturer's standard color chart. Frame Color: **[ColorName]**. Roof color: **[ColorName]**.

*******OR*******

Cupola to be **V** style; vented steel frame, sheet metal sides with **[6:12 **OR** 12:12 **OR** 18:12]** pitch. Colors chosen from manufacturer's standard color chart. Side color: **[ColorName]**. Roof color: **[ColorName]**.

*******OR*******

Cupola to be **N** style; Neo Classic Style with wood roof, steel frame, sheet metal sides. Colors chosen from manufacturer's standard color chart. Frame color: **[ColorName]**. Roof color: **[ColorName]**.

*****OR*****

Cupola to be **S** style; steel frame, sheet metal sides, with wood panel roof for asphalt shingles with **[6:12 **OR** 12:12 **OR** 18:12]** pitch. Color chosen from manufacturer's standard color chart: **[ColorName]**.

****Choose a Windscreen or Delete if not included with shelter****

e. SCREENS:

Polycarbonate Windscreens:

- 1) Windscreens shall be single preformed picture frame sections which shall be powder coated to match the color of the steel frame of the shelter.
- 2) Each sidewall shall have several 'windows' of 1/4" polycarbonate panels. The manufacturer shall determine the size of each 'window' taking into account strength properties of the polycarbonate and the length of each sidewall.
- 3) The windscreens shall be separated from the shelter's frame and from finish grade by air spaces.

*****OR*****

Perforated Metal Screens:

- 1) Perforated metal screens shall be made of picture frame sections with perforated .063 gauge Type 3003-H14 aluminum screens which shall be powder coated to match the color of the steel frame of the shelter.
- 2) Perforated metal shall be sized to be 1/4" diameter holes with 5/16" staggered centers, 12 holes PSI, 58% overall open area.
- 3) Screens shall be cross bent to add rigidity and reduce vibration.
- 4) Screens will have a **STANDARD POLI-5000**

*****IF POLI-5000 *****

- 5) Color chosen from manufacturer's standard color chart: **[ScreenColor]**.

****Choose the Seating or Delete if not included with shelter****

f. INTEGRATED SEATING:

Integrated Steel Seating

- 1) Integrated seating will be installed between shelter columns.
- 2) Seating will be made of laser cut custom steel sections and cold rolled steel slats
- 3) Screens will have a **STANDARD POLI-5000**.

*****IF POLI-5000 *****

- 4) Color chosen from the manufacturer's standard color chart: **[BenchColor]**.

*****OR*****

Integrated Plastic Lumber Seating:

- 1) Integrated seating will be installed between shelter columns.
- 2) Seating will be made of steel sections and plastic lumber slats
- 3) Seating frame will have a **STANDARD POLI-5000** finish.

*****IF POLI-5000 *****

- 3) Color chosen from the manufacturer's standard color chart: **[BenchColor]**.

**** Delete if not included with shelter****

g. POLIGUARD GUTTER AND DOWNSPOUT SYSTEM:

- 1) Shelter is to be equipped with high strength 5" low-profile, half-round steel gutter system, including 3.5" round downspout(s). Both gutter and downspout are to be factory powder-coated. Corners to be of factory seamed construction. All steel to be G-90 galvanized material.

PART 3 - EXECUTION

3.01 INSTALLERS STORAGE AND HANDLING

- A. Protect building products after arrival at destination from weather, sunlight, and damage.
- B. Installer shall store product elevated to allow air circulation and to not introduce mold, fungi decay or insects to the product.
- C. 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 and may void manufacturer's warranty.

*****IF T & G Roof or SIP Roof is Included*****

- D. To curtail warping of lumber, all units shall remain packaged while being stored.

*****IF Secondary Roof*****

- E. The secondary roof shall be installed immediately after the primary roof to prevent moisture damage to wood.

3.02 ERECTION

A. INSTALLATION:

*****Choose *****

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

*****OR***Choose If CPI Installer is specified*****

The shelter shall be erected by a Certified Installer who has a demonstrated ability to construct the shelter in the manner recommended by the shelter manufacturer.

B. GENERAL CONTRACTOR:

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 Polygon.

C. TOLERANCES:

Tolerances on steel structural members are set according to AISC construction practices, abided in the factory, and cannot be increased. 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.

D. OSHA COMPLIANCE:

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

3.03 REPAIR

- A. Do not attempt any field changes without first contacting Polygon.

3.04 FIELD OR SITE QUALITY CONTROL

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

END OF SECTION