Product Guide Specification
DIVISION 107300
SPECIALTIES MANUFACTURERS OF PROTECTIVE COVERS

PART 1 - GENERAL

[reference CSI 2004 MasterFormat™ Division 10
(Specialties Manufacturers) category 7300 (Protective Covers)]

1.1 DESCRIPTION OF PRODUCT

A. Free standing, pre-engineered canopy or walkway system consisting of steel framing, metal roof panels, sheet metal trim, related accessories, and (when applicable) foundation design.

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. Submit 4 sets of submittal drawings and 2 sets of calc books, both signed and sealed by a Professional Engineer licensed in the state where the project is located.

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 must 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 panel layout with trim and connection details.

D. FOUNDATION DESIGN:
1. The canopy/walkway shall be set on foundations designed by manufacturer (when applicable).
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.

E. ANCHOR BOLTS: Anchor bolts shall be provided by manufacturer.

1.4 QUALITY ASSURANCE

A. MANUFACTURER QUALIFICATIONS:

1. Company specializing in engineering and manufacturing pre-engineered canopies/walkways with a minimum experience of ten years.
2. All welders AWS Certified.
3. Powder coat finishing system to include shot blast, pretreatment, primer, and top coat.
4. PCI 4000 S Certified powder coat finishing system.
5. Annual audit of powder coat finish system by Third Party Agency (PCI).

1.5 FIELD OR SITE CONDITIONS

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

1.6 MANUFACTURER WARRANTY

A. Canopy/walkway must have a 10-year limited warranty on steel frame members.
B. Canopy/walkway framing must have a 10-year limited warranty on paint system.
C. Roof panels and related sheet metal trims must have a 20-yr limited warranty on paint system.

PART 2 – PRODUCTS

2.1 CANOPY/WALKWAY SYSTEM AND MATERIALS

A. MANUFACTURERS:
1. Acceptable Manufacturer: Floline Architectural Systems, LLC, 25523 W. Ruff Street, Plainfield, IL 60585; Phone (630) 922-7879; Fax (630-922-0880); www.flolinesystems.com Receive pricing from the corporate office, 25523 W. Ruff Street, Plainfield, IL 60585; Phone (630) 922-7879; Fax (630)-922-0880

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 to the PCI 4000 S Certified system listed under Section 2.1 C. 8. FINISHES.
4. Staff members' cumulative experience in fabrication will not be an acceptable alternative for manufacturer's experience in the canopy/walkway construction industry.

C. PRODUCT REQUIREMENTS AND MATERIALS:
1. GENERAL: The pre-engineered package shall be prefabricated which will include all parts necessary to field construct the canopy/walkway. The canopy/walkway shall be shipped knocked down to minimize shipping expenses. Field labor will be kept to a minimum by pre-manufactured parts. On-site 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).
4. STRUCTURAL FRAMING: Hollow Structural Steel tube minimum ASTM A500 grade B. “I” beams, tapered columns or open channels shall not be accepted for primary beams. Frame will have a standard PCI-4000 S Certified finish. Color chosen from manufacturer's standard color chart.
5. 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. All structural fasteners shall be hidden within framing members wherever possible.
    d. No field welding shall be required to construct the canopy/walkway.
    e. All welds shall be free of burrs and inconsistencies.
    f. All exposed fasteners shall be painted by manufacturer prior to shipment to match frame or roof colors as applicable.
    g. Manufacturer shall provide extra structural and roofing fasteners.

6. SHEET METAL
    a. Roof Panels to be either Floline 900 profile: 1-1/2 inch (38 mm) deep with ribs spaced 5.9 inches (150 mm) on center; nominal cover width of 35.4 inches (900 mm); or Floline 940 profile: 1-1/2 inch (38 mm) deep with ribs spaced 7.2 inches (183 mm) on center; nominal cover width of 36 inches (914 mm); sidelap occurs at top of high ribs.
        1. Substrate and material thickness:
            a. Galvalume in 24, 22, 20 and 18 gauge
            b. Galvalume Plus in 24, 22, 20, and 18 gauge
            c. G-90 galvanized in 24, 22, 20, and 18 gauge
            d. Aluminum in .040, .050, and .063 thickness
            e. Stainless steel in 24 gauge.
        2. Paint finish: Kynar 500® paint on topside, standard off-white primer on backside
    b. Sheet metal components
        1. Provide accessories and other items essential to completeness of roof installation including trim, flashing, fascia, metal closure strips, caps, gutters, downspouts, roof curbs, column covers, soffits and similar metal component.
        2. Form components from same gauge and finish as metal panels, unless

otherwise noted.

7. FINISHES:
    a. STANDARD PCI-4000 S CERTIFIED FINISH ON STRUCTURAL FRAMING:
        1. Steel shall be shot blasted to SSPC-SP10 near-white blast cleaning. SSPC-SP2 hand tool cleaning will not be an acceptable alternative.
        2. Parts shall be pretreated in a 3 stage iron phosphate or equal washer.
        3. Epoxy primer powder coat shall be applied to parts for superior corrosion protection.
        4. Top coat of Super Durable TGIC powder coat shall be applied over the epoxy primer.
        5. Finish shall not have any VOC emissions.
        6. 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).
        7. The powder coat applicator shall be PCI 4000 S Certified.
        8. Exposed fasteners for frame and ornamentation shall be powder coated to match structure.

    b. KYNAR 500® FINISH ON SHEET METAL
        1. Full Strength Kynar 500®/Hylar 5000 (contains a minimum 70% Kynar/Hylar polyvinylidene fluoride (PVDF) resins) premium flouropolymer coating system of 1.0 (± 0.1) mil total dry film thickness. For additional protection a wash coat of 0.3 -0.4 mil dry film thickness is applied to the reverse side.

PART 3 – EXECUTION

3.1 INSTALLERS STORAGE AND HANDLING

A. Protect building products after arrival at destination from weather, sunlight, and damage.

B. Installer shall store product elevated from soils 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.

3.2 ERECTION

A. FOUNDATIONS: The canopy/walkway shall be placed on foundations designed by the manufacturer (when applicable), with materials by others. Design approved by the Engineer of Record identified in Section 1.3 D. FOUNDATION DESIGN.

B. INSTALLATION: Install all components according to manufacturer's installation instructions and these specifications. Remove any strippable film at time of installation.

C. 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 the manufacturer.

D. 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.

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

3.3 REPAIR

A. Do not attempt any field changes without first contacting the manufacturer.

3.4 FIELD OR SITE QUALITY CONTROL

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

END OF SECTION