

SECTION 02870 - SITE AND STREET FURNISHINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following site and street furnishings:
 - 1. Benches.
 - 2. Bicycle racks.
 - 3. Trash receptacles.
 - 4. Picnic tables and handicapped accessible picnic tables.
 - 5. Bleachers.
- B. Related Sections include the following:
 - 1. Division 3 Section "Cast-in-Place Concrete" for installation of anchor bolts cast in concrete footings.
- C. Products furnished, but not installed under this Section, include anchor bolts to be cast in concrete footings.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, finishes, field-assembly requirements, and installation details.
- B. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.
 - 1. Size: Not less than 6-inch- (150-mm-) long linear components and 4-inch- (100-mm-) square sheet components.
- C. Maintenance Data: For site and street furnishings to include in maintenance manuals.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of site and street furnishings through one source from a single manufacturer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Benches:
 - a. Permanent bench, Model 1413, as manufactured by Play World Systems, obtained through Fry & Associates, Inc., 101 E. 15th Ave., N. Kansas City, MO 64116, phone (816) 221-4825, or approved equal.
 - 2. Bicycle Racks:
 - a. Loop bike rack, Model 1353, as manufactured by Play World Systems, obtained through Fry & Associates, Inc., 101 E. 15th Ave., N. Kansas City, MO 64116, phone (816) 221-4825, or approved equal.
 - 3. Trash Receptacles:
 - a. PVC-coated trash can, Model 1414 with options Model 1416 anchor bolts, Model 1417 dome lid, Model 8060 Liner, as manufactured by Play World Systems, obtained through Fry & Associates, Inc., 101 E. 15th Ave., N. Kansas City, MO 64116, phone (816) 221-4825, or approved equal.
 - 4. Picnic Tables:
 - a. Model 1403, as manufactured by Play World Systems, obtained through Fry & Associates, Inc., 101 E. 15th Ave., N. Kansas City, MO 64116, phone (816) 221-4825, or approved equal.
 - b. Model 1405, handicap accessible, as manufactured by Play World Systems, obtained through Fry & Associates, Inc., 101 E. 15th Ave., N. Kansas City, MO 64116, phone (816) 221-4825, or approved equal.
 - 5. Bleachers:
 - a. Model ST15, as manufactured by Diversified Metal Fabricators, obtained through AB Creative, Inc., 32225 W. 88th St., DeSoto, KS 66018, phone (913) 583-3332, or approved equal.

2.2 MATERIALS

- A. Steel: Free from surface blemishes and complying with the following:
 - 1. Plates, Shapes, and Bars: ASTM A 36/A 36M.
 - 2. Tubing: Cold-formed steel tubing complying with ASTM A 500.
 - 3. Perforated Metal: From steel sheet not less than 0.105-inch nominal thickness; manufacturer's standard perforation pattern.
 - 4. Expanded Metal: From carbon-steel sheets, deburred after expansion, and complying with ASTM F 1267.
- B. Plastic: Color impregnated, color and UV-light stabilized, and mold resistant.
 - 1. Polyethylene: Fabricated from virgin plastic HDPE resin.
- C. Anchors, Fasteners, Fittings, and Hardware: Manufacturer's standard, corrosion-resistant-coated or noncorrodible materials; commercial quality; tamperproof, vandal and theft resistant; concealed, recessed, and capped or plugged. Provide as required for site and street furnishings' assembly, mounting, and secure attachment.
 - 1. Antitheft Hold-Down Brackets: For securing site and street furnishings to substrate; four per unit, Model BPM7425, as manufactured by Play World System, obtained through Fry & Associates, Inc., 101 E. 15th Ave., N. Kansas City, MO 64116, phone (816) 221-4825, or approved equal.

2.3 BENCHES

- A. Frame: Steel.
- B. Steel Seat and Back: Fabricated from perforated metal.
- C. Seat Height: As indicated on Drawings.
- D. Overall Height: As indicated on Drawings.
- E. Overall Width: As indicated on Drawings.
- F. Overall Depth: As indicated on Drawings.
- G. Weight: 98 pounds.
- H. Seat Surface Shape: Flat.
- I. Unit Configuration: Straight.
- J. Installation Method: Cast in concrete, as indicated on Drawings.

K. Steel Finish: PVC-color coated.

1. Color: Hunter green.

2.4 BICYCLE RACKS

A. Frame: Galvanized steel.

1. Tubing OD: Not less than 3-inch galvanized steel tubing.

B. Style: Arched loop.

C. Overall Height: As indicated on Drawings.

D. Overall Width: As indicated on Drawings.

E. Overall Depth: As indicated on Drawings.

F. Capacity: Designed to accommodate not less than five bicycles.

G. Security: Designed to lock wheel and frame.

H. Installation Method: Cast in concrete, as indicated on Drawings.

I. Steel Finish: Color coated.

1. Color: Forest green.

2.5 TRASH RECEPTACLES

A. Steel Facing Surrounds: Perforated steel sheet.

B. Receptacle Shape, Form, and Function: Round cylinder; with opening for depositing trash in side of lid or top.

C. Lids and Tops: Steel secured by cable or chain.

1. Description: Dome top.

2. Flap: Opening for depositing trash covered by spring-loaded-hinged, push-in weather flap.

D. Style: To match benches.

E. Overall Height: 42³/₄ inches.

F. Overall Diameter: 24 inches.

- G. Weight: 64 pounds.
- H. Inner Container: Rigid plastic container designed to be removable and reusable.
- I. Capacity: Not less than 32 gal. (121 L).
- J. Service Access: Removable lid or top, inner container and disposable liner lift or slide out for emptying.
- K. Installation Method: Anchored to substrate according to manufacturer's recommendations.
 - 1. Post Mount: Color-coated steel pipe; color to match receptacle; for mounting one receptacle.
- L. Steel Finish: PVC-color coated.
 - 1. Color: Hunter green.

2.6 PICNIC TABLES AND HANDICAPPED ACCESSIBLE PICNIC TABLES

- A. Frame: Steel.
- B. Steel Seats and Table Tops: Fabricated from perforated metal.
- C. Seat Height: 17 inches.
- D. Table Top Height: 30 inches.
- E. Overall Height: 30 inches.
- F. Overall Length: 96 inches.
- G. Overall Width: 61 inches.
- H. Weight: 208 pounds.
- I. Style: To match benches.
- J. Unit Configuration: As indicated on Drawings.
- K. Installation Method: Anchored at finished grade to substrate with hold-down brackets per manufacturer's recommendations.
- L. Steel Finish: PVC-color coated.
 - 1. Color: Hunter green.

2.7 BLEACHERS

- A. Frame: Steel.
- B. Steel Seat: Fabricated from expanded metal.
- C. Tube Guardrails: Not less than 1⁵/₈-inch (41-mm) galvanized steel tubing.
- D. Capacity: 50 people.
- E. Overall Length: 15 feet.
- F. Overall Width: 115 inches.
- G. Overall Height: 47 inches, or 5 rows of seating.
- H. Weight: 1,502 pounds.
- I. Installation Method: Anchored to substrate indicated on Drawings.
- J. Steel Finish: Railing to be galvanized, seats to be PVC color-coated.
 - 1. Color: Hunter green.

2.8 FABRICATION

- A. Metal Components: Form to required shapes and sizes with true, consistent curves, lines, and angles. Separate metals from dissimilar materials to prevent electrolytic action.
- B. Welded Connections: Weld connections continuously. Weld solid members with full-length, full-penetration welds and hollow members with full-circumference welds. At exposed connections, finish surfaces smooth and blended so no roughness or unevenness shows after finishing and welded surface matches contours of adjoining surfaces.
- C. Pipes and Tubes: Form simple and compound curves by bending members in jigs to produce uniform curvature for each repetitive configuration required; maintain cylindrical cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of handrail and railing components.
- D. Steel and Iron Components: Galvanized, galvanized and color coated, or color coated. Bare metal steel or iron components are not permitted.
- E. Exposed Surfaces: Polished, sanded, or otherwise finished; smooth all surfaces, free from burrs, barbs, splinters, and sharpness; all edges and ends rolled, rounded, or capped.
- F. Factory Assembly: Assemble components in the factory to the greatest extent possible to minimize field assembly. Clearly mark units for assembly in the field.

2.9 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.10 STEEL AND GALVANIZED STEEL FINISHES

- A. Baked-Enamel, Powder-Coat Finish: Manufacturer's standard, baked, polyester-TGIC, powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness.
- B. PVC Finish: Manufacturer's standard, UV-light stabilized, mold-resistant, slip-resistant, matte-textured, dipped or sprayed-on, PVC-plastisol finish, with flame retardant added; complying with coating manufacturer's written instructions for pretreatment, application, and minimum dry film thickness.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for correct and level finished grade, mounting surfaces, installation tolerances, and other conditions affecting performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Comply with manufacturer's written installation instructions, unless more stringent requirements are indicated. Complete field assembly of site and street furnishings, where required.
- B. Unless otherwise indicated, install site and street furnishings after landscaping and paving have been completed.
- C. Install site and street furnishings level, plumb, true, and securely anchored at locations indicated on Drawings.

- D. Post Setting: Set cast-in support posts in concrete footing with smooth top, shaped to shed water. Protect portion of posts above footing from concrete splatter. Verify that posts are set plumb or at correct angle and are aligned and at correct height and spacing. Hold posts in position during placement and finishing operations until concrete is sufficiently cured.

3.3 CLEANING

- A. After completing site and street furnishing installation, inspect components. Remove spots, dirt, and debris. Repair damaged finishes to match original finish or replace component.

END OF SECTION 02870