

## **323000 SITE IMPROVEMENTS**

### **1. Steel tables with attached chairs; steel benches:**

#### **a. General**

- 1) Except where otherwise indicated, outdoor furniture shall be steel with a 1/4" heat fused plastic coating.
- 2) The outdoor furniture shall not rust crack, chip, peel, warp or rot.
- 3) Shall be unaffected by common acids, alkali's, salts and acid rain.
- 4) Surface shall be nonporous.
- 5) Shall be capable of remaining outside year-round without being affected by extreme temperatures.
- 6) Tops and seats shall be a diamond mesh design to discourage graffiti and carving.
- 7) Shall not absorb or collect water, grease or oil and shall not leaf stain.
- 8) Shall have no sharp edges.
- 9) Shall have a five-year limited warranty.
- 10) Benches shall be anchored to concrete using surface mount accessory, no direct fastening thru the leg.
- 11) Bench shall be 6'-0" long unless otherwise directed by the University.
- 12) Color: Black, or as approved by the University.

b. Manufacturer/Product:

1) Steel Table, 46" Round, with Attached Chairs:

- a) Wabash Valley Mfg., Inc., Model No. F6040/F6042.
- b) Ken Coat, Inc., Model No. 35E46PT.

2) Steel Bench – Non-academic Areas:

- a) Heritage Courtyard, Model No. CY420D, Portable / Surface with Diamond Pattern, Black.

3) Wood Benches – Historic and Formal Areas (Coordinate with the University Facilities Department for Locations):

- a) Smith and Hawken, Gloucester Bench, 6'-0" long, Model No. 496927.
- b) Country Casual, Gaithersburg, MD, Mendip Bench, 6'-0" long, Model No. 4603.
- c) Gardenside, Ltd., San Rafael, CA, Parkside Bench, 6'-0" long.

2. Bike Bollards

a. General:

- 1) 2" or larger diameter powder coated steel "Heavy Duty Serpentine" style
  - 2) Finish as specified for bollards listed below. Color to be black.
  - 3) Number of serpentine loops should be appropriate for site and specified in design.
- a) American Playground, 505E. 31<sup>st</sup> St, Anderson, IN 46016).

### 3. Bollards

#### a. Fixed Bollards

- a) Bollard post shall be 4 inch i.d. Schedule 40 mild steel seamless pipe with a minimum wall thickness of 7/32 inch. Thin wall tube is not acceptable. Top of bollard post shall be fitted with a cast aluminum hemi-dome end cap, permanently double monobolted in place. Easily vandalized friction fit end caps are not permitted. Bollard shall include 2 each 9/16 inch diameter thru holes for No. 4 rebar. Manufactured by Creative Pipe Inc.
- b) Foundation: Minimum 3,000 psi concrete.
- c) Finish:
  - 1) Bollard shall be coated with a tough, opaque, UV resistant exterior grade polyester powder coating applied to a minimum thickness of 6 mils. Liquid, epoxy or leadcontaining powder coatings are not acceptable.
  - 2) Color shall be powder coated black or as selected by the University.
    - a) Creative Pipe, Inc., Model CBR.

#### b. Removable Bollards

- a) Bollard post shall be 4 inch i.d. schedule 40 mild steel seamless pipe with a minimum wall thickness of 7/32 inch. Thin wall tube is not acceptable. Top of bollard post shall be fitted with a cast aluminum hemi-dome end cap, permanently double mono-bolted in place. Easily vandalized friction fit end caps are not permitted. Bollard shall include 2 each 9/16 inch diameter thru holes No. 4 rebar (by others).
- b) Footing and associated hardware to allow bollard removal.

c) Finish:

- a. Bollard shall be coated with a tough, opaque, UV resistant exterior grade polyester powder coating applied to a minimum thickness of 6 mils. Liquid, epoxy or lead containing powder coatings are not acceptable.
- b. Color shall be powder coated black or as selected by the University.
- c. Lock to be furnished by Owner.

1. Creative Pipe, Inc., Model CBR.

b. Bollard Post and Chain

- a) Model: Aluminum Fence Post
- b) Color: Ridge Black Powdercoat
- c) Chain: 1/4" Grade 30 Proof Coil Chain; Black
- d) Manufacturer: Quality Machining, Inc.  
304 Science Park Road, Bldg. 5,  
State College, PA 16803  
Ph 814-238-5764, Fax 814-234-6986

c. Collapsible Bollard (see Section 323001)

d. Handicap Access Post for Mounting Door Push Plate

a. General

- 1) Post shall be 4" x 6" tubular seamless steel, 1/4" minimum wall thickness.
- 2) Top of post shall be fitted with a steel cap overlapping 2" on all sides. Overhanging edges shall be at a 20° down angle. Cap shall

have smooth, rounded edges. (See detail on drawings SW-5).  
Weld cap to post providing watertight seal.

- 3) Openings shall be provided for conduit entrance below grade and mounting hardware for handicap push plate installation. See detail for conduit and push plate location. See handicap push plate manufacturer for size of opening and mounting hardware required.
- 4) Access post and cap shall be primed and painted to match curtain wall system framing at entrances. Color to be approved by Architect.
- 5) Foundation: Minimum 3,000 psi concrete.

b. Handicap Activation Device

- 1) Shall be stainless steel, 6" round push plate switch. Engraved with international handicap insignia and the words, "Press to Open". Pad-mounted opening devices shall not be used.

c. Painting

- 1) Materials for painting tubular steel post and cap.
  - a) Surface preparation shall be SSPC-SP-10.
  - b) Paint shall be epoxy acrylic urethane.
  - c) Manufacturers
    - (1) Prime Coat
      - (a) Themec, Model 161-1211, DFT 3-5.
      - (b) Sherwin-Williams, Recoatable epoxy primer, DFT 3-5.
    - (2) Intermediate Coat
      - (a) Tnemec, Series 73, DFT 2-3.
      - (b) Sherwin-Williams, Corothane 11 B65W200, Series/B6002, DFT 2-3.

(3) Finish Coat

- (a) Tnemec, Series 73, DFT 2-3.
- (b) Sherwin-Williams, Corothane 11 B65W200, Series/B6002, DFT 2-3.

e. Exterior Waste Containers

- a. Provide precast, steel-reinforced concrete containers with cast aluminum door for easy removal of liners.
- b. Sizes:
  - 1) Single Bin: 24" by 26" by 52", 45 gal. capacity.
  - 2) Three-Bin: 75" by 25" by 47", 45 gal. capacity per bin.
- c. Finish: Exposed aggregate; tan, with brown matrix color.
- d. Products: Equal to Model No. TF1029 (single bin) and Model No. TF1222 (three-bin), as manufactured by Terra-Form, Div. of Wausau Tile.