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SECTION 02831 CHAIN LINK FENCING AND GATES

All work and materials shall conform to the Drawings and the provisions of MDOT SECTION 607- FENCES, with the following modifications and additions:

*MODIFICATIONS*

A. Section 607.02- Add the following:

Provide vinyl or galvanize coated chain link fences and gate units controlled by single source including erection accessories, fittings, and fastenings. Refer to Drawings for when either type is required. Unless shown otherwise on the Contract Drawings, supply all components with vinyl coating.

*ADDITIONS*

1.0 SUBMITTALS

- A. Contractor shall submit catalog cut sheets of all fencing products proposed for use.

2.0 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with requirements, provide products of one of the following:

1. Allied Tube and Conduit Corporation
2. Anchor Fence, Inc.
3. United States Steel
4. Acme Fence Company

2.02 MATERIALS

- A. Fabric

1. No. 9 ga. (0.148" ± 0.005") finished size galvanized steel wires, 2" mesh, with both top and bottom salvages twisted and knuckled finish with a black vinyl coating. Furnish one-piece fabric widths for fencing.

- B. End, Corner, and Pull Posts: Galvanized steel, with exposed portions finished with a black vinyl coating, minimum sizes and weights as follows:

1. Over 4'-0" Fabric Height: 2.875" OD pipe, 5.79 lbs./lin. ft., or 3.5" x 3.5" roll-formed sections, 4.85 lbs./lin. ft.

- C. Line Posts: Galvanized steel, with exposed portions finished with a black vinyl coating, minimum sizes and weights as follows:

1. 4'-0" to 8'-0" Fabric Height: 2.375" OD steel pipe, 3.65 lbs./lin. ft., or 2.25" x 1.875" H-sections 2.64 lbs./lin. ft.
2. Over 8'-0" Fabric Height: 2.875" OD steel pipe, 5.79 lbs./lin. ft. or 2.25" x 1.875" H-sections, 3.26 lbs./lin. Ft

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- D. Gate Posts: Galvanized steel, with exposed portions finished with a black vinyl coating, posts for supporting single gate leaf, or one leaf of double gate installation, for nominal gate widths as follows:
1. Up to 4'-0": 3.5" x 3.5" roll-formed section, 2.85 lbs./lin. ft., or 2.875" OD pipe, 5.79 lbs./lin. ft.
  2. Over 4'-0" to 13'-0": 4.000" OD pipe, 9.11 lbs./lin. ft.
- E. Top Rail: Rails: 1.66" OD pipe, 2.27 lbs./ft. or 1.625" x 1.25" roll-formed sections, 1.35 lbs./Ft.; galvanized steel, with exposed portions finished with a black vinyl coating, manufacturer's longest lengths.
- F. Couplings: Expansion type, approximately 6" long, for each joint.
- G. Attaching Devices: Provide means for attaching top rail securely to each gate corner, pull and end post.
- H. Sleeves: Galvanized steel with exposed portions finished with a black vinyl coating pipe not less than 6" long and with inside diameter not less than 1/2" greater than outside diameter of pipe. Provide steel plate closure welded to bottom of sleeve of width and length not less than 1" greater than outside diameter of sleeve.
- I. Tension Wire: 7 gauge galvanized steel, coated coil spring wire, located at bottom of fabric.
- J. Wire Ties: 11 gauge galvanized steel.
- K. Post Brace Assembly: Manufacturer's standard adjustable brace at end and gate posts and at both sides of corner and pull posts, with horizontal brace located at mid-height of fabric. Use same material as top rail for brace, and truss to line posts with 0.375" diameter rod and adjustable tightener.
- L. Post Tops: Galvanized steel, with exposed portions finished with a black vinyl coating, weathertight closure cap for each tubular post. Furnish caps with openings to permit passage of top rail.
- M. Stretcher Bars: Galvanized steel, with exposed portions finished with a black vinyl coating, one piece lengths equal to full height of fabric, with minimum cross-section of 3/16" x 3/4". Provide one stretch bar for each gate and end post, and two for each corner and pull post.
- N. Stretch Bar Bands: Manufacturer's standard.
- O. Gate Cross-bracing: 3/8" diameter galvanized steel adjustable length truss rods.
- P. Swinging Gate Hardware
1. Hinges: Size and material to suit gate size, non-lift-off type, offset to permit 180 degree gate opening. Provide 1-1/2" pair of hinges for each leaf up to 6'-0" nominal height. Add hinges for each 2' nominal height increase.
  2. Latch: Forked type of plunger-bar type to permit operation from either side of gate, with padlock eye as integral part of latch.

- Q. Double Gates Hardware: Provide gate stops for double gates, consisting of mushroom type of flush plate with anchors set in concrete, to engage center drop rod or plunger bar. Include locking device and padlock eye as integral part of latch, using one padlock for locking both gate leaves.
- R. Sliding Gate Hardware: Provide manufacturer's standard heavy-duty track, ball-bearing hanger sheaves, overhead framing and support, guides, stays, bracing, and accessories as required.

### 2.03 GATE FABRICATION

- A. Fabricate swing gate perimeter frames of 1.90" or 2.375" OD pipe, galvanized steel as specified on the drawings. Provide horizontal and vertical members to ensure proper gate operation and for attachment of fabric, hardware, and accessories. Space frame members maximum of 8'-0" apart.
- B. Assemble gate frames by welding or special fittings and rivets, for rigid connections. Install same fabric as for fence with stretcher bars at vertical edges. Install diagonal cross-bracing on gates as required to ensure rigid frame without sag or twist. Bars may be used at top and bottom edges. Attach stretchers to gate frame at 15" o.c. maximum.
- C. Attach hardware to provide security against removal or breakage.

### 3.0 EXECUTION

#### 3.01 INSTALLATION

- A. Comply with recommended procedures and instructions of fencing manufacturer. Provide secure, aligned installation with line posts spaced at 10'-0" o.c. maximum.
- B. Gates: Install gates plumb, level, and secure for full opening without interference. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubrication.

END OF SECTION 02831