

SECTION 02820

GALVANIZED CHAIN LINK FENCE AND GATES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Fence framework, fabric and accessories
- B. Gates and related hardware
- C. Installation

1.2 SUBMITTALS

- A. Shop drawings: Layout of fences and gates with dimensions, details, and finishes of components, accessories, and post foundations.
- B. Product data: Manufacturer's catalog cuts indicating material compliance and specified options.
- C. Samples: If requested, samples of materials (e.g., fabric, wires, and accessories).

PART 2 PRODUCTS

2.1 CHAIN LINK FENCE FABRIC

- A. Galvanized wire: Galvanized fabric shall be galvanized after weaving with a minimum of 1.2 ounces of zinc per square foot of surface area and conform to ASTM A 392, Class 1. Fabric shall be 9-gage wire woven in a 2-inch diamond mesh. Top selvage to be knuckled, bottom selvage to be twisted.
- B. Size: Fabric shall be 9-gage wire woven in a 2-inch diamond mesh.
- C. Selvage of fabric knuckled at top and knuckled at bottom.

2.2 STEEL FENCE FRAMING

- A. Steel pipe - Type I: ASTM F 1083, standard weight schedule 40; minimum yield strength of 25,000 psi; sizes as indicated. Hot-dipped galvanized with minimum average 1.8 oz/ft² of coated surface area.
- B. -End and Corner Post to be 2 7/8 inch
-Line (intermediate) Post 2 3/8" on center 3.65 lbs/ft
-Rail and Braces 1 5/8" on center 2.27 lbs/ft

2.3 ACCESSORIES

- A. Chain link fence accessories: [ASTM F 626] Provide items required to complete fence system. Galvanize each ferrous metal item and finish to match framing.
- B. Post caps: Formed steel, cast malleable iron, or aluminum alloy weather tight closure cap for tubular posts. Provide one cap for each post. Provide tops to permit passage of top rail.
- C. Top rail and brace rail ends: Pressed steel per ASTM F626, for connection of rail and brace to terminal posts.
- D. Top rail sleeves: 7" expansion sleeve with spring, allowing for expansion and contraction of top rail.
- E. Wire ties: 9 gauge [0.148"] galvanized steel wire for attachment of fabric to line posts. Double wrap 13 gauge [0.092"] for rails and braces. Hog ring ties of 12-1/2 gauge [0.0985"] for attachment of fabric to tension wire.
- F. Brace and tension (stretcher bar) bands: Pressed steel. At square post provide tension bar clips.
- G. Tension (stretcher) bars: Install per manufacturer's recommendations.
- H. Tension wire: Galvanized coated steel wire, 7 gauge, [0.177"] diameter wire with tensile strength of 75,000 psi.
- I. Truss rods & tightener: Steel rods with minimum diameter of 5/16". Capable of withstanding a tension of minimum 2,000 lbs.
- J. Nuts and bolts are galvanized.

2.4 SETTING MATERIALS

- A. Concrete: Minimum 28 day compressive strength of 3,000 psi.

PART 3 EXECUTION

3.1 EXECUTION

- A. Verify areas to receive fencing are completed to final grades and elevations.
- B. Ensure property lines and legal boundaries of work are clearly established.
- C. Arrange for and verify that underground utilities have been marked.

3.2 CHAIN LINK FENCE FRAMING INSTALLATION

- A. Install chain link fence in accordance with ASTM F567, "Standard Practice for Installation of Chain-Link Fence", and manufacturer's instructions.
- B. Locate terminal post at each fence termination and change in horizontal or vertical direction of 30° or more.
- C. Space line posts uniformly (maximum spacing as per manufacture).

- D. Concrete set terminal posts: Drill holes in firm, undisturbed or compacted soil. Holes shall have diameter 4 times greater than outside dimension of post, minimum 12" dia., and depths approximately 6" deeper than post bottom. Excavate deeper as required for adequate support in soft and loose soils, and for posts with heavy lateral loads. Set post bottom 36" below surface when in firm, undisturbed soil. Spoils not used to fill holes from the removal of existing fence shall be removed from site. Place concrete around posts in a continuous pour. Trowel finish around post. Slope to direct water away from posts.
- E. Check each post for vertical and top alignment, and maintain in position during placement and finishing operations.
- F. Bracing: Install horizontal pipe brace at mid-height on each side of terminal posts. Firmly attach with fittings. Install diagonal truss rods at these points. Adjust truss rod, ensuring posts remain plumb.
- G. Tension wire: Provide tension wire at bottom of fabric. Install tension wire before stretching fabric and attach to each post with ties. Secure tension wire to fabric with 12-1/2 gauge [0.0985"] hog rings 24" on center.
- H. Top rail: Install lengths, 21'. Connect joints with sleeves for rigid connections for expansion/contraction.
- I. Manual Gates: Install gates plumb, level and secure for full opening without interference. Anchor center stops in concrete. Gates to be capable of minimum 90-degree swing.
- J. Electric Gates: Install automatic gates as per manufacture requirements, including all operators, wiring, switching, etc. Provide siren activators for all automatic gates for city fire department truck emergency access.

3.3 CHAIN LINK FABRIC INSTALLATION

- A. Fabric: Install fabric on field side of posts except where indicated on plans and attach so that fabric remains in tension after pulling force is released. Leave no space between finish grade and bottom selvage. Attach fabric with wire ties to line posts at 15" on center and to rails, braces, and tension wire at 24" on center.
- B. Tension (stretcher) bars: Pull fabric taut; fasten to posts per manufacturer's recommendations.

3.4 ACCESSORIES

- A. Tie wires: Bend ends of wire to minimize hazard to persons and clothing.
- B. Fasteners: Install nuts on side of fence opposite fabric side for added security.

3.5 CLEANING

- A. Clean up debris and unused material, and remove from the site.

END OF SECTION