SECTION 02830 - CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes fence framework, fabric, and accessories; excavation for post bases; concrete foundation for posts, and center drop for gates; and manual gates and related hardware.

1.2 REFERENCES

A. ASTM A123 - Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products.

B. ASTM A153 - Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

C. ASTM F567 - Installation of Chain-Link Fence.

D. ASTM F669 - Strength Requirements of Metal Posts and Rails for Industrial Chain Link Fence.

E. ASTM F1083 - Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures.

F. Chain Link Fence Manufacturers Institute (CLFMI) - Product Manual.

1.3 SYSTEM DESCRIPTION

A. Fence Height: As indicated on Drawings.

B. Line Post Spacing: Equal intervals between terminal, angle, corner, and gate posts, and not more than 10'-0" apart measured from center to center of posts.

1.4 SUBMITTALS

A. Manufacturer qualifications.

B. Product Data: Provide data on fabric, posts, accessories, fittings and hardware.

C. Shop Drawings: Indicate plan layout, spacing of components, post foundation dimensions.

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with ASTM F567.

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.7 WARRANTY

A. Special Warranty: Manufacturer's standard form in which Installer agrees to repair or replace components of chain-link fences and gates that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, deterioration of metals, metal finishes, and other materials beyond normal weathering.
2. Warranty Period: Five years from date of Substantial Completion.

1.8 PRE-INSTALLATION CONFERENCE

A. Conduct conference at project site in compliance with requirements in Division 1 Section "Project Coordination."

B. Review product requirements and installation methods.

C. Review field and substrate conditions, and coordinate sequencing with adjacent work.

PART 2 - PRODUCTS

2.1 CHAIN-LINK FENCE FABRIC

A. General: Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage knuckle or twist. Comply with CLFMI Product Manual and with requirements indicated below:

1. Steel Wire Fabric: Wire with a diameter of 0.120 inch (3.05 mm).

a. Mesh Size: 2 inches (50 mm).
b. Zinc-Coated Fabric: ASTM A 392, Type II, Class 1, 1.2 oz./sq. ft. (366 g/sq. m).

2.2 FENCE FRAMING

A. Posts and Rails: Comply with ASTM F 1043 for framing, including rails, braces, and line; terminal; and corner posts. Provide members as sized on drawings with wall thickness according to ASTM F 1043 based on the following:

1. Light Industrial Strength: Material Group IC-L, round steel pipe, electric-resistance-welded pipe.
2. Horizontal Framework Members: Intermediate, top and bottom rails complying with ASTM F 1043.
3. Brace Rails: Comply with ASTM F 1043.
4. Metallic Coating for Steel Framing: Type A zinc coating.

2.3 TENSION ROD

A. Metallic-Coated Steel Rod: Steel rod with tread at end for turnbuckle, with the following metallic coating:

1. Type II, zinc coated with minimum coating weight matching chain-link fabric coating weight.

2. Size as indicated on drawings.

2.4 SWING GATES

A. General: Comply with ASTM F 900 for gate posts and single/double swing gate types.

B. Pipe and Tubing:

1. Zinc-Coated Steel: Comply with ASTM F 1043 and ASTM F 1083; protective coating and finish to match fence framing.
2. Gate Posts: Round tubular steel.
3. Gate Frames and Bracing: Round tubular steel.

C. Frame Corner Construction: Welded.

D. Hardware:

1. Hinges: 180-degree inward.

2. Latches permitting operation from both sides of gate with provision for padlocking accessible from both sides of gate.

G. Tension Strap: Mild steel flats not less than 3/16" x 3/4".

H. Tie Wire: Aluminum alloy steel wire.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install removable framework, fabric, accessories and gates in accordance with ASTM F567.

B. Place fabric on outside of posts and rails.

C. Set removable intermediate, terminal and posts plumb, in pipe sleeve installed in concrete footings with top of footing one inch above finish grade. Slope top of concrete for water runoff.

D. Line Post Footing Depth Below Existing Finish Grade: All fence post concrete footing shall be as indicated on drawings. Align posts and set plumb and true. In bituminous surfaced areas, cover top of concrete footings with seal coat. Remove all cement from exposed pipe surfaces while cement is still soft.

E. Corner and Terminal Post Footing Depth Below Existing Finish Floor: As indicated on Drawings.

F. Brace corner post to adjacent line post with horizontal center brace rail and diagonal truss rods.

G. Provide top rail through line post tops and splice with 6 inches long rail sleeves.

H. Do not stretch fabric until concrete foundation has cured 28 days.

I. Stretch fabric between terminal posts.

J. Position bottom of fabric 2 inches above existing finished grade.

K. Fasten fabric to top rail, line posts, braces, and bottom tension wire with tie wire at maximum 15 inches on centers.

L. Attach fabric to end, corner, and gate posts with tension bars and tension bar clips.

M. Install bottom tension rod stretched taut between terminal posts.

3.2 ERECTION TOLERANCES

A. Maximum Variation From Plumb: 1/4 inch.

B. Maximum Offset From True Position: 1 inch.

END OF SECTION 02830