SPECIFICATIONS FOR:
ORNAMENTAL FENCE INSTALLATION
SHPEEN HALL ROWAN UNIVERSITY PROJECT # 70824

GENERAL:
It is the intention and meaning of these specifications to secure the construction, including all labor, material and other requirements for the installation of ornamental fencing at Shpeen Hall, Rowan University.

SCOPE OF WORK:
Install new ornamental fence to replace existing chain link fence (approximately 715 linear feet) and one gate as outlined in the specifications provided. Note: specifications take precedence over drawings.

‘Or Equals’- If or equals are offered, forward literature describing product with bid along with the corresponding credit for the substitution. The University is the sole determiner of any ‘or equal’ submission’s validity and acceptance.

Contractor Use of Site & Premises:
Contractor shall limit use of the premises for work and storage to minimize their impact on the University.

Contractor shall assume responsibility for protection and safekeeping of products and materials stored on site.

Contractor shall move any stored products under contractor’s control which may interfere with the operation of the owner.

Contractor shall repair any damage caused by the construction operations and take all precautions necessary to protect existing work in place.

Contractor shall confirm location of existing utilities on site as required to avoid damage to utilities during construction.
**Coordination/Installation:**

Installation shall be made in a workmanlike manner by skilled mechanics experienced in erection of this type of fence.

It is recommended that the contractor examined the site prior to submitting a bid in order to have informed himself/herself of all existing conditions affecting his/hework and to field verify the actual linear feet required.

**Submittals:**

Provide product data for all materials outlines in the drawings and specification.

Submit a complete list of major products proposed for use including the name of the manufacturer, trade name and model number of each product.

For products specified only by referenced standards, give the manufacturer, trade name, model or catalog designation and performance standards.

**Concrete:**

Concrete work includes all footings as required by contract drawings and specifications.

Footage size minimum 36” x 12” or as required by the fence manufacturer.

Design the mix to produce standard weight concrete with a compressive strength of 4,000 PSI, minimum at twenty-eight (28) days.

The concrete for the base of posts shall be rounded below grade to shed water away from posts. The shape of such crown shall be similar for all posts. The concrete must be constructed two inches (2”) below the finished grade.

**Fencing:**

Fencing consists of the furnishing and setting of ornamental fence as outlined in the specifications and drawings.

**Materials:**

All fence materials and fabrications shall be those manufactured by Security Fence Manufacturing and Supply Company, Incorporated, Bladensburg, Maryland or approved equal.

The tubing for fence pickets, rails and posts shall be manufactured from coil steel having yield strength of 45,000 PSI and tensile strength of 58,000 PSI. The steel shall be pregalvanized to meet the requirements of ASTM A513 with a minimum zinc coating weight of .90 once per square foot (to meet the requirement of ASTM A525-G90).
All primary components of Property Guard™ (pickets, rails, posts, gates and caps) shall receive three (3) stage pretreatment to clean and prepare the surface for finish coating.

1st stage: iron phosphate surface pretreatments to clean and promote adhesion

2nd stage: clean water rise

3rd stage: non-chromate conversion coating to seal the surface and provide additional corrosion protection.

Finished color coating of polyester power applied by the electrostatic spray method to a thickness of 2-4 mils and baked at 450-500° until cured.

Rails shall be 1-1/2 by 1-3/8” by 1-1/2” “U” channel steel 11 gauge weighing 2.21 pounds per foot with square hold punched every 5” on center to allow pickets to pass through.

-Pickets – 1” square – 16 gauge
-Line Post – 2.5” x 2.5” – 12 gauge
-Gate Post – 4” x 4” – 12 gauge

The color shall be black.

All fittings, accessories and fasteners shall be polymer coated to match fence system.

Fasteners shall be aluminum drive rivets prior to polymer coating. The fasteners shall have a pullout minimum from 500 to 700 pounds. Steel pop rivets (SD-54-BS) shall have ultimate shear strength of 2,100 pounds and a tensile strength of 1.325 pounds.

Post caps shall be pressed steel polyester coated and mechanically attached to the posts.

Rail posts brackets shall be malleable cast iron per ASTM A47 Grade 32510 hot dipped galvanized per ASTM A48.

All gates and gate hardware shall be supplied in accordance with the manufacturer’s standard procedures.

Swing gates shall be supplied with the same cross-section as the fence rails. Gate pickets shall match fence section. Gate frames shall be welded.

Hinges shall be steel. Post (male) and gate frame (female) hinges shall be manufactured to allow a 90° opening of the gate.

Latch for double swing gates shall be plunger bar type and shall permit operation from each side of gate with padlock eye as integral part of the latch.
**Reference Standards:**

ASTM A526 specification for steel sheet, zinc coated (galvanized) by the hot dip process, commercial quality.

ASTM A513 specification for electric resistance welded carbon and alloy steel mechanical tubing.

ASTM B117 standard test method of salt spray (fog) testing.

**Installation:**

Upon receipt at job site, all materials shall be checked to insure that no damage occurred during handling or shipping. If polyester coating is damaged during installation, the contractor shall repair or replace the material at his/her own expense.

Set fence posts at 8’ maximum on center. Set gate posts for gate openings as specified on the construction plans.

Install all posts and sections plumb and level in accordance to plans in a workmanlike manner.

**Warranty:**

Contractor shall provide a one (1) year written warranty for material and workmanship. Contractor shall also provide a manufacturer’s ten (10) year warranty.

**END OF SPECIFICATION**