

## SECTION 03 4900

### PRECAST FENCING

#### PART 1 – GENERAL

##### 1.1 SUMMARY

- A. Includes But Not Limited To:
  - 1. Furnish and install precast fencing elements as described in Contract Documents.
  - 2. Furnish and install concrete system for fencing.
- B. Related Requirements:
  - 1. Section under 03 3053: miscellaneous cast-in-place concrete

##### 1.2 REFERENCES

- A. Reference Standards
  - 1. ASTM International
    - a. ASTM C33/C33M-08, 'Standard Specification for Concrete Aggregates.'
    - b. ASTM C150-07, 'Standard Specification for Portland Cement.'

#### PART 2 – PRODUCTS

##### 2.1 PERFORMANCE

- A. Capacities of glass fiber reinforced concrete fencing panel
  - 1. min. of 3,500 psi concrete
  - 2. Ultimate tensile strength of glass fiber reinforced concrete: 1,000-1,700 psi.
  - 3. min flexural load of gfrc fencing panel: 35lbs/sqft
  - 4. Min. wind load capacity of gfrc fencing panel: 120 mph exposure B.

##### 2.2 MANUFACTURED UNITS

- A. Materials
  - 1. Glass Fiber Reinforced Concrete with Expanded Polystyrene Foam Core Fencing Panels
    - a. Cement ASTM C150, Type II
    - b. Glass fibre: Alkali resistance glass fiber(min. 3.75% by volume)
    - c. Expanded Polystyrene foam core
    - d. Min. 5/16" thick GFRC skin that completely encapsulates foam core
    - e. Fence panel dimensions: 72" tall x min. 102" long x min. 4.25" thick at edges
  - 2. Columns(min. 9' center spacing)
    - a. Solid precast with minimum compressive strength of 3000 psi
    - b. 4-6% air entrainment
    - c. Dimension of column (min. 12"x72"x min. 10")
  - 3. Column Caps
    - a. Dimension of cap(min. 14" x min. 12" x 4" tall)
    - b. Cap to have brick tie cast in to bottom of cap that is used for mechanical attachment to column grout cell.
- B. Approved manufacturers
  - 1. RhinoRock Concrete Fencing: PO Box 971178 Orem, Utah **(801) 735-8877** [www.rhinorock.com](http://www.rhinorock.com)
  - 2. Others if approved prior to bidding

## **PART 3—EXECUTION**

### **3.1 INSTALLATION**

#### **A. Footing**

1. min. 14" diameter round pier footing minimum depth of 36" or as recommended by local engineer.
2. min. 3000 psi concrete
3. place one 3"x4" metal tube either galvanized with min. 50 micron coating or 6061 aluminum with minimum wall thickness of 0.10" into min. 3000 psi concrete pier footing. May be wet mixed concrete or may be dry bagged.

#### **B. Fence Installation**

1. set fence panels level within 1/4" over 48"
2. set columns plumb within 3/8" over 72"
3. set caps level and ensure that brick tie cast into column cap is set into grouted column cell while grout in plastic state to ensure mechanical connection between column and cap.

#### **C. Structural Screws**

1. All structural fasteners must be provided by Rhinorock.

#### **D. General**

1. Fence height from grade to be 69-72"
2. Both sides of fence to have same texture

Installation video is available at [www.rhinorock.com](http://www.rhinorock.com)