

FRP BAFFLE WALL

PART 1 GENERAL

1.1. SUBMITTALS

A. Shop Drawings

- i. Manufacturer's catalog information, descriptive literature, specifications, and identification of materials of construction, including resins and glass fiber content and layout for FRP constructions.
- ii. Detailed drawings showing equipment fabrication, dimensions, method of attachment including number, locations and size of fasteners and weights of fabrications.
- iii. Manufacturer's recommended baffle dimensions, deflection angle and location for each application.

B. Quality Control Submittals

- i. Manufacturer's Certificate of Compliance.
- ii. Special shipping, storage and protection and handling instructions.
- iii. Manufacturer's written/printed installation instructions.
- iv. Must be manufactured in the U.S.A.
- v. A list of ten installations of comparable size in operation for at least five years.
- vi. Certified test reports of the physical and mechanical properties of the product.

1.2. WARRANTY

- A. Manufacturer shall warrant the Baffle Walls to be free of defects in materials and workmanship for a period of five years after the date of Substantial Completion.

1.3. COORDINATION

- A. Manufacturer shall coordinate the Baffle Wall design, configuration, and installation requirements with adjacent mechanisms (if any) within the same structure.

PART 2 PRODUCTS

2.1. MANUFACTURERS

- A. Materials, equipment, and components in this section shall be the products of:

NEFCO, Incorporated, 8895 North Military Trail, Bldg. C, Suite 100,
Palm Beach Gardens, FL 33410 (561-775-9303)

2.2. DESIGN

- A. The design of FRP products including connections shall be in accordance with governing building codes and standards as applicable.

- B. Structural Members shall be designed to support all applied loads. Deflection in any direction shall not be more than L/100 of span for structural members. Connections shall be designed to transfer loads.
- C. Baffle Panels to be a minimum of 1/4" thick.
- D. Baffle Panel deflection shall not be more than L/90 of span.
- E. Hardware
 - 1. All fasteners, anchors, and structural hardware shall be stainless steel or FRP.
 - 2. All connections of Baffle Wall Panels to fiberglass columns or super structure shall be as shown on the approved shop drawings.

2.3. MATERIALS

- A. Each baffle panel shall be manufactured by the pultrusion process utilizing polyester or vinyl ester resin. ANSI/NSF-61 certified for potable water applications (as required). A synthetic surface veil shall be the outermost layer covering the exterior surface.
- B. FRP Baffle Panels shall possess the following minimum physical properties:

<u>Property</u>	<u>Test</u>	<u>Minimum Value</u>
Tensile Strength	ASTM D-638	52,000 psi
Flexural Strength	ASTM D-790	66,000 psi
Flexural Modulus	ASTM D-790	2.4x 10 ⁶ psi
Barcol Hardness	ASTM D-2853	50
Water Absorption	ASTM D-570	0.2%
Notched Izod (LW)	ASTM D-256	25

- C. Materials used in the manufacture of the FRP products shall be raw materials in conformance with the specification.
- D. All materials shall be of the kind and quality specified.
- E. All FRP products noted shall be manufactured using a pultruded process utilizing _____ (select polyester or vinyl ester) resin, flame retardant (if required) and ultraviolet (UV) inhibitor additives. A synthetic surface veil shall be the outermost layer covering the exterior surface.
- F. If required, after fabrication, all cut ends, holes, and abrasions of FRP items shall be sealed with a compatible resin coating.
- G. FRP products exposed to weather shall contain an ultraviolet inhibitor.
- H. All exposed surfaces shall be smooth and true to form.

PART 3 EXECUTION

3.1. INSTALLATION

- A. The installation contractor shall field verify existing dimensions and install the baffle wall in accordance with the contract drawings, approved shop drawings and manufacturer's recommendations. Contractor to provide footings or grout pads for structure if required.
- B. With approval from NEFCO, field cutting of baffle panels will be allowed to accommodate obstructions.
- C. All the fasteners required for installation shall be supplied by the baffle wall manufacturer. The baffle wall shall be attached to the surrounding concrete structure using adequate anchors given the application and/or working conditions.

END OF SECTION