

**SECTION 10 71 00**  
**WATER INFLATED FLOOD BARRIERS**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 10 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. This Section includes the following:
  - 1. Water inflated flood barriers.

**1.3 DEFINITIONS**

- A. Freeboard – The amount of an installed water-inflated barrier above the surface of the water being blocked.
- B. Internal Baffle System – A device used to restrict movement of a water-inflated flood barrier parallel to a force exerted on the barrier.

**1.4 SUBMITTALS**

- A. Product Data: For each type of product indicated include material descriptions, dimensions of individual components and profiles, and accessories for each flood barrier.
- B. Property Assessment Sheet: Customer to complete, sign and submit. Include all requested customer information, project information, and property site conditions.
- C. **[LEED Submittal:]**
  - 1. **[Product Data for SS Credit 5.1: For conserving existing natural areas.]**
  - 2. **[Product Data for ID Credit 1: [For innovative approach to dewatering site.][For exemplary performance in dewater site.]]**

**1.5 WARRANTY**

- A. Manufacturer's standard form in which manufacturer agrees to repair or replace flood barrier components that fail in materials or workmanship within specified warranty period.

**1.6 QUALITY ASSURANCE**

- A. ASTM Compliance:
  - 1. Comply with ASTM D-3776 for weight of PVC material.
  - 2. Comply with ASTM D 751 for tensile strength, tear strength and adhesion.

## PART 2 - PRODUCTS

### 2.1 WATER INFLATED FLOOD BARRIERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide WIPP® product as manufactured by Hydrological Solutions, Inc. or equal.
- B. General: Self-contained, UV protected, field repairable, welded seam, single tube with inner restraint baffle(s)/diaphragm(s) stabilization system, threaded fill and drain ports, and end lifting loops. The water-inflated dam must be capable of stand-alone installation without any external mechanical or gravitational stabilization devices and maintain mechanical stability in addition to providing anti rolling when exposed to uneven hydrostatic pressure from either side.
- C. Dam bladder and lifting loops: Heavy gauge, 30 oz/sq. yd., PVC fabric reinforced with polyester.
- D. Fill Ports: 3/4-inch, 2-inch I.D., threaded with threaded plugs or 4-inch I.D., industrial grade, with threaded plugs.
- E. Drain Ports: 2-inch I.D., threaded with threaded plugs or 4-inch I. 8-inch I.D. industrial grade with threaded plugs
- F. Overflow pressure release fitting: 3/4-inch, 2-inch I.D threaded with threaded plugs
- G. Internal Baffle: Perforated PVC **[Single][Double]** baffle system.
- H. Accessories:
  - 1. Field repair kit: Vinyl adhesive and patch material.
  - 2. **[Fill Pipes.]**
  - 3. **[Overflow stand pipe]**
  - 4. **[Protective membrane.]**
- I. Performance Ratings: Tested and rated according to ASTM D 751.
  - 1. Tensile Strength: 700x650 (±30) lbs./in.
  - 2. Tear Strength: 170x140 (±20) lbs.
  - 3. Adhesion: 20x17 (±2) lbs./in.
- J. Cold Crack and Low Temperature Flexibility: -22°F per MIL-C-20696.

## PART 3 - EXECUTION

### 3.1 SHIPPING & STORAGE

- A. Small dams shall be packed in boxes for shipping
- B. Large dams shall be packaged on standard pallets for shipping and storage.

### 3.2 EXAMINATION

- A. Examine dams for shipping damage and other conditions affecting performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.3 INSTALLATION

- A. Place, maintain, and remove flood barriers in the locations **[that provide suitable access to the area needing protection as required and defined by the drawings.] [noted on the drawings.]**
- B. Locate flood barriers so as to cause the least possible interference with traffic and objects that could damage the flood barriers, the locations and extent of such flood barriers will be subject to the approval of the proper Authorities.
- C. Install individual units together by overlapping the end of the units the specific length which will create a watertight connection.
- D. Install and remove flood barriers in accordance with manufacturer's recommendations.
- E. Do not install flood barriers on top of ice or snow.
- F. Install flood barriers where they will be exposed to a minimum of 25% freeboard (amount of barrier above water level). Increase freeboard as required by manufacturer for exposures to high water velocities, slick soil conditions or other relevant hydrostatic conditions. Do not stack flood barriers.
- G. Construct flood barriers so as to keep the protected area free from water. Any and all damage caused by the failure of a flood barrier from any cause whatsoever, shall be the responsibility of the customer.
- H. Remove debris from the area of installation to minimize the potential of puncturing the flood barrier.

### 3.4 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to train Customer's representative on the installation and operation of the flood barriers.
- B. Keep away from heat, welding, open flames, and sparks.
- C. Provide adequate ventilation when using vinyl cement for patching.

**END OF SECTION 10 71 00**