



**DEVELOPMENTAL SPECIFICATIONS
FOR
FLOATING SILT CURTAIN**

**Effective Date
February 18, 2014**

THE STANDARD SPECIFICATIONS, SERIES 2012, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE DEVELOPMENTAL SPECIFICATIONS AND THEY PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

12047.01 DESCRIPTION.

Floating Silt Curtains are temporary control measures used for containing suspended sediment in an area of open water. Open water is described as any perennial water course or water body with 6 inch (150 mm) or greater depth. Floating Silt Curtains consist of fabric fastened to a flotation carrier and weighted along the bottom edge. Two types of Floating Silt Curtains may be utilized:

A. Floating Silt Curtain (Containment).

Floating Silt Curtain (Containment) is intended to capture all sediment entering the water during construction activities and the sediment is to be ~~completely~~ removed with the floating silt curtain upon completion of the work.

B. Floating Silt Curtain (Hanging).

Floating Silt Curtain (Hanging) is intended to create a static water area isolated from the water course or water body. Sediment entering the static water area is isolated and settles out of suspension within the area of the floating silt curtain.

12047.02 MATERIALS.

- A. Floating Silt Curtains shall meet the following minimum requirements and manufacturer recommendations:

Table DS-12047.02-1: Floating Silt Curtain Requirements

Property	Value
Curtain Fabric Material Type	Impermeable vinyl-coated nylon
Mass Per Square Yard (m ²)	22 oz. (0.75 kg)
Grab Tensile Strength ASTM D 4632 *	500 lbs. (2.2 kN)
Flotation	8 inch (200 mm) diameter marine quality expanded polystyrene
Net Buoyancy, Per Foot (m)	20 lbs. (300 N)
Top Load Carrying Components	Fabric plus 5/16 inch (8 mm) galvanized steel cable 9800 9100 lbs. (40 kN) minimum break strength
Ballast, Lbs. Per Foot (Kg/m), Minimum	1.4 1.0 lbs./foot (1.6 1.5 kg/m) enclosed 5/16 inch (8 mm) galvanized chain
Connection Between Sections	Aluminum collar reinforced quick disconnects

* Minimum average roll value.

- B. Design connecting devices to prevent silt from permeating through the connection and at specified strength to prevent ripping out.

12047.03 CONSTRUCTION.

A. General.

1. Construct Floating Silt Curtain as shown in the contract documents and to the expected water depth plus wave height.
2. On U.S. Coast Guard regulated waters or other navigable waterways, furnish buoys to mark the ends and special areas for visibility. Place buoys as required for navigational purposes.
3. Floating Silt Curtain shall be installed adjacent to planned work area prior to soil disturbance. The curtain shall be installed along the complete work area which is planned to be disturbed and to points 20 feet (6 m) beyond the limits of the area of disturbance and tied into the existing soil bank.
4. Floating Silt Curtain (Containment) installations will require both a containment floating silt curtain and a hanging floating silt curtain. Install the two floating silt curtains as shown in the contract documents with the containment silt curtain closest to shore and the hanging silt curtain 10 feet (6 m) outside the containment silt curtain.
5. Do not discharge water pumped from the work site into an area of unrestrained open water.
6. Control surface drainage prior to entry into the water by installation of appropriate erosion control measures on land.

B. Floating Silt Curtain (Containment).

1. Install Floating Silt Curtain (hanging) prior to installation of Floating Silt curtain (Containment).
2. Shape water body soil bank to enable installation of Floating Silt Curtain (Containment) as detailed in the contract documents.
3. Install Floating Silt Curtain (Containment).
4. Anchors shall include a chain having a minimum weight of 3.3 3.0 pounds (4.5 1.4 kg) per yard (meter) and anchor weights as needed to hold curtain down.
5. Inspect the containment floating silt curtain after heavy winds or major rain storms (1 inch (25 mm)) to check for damage and depth of silt on the bottom of the silt curtain. If 2 inches (50 mm) or more of silt is present on top of the silt curtain, remove the silt curtain and silt as described below and reinstall floating silt curtain.
6. Upon completion of the work or when clean-out of containment silt curtain is required, remove containment silt curtain and contained silt by pulling the top of curtain towards land until it reaches the trench line. Remove entrenched fabric and pull both ends up and out of the water. Dispose of collected silt offsite at an upland, non-wetland location or as approved by the Engineer. Following removal of containment curtain, the hanging curtain shall remain in place for a minimum of 48 hours after which it can be removed, provided all work in the area being protected is completed.

C. Floating Silt Curtain (Hanging).

1. Anchors shall be a minimum of ~~40~~ 60 pounds (~~18~~ 27 kg) and located at a maximum spacing of ~~100~~ 50 feet (~~30~~ 15 m) along curtain.
2. Hanging silt curtain shall remain in place for a minimum of 48 hours after completion of work activity to allow suspended sediment to settle out after which time the silt curtain can be removed. Remove curtain in a manner that will prevent re-suspension of silt into the water.

12047.04 METHOD OF MEASUREMENT.

- A. Floating Silt Curtain, of the type specified, will be measured by length in feet (meters) furnished and installed.
- B. Clean-out of Floating Silt Curtain (Containment) will be measured by length in feet (meters) removed, cleaned, and reinstalled (if necessary) each time cleaning is required.
- C. Maintenance of Floating Silt Curtain, when directed by the Engineer, will be measured in feet (meters) for sections of curtain requiring maintenance (typically 50 foot (15 meter) sections).

12047.05 BASIS OF PAYMENT.

- A. Payment for Floating Silt Curtain (Hanging) will be the contract unit price for the length in feet (meters) of hanging silt curtain furnished and installed. Payment is full compensation for labor, equipment, and materials necessary to construct, ~~maintain~~, and remove hanging silt curtain. Upon satisfactory installation of hanging silt curtain, the Engineer may authorize partial payment not exceeding 80% of the quantity placed. Remaining quantity will be paid after Floating Silt Curtain is removed.
- B. Payment for Floating Silt Curtain (Containment) will be the contract unit price for the length in feet (meters) of containment silt curtain furnished and installed. Payment is full compensation for labor, equipment, and materials necessary to construct ~~and maintain~~ containment silt curtain.
- C. Payment for Clean-out of Floating Silt Curtain (Containment) will be the contract unit price for the length in feet (meters) of the Containment Silt Curtain removed each time cleaning is required. Payment is full compensation for labor and equipment necessary to remove and clean containment silt curtain, remove and dispose of collected silt, and reinstall containment silt curtain (if necessary). Clean-out of Floating Silt Curtain (Containment) will be paid to remove the containment silt curtain at the completion of the project.
- D. Payment for Maintenance of Floating Silt Curtain will be at the contract unit price per foot (meter) of floating silt curtain requiring maintenance, as directed by the Engineer. Payment is full compensation for labor, equipment, and materials necessary to maintain Floating Silt Curtain (Hanging and Containment). Maintenance includes repairs and realignment of existing curtain and labor cost when the Floating Silt Curtain is replaced due to loss or destruction. When Floating Silt Curtain is lost or destroyed, Contactor will receive additional payment based on the material invoice cost of the replacement curtain.