

ITEM # 0210306A - TURBIDITY CONTROL CURTAINS

Description: This work consists of furnishing, assembling, installing, relocating, maintaining, and removing turbidity control curtains to minimize the drift of suspended sediment within the watercourse. The layout of the turbidity control curtains shall be as indicated on the plans, permits or as directed by the Environmental Scientist from the Office of Environmental Planning (OEP) or their authorized delegate.

Materials: The Contractor shall use Type 3 Permeable Turbidity Barriers when working within tidally influenced waters.

Length: The length of the turbidity control curtain shall be as specified in the plans, permit.

Fabric: Turbidity control curtains fabric shall consist of 22 oz./yd² Nylon reinforced Vinyl Fabric (PVC), with UV inhibitors. The material shall have a tensile strength of not less than 200 lbs. when measured lengthwise or crosswise.

Skirt Depth: The depth of the skirt shall be measured to maintain a 1-foot offset above the bottom of the watercourse at all locations during high tide.

Color: The color of the turbidity control curtains shall be yellow.

Seams: All horizontal seams shall be 100% heat welded and all vertical seams shall be 100% RF welded.

Flotation Units: The flotation unit shall be a 12 inch polystyrene float with a buoyancy of 50 lbs./ft² and shall be capable of keeping the turbidity control curtain at a minimal elevation of 3 inches above the water line.

Top Tension Cables: The top tension cable shall be 5/16 inch galvanized steel cable placed on each side of the curtains. The breaking strength of the tension cable shall be 10,000 lbs. per cable with a total breaking strength of 20,000 lbs.

Bottom Ballast Chain: The bottom ballast chain shall be 3/8 inch galvanized steel chain placed at the bottom of the skirt. The chain shall be finished on both ends with stress plates with a 1-ton hook on one end and ring on the other end. The breaking strength shall be 10,600 lbs. and the weight shall be 1.50 lb./ft.

Fasteners: The top 18 inches shall consist of marine grade aluminum slide connectors and grommets for lacing from below the connector to the bottom edge of skirt. The edges shall be reinforced with 5/8 inch poly rope with a minimum breaking strength of 800 lbs.

Anchors: The anchor shall consist of a leader chain, nylon rope, heavy duty marker buoy and 6 feet of painted line. The anchor can be a grappling hook, plow or fluke-type that digs into the watercourse bottom/harbor. The nylon rope shall act as an anchor line between the anchor and buoy. The anchor line shall have enough slack to allow the barrier to float freely with tidal changes

without pulling the curtain below the water surface. The anchors shall be placed every 50 to 100 feet. Alternate anchoring methods such as heavy concrete weights, driven pilings, or stakes may be used, if approved prior to use by the Environmental Scientist or their authorized delegate.

Product Data: Prior to any watercourse disturbance within the Project limits, the Contractor shall submit to the Environmental Scientist for review and approval, through the Engineer, Product Data for the Type 3 Permeable Turbidity Barriers to be used. Within 30 days of receipt of the submittal, the Engineer will notify the Contractor whether the submittal is approved, rejected or requires modifications. If any part of the proposed barriers are not approved, the Contractor shall promptly make any necessary changes and re-submit for approval. The proposed barriers must be approved in writing prior to beginning any in-water work on the Project.

Construction Methods: When assembling and installing turbidity control curtains, the Contractor shall follow the directions of the manufacturer.

Unless otherwise directed by the Environmental Scientist or their authorized delegate, the Contractor shall begin installation at high tide from a shoreline anchorage and work with the current in a downstream direction.

The turbidity control curtains shall form a continuous vertical and horizontal barrier able to contain suspended sediment or turbidity within the watercourse. The bottom skirt shall be suspended a minimum of 12 inches above the bottom of the watercourse for the entire length of the turbidity curtains at high tide.

Installation of Turbidity Curtains: The turbidity control curtains shall be floated into position, attached to the anchor lines, and then unfurled.

The Contractor shall securely attach curtain panel ends together using rope lashings. The top lashing shall be securely tied to the anchor line.

The Contractor shall place the anchors such that the turbidity control curtains remain in the proper location and none of the flotation devices are pulled under the water surface. If directed by the Engineer, the Contractor shall supply and place additional anchorage.

Maintenance of Turbidity Curtains: Throughout the Project duration, the Contractor shall maintain the turbidity control curtains so that no sediment caused by the Project enters the watercourse beyond the limits of the turbidity control curtains.

Turbidity control curtains damaged prior to installation, during installation, or during the life of the Contract shall be repaired or replaced to the satisfaction of the Environmental Scientist or their authorized delegate.

Removal of Turbidity Curtains: The turbidity control curtains shall remain in place until all regulated in-water work for the Project is complete.

When directed by the Environmental Scientist or their authorized delegate, the turbidity control curtains shall be furled in place, then released from the anchors and towed out of the water. The turbidity control curtains and all materials incidental to the assembly of the turbidity control curtains shall be removed in such a manner as to minimize turbidity within the watercourse.

The turbidity control curtains and related components shall be removed from the Project and shall become the property of the Contractor after removal.

Method of Measurement: This work will be measured for payment by the actual number of linear feet of turbidity control curtains installed and accepted.

Basis of Payment: Payment for this work will be made at the Contract unit price per linear foot of “Turbidity Control Curtains,” completed in place, which shall include all materials, equipment, tools and labor incidental to the furnishing, assembling, installing, maintaining, relocating and removing of the turbidity control curtains.

Pay Item	Pay Unit
Turbidity Control Curtains	l.f.