

ITEM 11209.0501 M - REINFORCED SILT FENCE

DESCRIPTION

This work shall consist of furnishing and installing Reinforced Silt Fence, as well as performing any incidental and appurtenant work required for a complete job, as shown on the Contract Documents or as directed by the Engineer.

MATERIALS

1. **Construction (Limiting) Fence:** The construction (limiting) fence shall be a welded wire fence with a minimum height of 1.8 meters.

Wire fabric shall be of No. 6 gauge wire with a mesh of approximately 50 mm. The upper edge of the fabric shall be twisted and barbed.

Post/Rails shall have the following nominal outside diameters and minimum weights per linear meter (foot):

- (a) Line posts 63.5 mm @ 5.51 kilograms (2.5" @ 3.7 lbs)
- (b) End and corner posts 76.2 mm @ 8.63 kilograms (3" @ 5.8 lbs).
- (c) Middle rails 41.28 mm @ 3.42 kilograms (1 5/8" @ 2.3 lbs).

2. **Filter Fabric:**

The filter fabric shall be purchased and delivered in a continuous roll and cut on-site to the length of the barrier(s) to avoid the use of joints. Dimensions of the roll shall be 914 mm by 30 meters in length. The filter fabric shall meet NYSDOT specifications on same, and shall be fabric #2130 as manufactured by Mutual Industries, Inc., 707 W. Grange Street, Philadelphia, PA, 19120; Tel. # (215) 927 – 6000, or approved equal.

3. **Hay Bales:** All hay bales shall be of straw, and shall be standard sized bales as shown in the Contract Plans. All bales shall be fiber-bound. No string bound hay bales are accepted.

CONSTRUCTION DETAILS

1. Upon furnishing and installing the approved reinforced silt fence but prior to commencing any other work on-site, the Contractor shall notify the Engineer and arrange for an on-site inspection.
2. The reinforced silt fence shall be maintained in good condition and repaired as necessary by the Contractor during the construction and post-construction / site stabilization phases as directed by the Engineer.
3. The reinforce silt fences shall be inspected periodically (at least once per week), or as directed by the Engineer. Any required repairs shall be made immediately.

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4. Filter fabric shall be inspected at least once per week and immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately. Should the fabric decompose or become ineffective prior to the end of the expected usable life while the barrier is still necessary, the fabric shall be replaced promptly.
5. Hay bales shall be inspected at least once per week and immediately after each rainfall and at least daily during prolonged rainfall. Close attention shall be paid to the repair of damaged bales, end runs and undercutting beneath bales. Necessary repairs to barriers or replacement of bales shall be accomplished promptly. Sediment deposits should be removed after each rainfall. Sediment deposits must be removed when the level of deposition reaches approximately 150 mm (one-half foot) deep in front of the hay bale. Any sediment deposits remaining in place after the hay bale barrier is no longer required shall be dressed to conform to the existing grade.
6. The construction (limiting) fence shall be located where indicated on the contract plans. The fence shall be adjusted to avoid interference with trees.
7. The fence shall be constructed of wire fabric fastened to the middle rails and to the vertical line posts.
8. Line posts shall be spaced not more than 1.8 meters on centers. Posts shall be securely set in the ground. Line posts shall extend at least 1.2 meters below finished grade. Post locations shall be adjusted to avoid tree roots as appropriate.
9. The filter fabric shall be securely fastened to vertical line posts, wire fabric and middle rails by means of ties and spaced not more than 305 mm apart on rails and not more than 355 mm apart on line posts. The fabric shall be situated between the wire fabric and staked hay bales. When joints are necessary, filter cloth shall be spliced together only at a line post, with a minimum 150-mm overlap, and securely sealed.
10. A trench shall be excavated approximately 100 mm wide and 100 mm deep along the line of posts and up-slope from the barrier. The filter fabric shall be extended into the trench, the trench backfilled, and the soil compacted over the filter fabric.
11. Bales shall be placed in a single row, with ends of adjacent bales tightly abutting one another. Bales shall be placed up-slope of the filter fabric, and shall at all times run parallel to the construction (limiting) fence and abut the filter fabric.
12. Hay bales shall be installed so that bindings are oriented around the sides rather than along the tops and bottoms of the bales in order to prevent deterioration of the bindings.
13. The hay bale barrier shall be entrenched and backfilled. A trench shall be excavated to fit the width of a bale and the length of the proposed barrier to a depth of 100 mm. After the bales are staked and chinked, the excavated soil shall be backfilled against the barrier. Backfill soil shall conform to the ground to the ground level on the downhill side and shall be built up to 100 mm against the uphill side of the hay bale barrier.

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14. Each bale shall be securely anchored by at least two stakes or steel reinforcing bars driven through the bale. The first stake in each bale shall be driven toward the previously laid bale to force the bales together. Stakes or reinforcing bars shall be driven deep enough into the ground to securely anchor the bales.
15. The gaps between bales shall be chinked (filled by wedging) with straw to prevent water from escaping between the bales. The Contractor shall scatter loose hay over the area immediately uphill from the straw bale barrier to increase barrier efficiency.
16. Siltation fences and hay bales shall be removed when they have served their useful purpose, but not before the up-slope area has been permanently stabilized.

METHOD OF MEASUREMENT

This item will be measured by the total number of linear meters of Reinforced Silt Fence installed (excluding the Reinforced Silt Fence installed as part on the Sediment Trap(s)) and maintained in accordance with the plans, specifications and directions of the Engineer. The construction (limiting) fence, filter fabric and staked hay bales which together make up the reinforced silt fence shall be measured as one unit.

BASIS OF PAYMENT

The unit price bid for Reinforced Silt Fence shall include the cost of all labor, materials and equipment, and incidental expenses necessary to complete the work in accordance with the plans and specifications and to the satisfaction of the Engineer.