

Instructions

Silt Fence Standard Detail

General Description

This standard detail is a potential add on sheet to a set of construction drawings for projects that will involve large areas of disturbed land. These are notes and specifications for typical installations of silt fences around construction sites with significant areas of disturbance. ASTMs are referenced. They are common industry standards. The notes cover the installation, the maintenance and post construction removal of the silt fence and the silt that will have accumulated over the project duration. Combined with silt fence location on a plan view of the project, this detail should help minimize off site environmental impacts.

The reason for possible inclusion is based on the following and the possibility that permits will be required.

US EPA under authorities in the Clean Water Act may regulate pollution discharge from point sources through the NPDES (National Pollution Discharge Elimination) system. Often the authority/responsibility to do so is addressed with state or territorial regulations. The minimum threshold is 1 acre, but some jurisdictions use a smaller area of disturbance as the requirement for permits. <http://www.gpo.gov/fdsys/pkg/FR-2014-03-06/pdf/2014-04612.pdf>

NAICS, The North American Industrial Classification System is administered by the US Census Bureau <http://www.census.gov/eos/www/naics/> . Most recent EPA rules indicate that the affected NAICS for the recent final rules are 236 and 237. 237 is defined as follows:

Sector 23 -- Construction^T

237 Heavy and Civil Engineering Construction^T

The Heavy and Civil Engineering Construction subsector comprises establishments whose primary activity is the construction of entire engineering projects (e.g., highways and dams), and specialty trade contractors, whose primary activity is the production of a specific component for such projects. Specialty trade contractors in Heavy and Civil Engineering Construction generally are performing activities that are specific to heavy and civil engineering construction projects and are not normally performed on buildings. The work performed may include new work, additions, alterations, or maintenance and repairs.

Specialty trade activities are classified in this subsector if the skills and equipment present are specific to heavy or civil engineering construction projects. For example, specialized equipment is needed to paint lines on highways. This equipment is not normally used in building applications so the activity is classified in this subsector. Traffic signal installation, while specific to highways, uses much of the same skills and equipment that are needed for electrical work in building projects and is therefore classified in Subsector 238, Specialty Trade Contractors.

Construction projects involving water resources (e.g., dredging and land drainage) and projects involving open space improvement (e.g., parks and trails) are included in this subsector. Establishments whose primary activity is the subdivision of land into individual building lots usually perform various additional site-improvement activities (e.g., road building and utility line installation) and are included in this subsector.

Establishments in this subsector are classified based on the types of structures that they construct. This classification reflects variations in the requirements of the underlying production processes.

Design Criteria and Specifics

The silt fence is specified using ASTMs as is the installation. The drawings are taken from those specifications, (ASTM D 6462 for installation, ASTM D 6461 for materials). For the silt fence to be effective as pollution control feature it is critical that it be placed properly on the site. The silt fence should be placed down slope from the area to be disturbed. It need not be at the edge of the disturbance and in fact is better located with a strip of vegetated area between the work area and the silt fence. The silt fence needs to be located on the plan view for the project, which would then reference the silt fence detail for material, installation, operation and maintenance and removal requirements.

Quantities will vary for this practice

1. Stakes or posts either 4 or 6 ft spacing, depending on the silt fence properties and installation technique. The submittal or paperwork for the silt fence is not available during the design phase, so spacing, and consequently the number of posts or stakes, is necessarily deferred until the properties of the material are available.
2. Silt fence and trenching can readily be determined from the layout in plan view showing the location of the fence. It will be in Linear Feet and is unique to each project.

Limitations

The silt fence and pollution control included in a project are efforts to minimize off site environmental impacts and address the responsibilities of the regulatory authority for review and issuance of permits before the project is submitted. There may be requirements beyond silt fence that are necessary from both a regulatory point of view and a responsible erosion control perspective. It's not possible to anticipate everything that needs to be done, but it is possible to carry a reasonable amount of information for addressing what is probably necessary to prevent offsite damages from installation of a conservation project.

Site Specific Additions

Show the silt fence on the plan view for the project. Cross reference the silt fence detail with the same note that identifies the silt fence.

Construction

The silt fence installation should be checked out to ensure the trenching and backfill are completed prior to commencement of earthwork.

Operation and Maintenance: The O & M plan for the for the silt fence, which is expected to be in place only during construction is on the standard detail sheet. This includes removal of the fence and placement of the trapped sediment. .

References: ASTM D 6442, ASTM D 6441, ASTM D 4632.