

ITEM 41

EROSION AND SEDIMENT CONTROL

1.0 DESCRIPTION. All labor, materials, fixtures, equipment, tools and services required for the installation and maintenance of erosion and sediment control measures shall be furnished and installed in compliance with the following specifications and as specified on the project plans and the Erosion Sediment Control Plan (ESC).

All properties adjacent to the site of soil-disturbing activity shall be protected to the maximum extent practicable, from soil erosion and sediment runoff and drainage, including, but not limited to private properties, natural and artificial waterways, wetlands, storm sewers, sanitary sewers and public lands. Off-site dumping, erosion and sediment control measures shall be the responsibility of the Contractor.

2.0 SUBMITTALS. The following information shall be submitted.

A. Reference Standards. Latest revisions.

1. State of Ohio Standards as set forth in the *Rainwater and Land Development Manual*, defined by the Ohio EPA.
2. Ohio Revised Code Chapter 6111 Requirements.
3. ASTM D-4632.
4. ASTM D-3786.
5. ASTM D-4833.
6. ASTM D-4533
7. ASTM D-4355
8. ASTM D-4751
9. ASTM D-4491.

B. Shop Drawings.

1. Erosion Control Plan.
2. Sequencing Plan.
3. Plan for disposal of waste material.
4. Product data for materials proposed for use.
 - a. Silt fence
 - b. Inlet protection devices
5. All applicable permits for erosion control.
6. Construction schedule for erosion control.

C. Calculations. This section is not applicable.

D. Certifications.

1. An approved Storm Water Pollution Prevention Plan (SWPPP) or approval letter from the Stark SWCD (Soil and Water Conservation District) shall be located on the site for review.

3.0 MATERIALS. Only materials approved by the SCMSD may be used for the project.

A. Silt Fence.

1. Fencing or an approved equivalent tubular knit product shall meet all requirements herein and on the contract drawings including but not limited to ASTM standards above.

B. Inlet Protection.

1. Inlet protection materials shall be in accordance with approved shop drawings and contract drawings.

4.0 EXECUTION.

A. Construction.

1. Erosion and sediment control measures shall be installed as specified in the Erosion and Sediment Control Details contained in contract drawings.
2. Install erosion and sediment perimeter controls as a first action of construction as specified by the construction sequence. Regular inspection and maintenance of all erosion and control measures shall be the responsibility of the Contractor. This shall include and is not limited to protective BMP's (Best Management Practices) for stream corridors and crossings, wetlands, site entrance, sediment traps and basins, barriers, and diversion dikes.
3. Concentrated storm water runoff shall pass through a sediment control device before exiting the site boundaries. Concentrated runoff from bare soil areas shall be diverted into a settling pond or sediment control structure, or other approved sediment barrier before leaving the site.
4. Earthen structures such as dams, basins, stream modifications and water diversions shall be seeded and mulched within seven (7) days of the completion of installation. Dams shall conform to the Ohio Dam Laws (ORC 1521.06).
5. Stabilization of critical areas within 50 feet of any stream or wetland shall be temporarily stabilized within two (2) days of disturbance if area will remain inactive for fourteen (14) days or longer. Construction vehicles shall avoid streams and the 50-foot buffer areas. If an active drainage way must be crossed by construction vehicles repeatedly during construction, a temporary stream crossing shall be constructed according to the specifications in the Ohio Rainwater and Land Development Manual. Construction of bridges, culverts or sediment control structures shall not place soil, debris and other fine particulate

material into or close to the water resource in such a manner that it may slough, slip or erode.

6. Storm sewer inlets (and sanitary) shall be protected. Sediment-laden runoff shall not enter the storm sewer system without first being filtered and/or treated. Silt fences are to be constructed in front of all headwalls and pipe inlets.
7. Re-vegetation of soil requirements: Temporary soil stabilization shall occur within seven (7) days after rough grading if the area will remain idle longer than fourteen (14) days. Any disturbed areas within 50 feet of a surface water of the State and not at final grade must be seeded within 2 days of the most recent disturbance if it will remain idle for more than 14 days. Permanent soil stabilization shall be installed within seven (7) days after final grade is reached on any portion of the site. Any areas within 50 feet of a surface water of the State and at final grade must be seeded within 2 days of reaching final grade. Permanent vegetation is a groundcover dense enough to cover 80% of the soil surface and mature enough to survive winter weather conditions.
8. Soil stockpiles shall be stabilized or protected to prevent soil loss. Stabilization shall be required if stockpiles are located within critical areas near streams or wetlands, or if determined by the Stark SWCD that sediment from stockpiles will leave the site.
9. Unstable soils prone to slipping or sloughing shall not be cleared, graded, excavated, filled or have loads imposed upon them unless the work is planned by a qualified professional engineer and installed in accordance with the ESC Plan. Cut and fill slopes should be designed to minimize erosion problems.
10. Adequate slope design includes use of rough soil surface along the face of the slope; water diversion along the top of the slope away from the face; terraces to reduce slope length; delivery of concentrated storm water flows to the base of the slope via adequate channel or pipe; and drainage for water seeps in the slope that endanger slope stability.
11. Soil shall be removed from paved surfaces and/or public roads at the end of each day in such a manner that does not create off-site sedimentation in order to ensure safety and abate off-site soil loss. Collected sediments shall be placed in a stable location on site or taken off-site to a stable location.
12. Stabilize disturbed or modified drainage ways. Reduce erosion effects of storm water by using and/or maintaining grassed swales, infiltration structures, or water diversions.
13. Sediment and erosion controls shall be inspected once every seven (7) days and within 24 hours of a 0.5 inch or greater rainfall event. A written log of these inspections and improvements to controls shall be kept on site. The inspections shall include the date of inspection, name of inspector, weather conditions, actions taken to correct any problems and the date corrective actions were taken.
14. Trenches for underground utility lines and pipes shall be temporally stabilized within seven (7) days if they are to remain inactive for more than fourteen (14) days. Trench dewatering devices shall discharge in a manner that filters soil-laden water before discharging it to a receiving drainage ditch or pond. If

seeding, mulching, or other erosion and sediment control measures were previously installed; these protective measures shall be reinstalled.

B. Construction Sequence.

1. Pre-construction Meeting.
2. Initial clearing and grubbing to gain access, and installation of perimeter controls within seven (7) days of clearing and grubbing.
3. Cleaning and grubbing followed by excavation of sediment traps and basins; temporary soil stabilization for these sediment settling devices within fourteen (14) days of excavation.
4. Maintenance inspection schedule established and party responsible for inspection and repair of erosion and sediment control devices named.
5. Pre-winter stabilization meeting if project is to run through winter.
6. Final grading and permanent soil stabilization within 30 days of finishing final grade.
7. Removal of temporary erosion and sediment control devices.
8. Final stabilization meeting with provisions for long-term maintenance of storm water facilities including mechanisms for notification of future responsible parties and/or property owners' considerations.

5.0 ELECTRICAL. This section is not applicable.

6.0 QUALITY ASSURANCE. This section is not applicable.

7.0 MEASUREMENT.

A. Silt Fence.

1. The number of linear feet of silt fence to be measured for payment under Item 41 shall be the actual length of silt fence installed in accordance with these specifications and details.

B. Inlets.

1. The number of inlets protected to be paid for under Item 41, shall be the number of inlets actually protected in the completed work under this Contract.

8.0 PAYMENT. The unit price stipulated per lineal foot silt fence and number of inlet protections installed shall include all labor, materials, tools, and appliances necessary to complete the work as specified, shown or directed including removal of the devices and cleanup and restoration at the locations in which they were installed as follows:

<u>Item</u>	<u>Unit</u>	<u>Description</u>
41	LF	Silt Fence
41	EA	Inlet Protection

END OF SECTION