SECTION 31 25 00
EROSION AND SEDIMENTATION CONTROLS

PART 1 GENERAL

1.1 DESCRIPTION

A. The work of this section includes, but is not limited to:
   1. Installation of soil erosion and sedimentation control (SESC) measures as per approved plan.
   2. Maintenance of SESC measures.
   3. Restoration of area and removal of any interim SESC measures placed to protect areas from erosion during stabilization period.

B. Related work specified elsewhere:
   1. Earth Moving (Site excavation and placement of fill material): Section 31 20 00.00
   2. Facility Storm Drainage Piping (Storm drain pipe): Section 33 41 00

C. Applicable Standard Details:
   As shown on the Contract Drawings and in accordance with Publication 408 Specifications.

1.2 QUALITY ASSURANCE

A. Reference Standards:
   1. Pennsylvania Department of Transportation (PennDOT), latest revision:
      Publication 408, Specifications
      Publication 72M, Roadway Construction Standards (RC 0-99)
   2. Pennsylvania Department of Environmental Protection (PA DEP):
      Erosion and Sediment Pollution Control Program Manual Document No. 363-2134-008, Effective April 15, 2000 or latest revisions thereof as released in accordance with PA Code 25 Chapter 102.
   3. Asphalt Institute Specifications

1.3 SUBMITTALS

A. Soil Erosion and Sedimentation Control plan for this project is included in The Contract Drawings. The CONTRACTOR shall regard this plan as a minimum standard. This plan may not be adjusted by the CONTRACTOR without prior approval of the County Conservation District and other regulatory agencies as applicable, and by means of a Contract Change Order.

1.4 JOB CONDITIONS: Section Not Utilized.

PART 2 MATERIALS

2.1 STONE FOR RIP-RAP

A. Stone used shall be the type and size of rip-rap shown on Contract Drawings and shall meet the requirement of Publication 408, Section 850.

2.2 MATTING FOR EROSION CONTROL

A. The CONTRACTOR shall furnish a certification from the manufacturer that the matting conforms to the requirements prescribed hereinafter.

B. Jute matting for erosion control:
   1. As specified in Publication 408, Section 806.2(a).

C. Excelsior matting:
   1. As specified in Publication 408, Section 806.2(b).

D. Nylon matting:
   1. As specified in Publication 408, Section 806.2(d).

2.3 EROSION CONTROL DEVICES

A. Silt Barrier Fence:
   1. Geotextiles, Class 3: As specified in Publication 408, Section 735.1 (a) (b) (c) (d) and Section 865.2 (a).
   2. Mesh Support: As specified in Publication 408, Section 865.2(b).
   3. Post:
      a. Wood or steel or acceptable plastic with equivalent section and sufficient length for height of fence required.
      b. As specified in Publication 408, Section 865.2 (c).
   4. Fasteners: As specified in Publication 408, Section 865.2(d).
   5. Ground Anchors, Guy Wires: As specified in Publication 408, Section 865.2 (e) (f).

B. Compost Filter Sock:
   1. Sock: High-density polyethylene (HDPE) expandable, tubular, biodegradable or photodegradable, 3 mil to 5 mil, 3/8 inch knitted meshes netting. Size as specified on Contract Drawings, as specified in Publication 408, Section 866.2.b

C. Compost: Well-decomposed, stable, weed-free, organic compost meeting AASHTO MP-9 as specified in Publication 408 Section 866.2.a.

D. Stakes 2 inch x 2 inch wood or equivalent steel stakes, length provided to ensure a minimum embedded depth of 18 inches and 3-4 inches extended above the top of the sock.

2.4 TEMPORARY COVER

A. As specified on the Contract Drawings.

2.5 STORM DRAIN PIPE

A. As specified in Section 33 11 16.00.

2.6 PUMPED WATER FILTER BAG

A. As shown on the Contract Drawings, in accordance with Publication 408 Specifications.

PART 3 EXECUTION

3.1 CONSTRUCTION SEQUENCE

A. As shown on the Contract Drawings, C7 sheet series.

3.2 SOIL EROSION AND SEDIMENTATION CONTROL

A. Topsoil stockpile heights shall not exceed 35 feet. Stockpile side slopes must be 2:1 or flatter.

B. A copy of the approved erosion and sediment control plan must be available at the project site at all times.

C. All pumping of sediment laden water shall be through a sediment control BMP, such as a pumped water filter bag or equivalent sediment removal facility, over undisturbed vegetated areas.

D. All building materials and wastes must be removed from the site and recycled or disposed of in accordance with the PA DEP's solid waste management regulations at (PA Code 2501 et esq. 271.1 and 287,1 et seq). No building materials, water or unused building material shall be burned, buried, dumped or discharged at the site.

E. The CONTRACTOR shall be responsible for the removal of any excess material and shall ensure that the site(s) receiving the excess has an approved erosion and sediment control plan that meets the conditions of PA Code 25, Chapter 102 and/or other State or Federal regulations.

F. Clean Fill is defined as: uncontaminated, non-water soluble, non-decomposable, inert, solid material. The term includes: soil, rock, stone, dredged material, used asphalt, brick, block or concrete from construction and demolition activities that is separate from other waste and is recognizable as such. The term does not include materials placed in or on the waters of the Commonwealth unless otherwise authorized. (The term “used asphalt” does not include milled asphalt or asphalt that has been processed for re-use).

G. Any placement of clean fill that has been affected by a spill or release of a regulated substance must use Form FP-001 to certify the origin of the fill materials and the results of the analytical testing to qualify the material as clean fill. Form FP-001 must be retained by the OWNER of the property receiving the fill.

H. Environmental due diligence must be performed to determine if the fill materials associated with the project qualify as clean fill. Environmental due diligence is defined as: investigative techniques, including but not limited to, visual property inspections, electronic database searches, review of property ownership, review of property use history, sanborn maps, environmental questionnaires, transaction screens, analytical testing, environmental assessments or audits. Analytical testing is not a required part of due diligence unless visual inspection and/or review of the past land use of the property indicates that the fill may have been subject to a spill or release of a regulated substance. If the fill may have been affected by a spill or release of a regulated substance, it must be tested to determine if it qualifies as clean fill. Testing should be performed in accordance with Appendix A of the PA DEP’s policy Management of Clean Fill.

3.3 STABILIZATON SPECIFICATIONS

A. Permanent stabilization is defined as a minimum uniform 70% perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosions and subsurface characteristics sufficient to resist sliding and other movements.

B. Immediately after disturbance activities cease, the operator shall stabilize the disturbed areas. During non-geminating periods, mulch must be applied at the specified rates. Disturbed areas which are not at finished grade and which will be re-disturbed within 1-year must be stabilized in accordance with the temporary vegetative stabilization specifications. Disturbed areas which are at final grade or which will not be re-disturbed within 1-year must be stabilized in accordance with the permanent vegetative stabilization specifications.

C. An erosion control blanket will be installed on all disturbed slopes steeper than 3:1, all areas of concentrated flows, and disturbed areas within 50’ of waters of the Commonwealth.

D. Straw and hay mulch should be anchored immediately after application to prevent being windblown. A tractor-drawn implement may be used to “crimp” the straw or hay into the soil. This method is limited to slopes no steeper than 3:1. The machinery should be operated on the contour. (Note: Crimping of hay or straw by running over it with tracked machinery is not recommended.)

E. Asphalt, either emulsified or cut-back, containing no solvents or other diluting agents toxic to plant or animal life, uniformly applied at the rate of 31 gallons per 1000 sq. yd. may be used to tack mulch.

F. Synthetic Binders (chemical binders) may be used as recommended by the manufacture to anchor mulch provided sufficient documentation is provided to show they are non-toxic to native plant and animal species.

G. Lightweight plastic, fiber, or paper nets may be stabled over the mulch according to manufacturer’s recommendations.

H. Tracking slopes is required by running tracked machinery up and down the slope, leaving tread marks parallel to the contour. (Note: If a bulldozer is used, the blade shall be up.) Care should be exercised on soils having a high clay content to avoid over-compaction.

3.4 MAINTENANCE PROGRAM

A. Until the site is stabilized, all erosion and sediment control BMP's must be maintained properly. Maintenance must include inspections of all erosion and sediment control BMP's after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including cleanest, repair replacement, re-grading, reseeding, re-mulching and re-netting must be performed immediately. If erosion and sediment control BMP's fail to perform as expected, replacement BMP's or modifications of those installed will be required.

B. The permittee and co-permittee must ensure that visual site inspections are conducted weekly, and after each measurable precipitation event by qualified personnel, trained and experienced in erosion and sediment control, to ascertain that Erosion and Sediment Control (E&S) BMP's are operational and effective in preventing pollution to the waters of the Commonwealth. A written report of each inspection shall be kept, and include:

1. A summary of the site conditions, E&S BMP's, and compliance; and
2. The date, time, and the name of the person conducting the inspection.

C. Any sediment removed from BMP's during construction will be returned to upland areas on site and incorporated into site grading.

END OF SECTION