

SECTION 1310 - EROSION CONTROL

PART 1 - GENERAL

Temporary measures shall be applied throughout the construction period to control and to minimize silt to adjacent properties and waterways. Such measures shall include, but not be limited to, the use of berms, baled straw silt barriers, gravel or crushed stone, mulch, slope drains, check dams, water bars and other methods. These temporary measures shall be applied to erodible material exposed by any activity associated with the construction of this project and shall be according to the Storm Water Pollution Prevention Plan (SWP3).

1.1 SCOPE OF WORK:

- A. Furnish all labor, materials, and equipment required for erecting, maintaining and removing temporary erosion and sedimentation controls as shown on the drawings and as specified herein.
- B. Temporary erosion controls include, but are not limited to, sodding, seeding, mulching, watering, and reseeded of all disturbed surfaces, including waste, stockpile and borrow area surfaces. Work shall be scheduled to minimize erosion. Interceptor ditches shall be provided at locations that will ensure that erosion during construction will be either eliminated or maintained within acceptable limits.
- C. Temporary sedimentation controls include, but are not limited to, silt dams, traps, barriers, staked straw-bale diversions and appurtenances at the foot of sloped surfaces which will ensure that sedimentation pollution will be either eliminated or maintained within acceptable limits.
- D. The CONTRACTOR is responsible for providing and maintaining effective temporary erosion and sediment control measures during construction or until final controls become effective. The OWNER or ENGINEER will determine whether the controls are properly utilized.
- E. The CONTRACTOR shall be responsible for placement of erosion and sedimentation controls. During construction, the CONTRACTOR shall place controls in locations required by the SWP3 or other sections of the construction documents. If during the course of construction the ENGINEER determines additional controls are required, the CONTRACTOR shall furnish, install and maintain additional controls to control erosion and sedimentation to the satisfaction of the ENGINEER. Such additional erosion control measures not included in the construction documents shall be paid for at unit bid prices or at negotiated prices.
- F. The CONTRACTOR shall implement erosion control measures as may be required by local, state and federal agencies, whether included in the construction documents or not. Additional erosion control measures not included in the construction documents shall be paid for at unit bid prices or at negotiated prices.

1.2 DEFINITIONS:

- A. Riparian Area - The area within two and one half (2.5) times the width of the stream bed measured from the toe of each bank on the horizontal, or fifty feet (50'), whichever is greater. Where areas near stream beds have slopes greater than 20%, the horizontal measurement should be made beginning at the top of the slope due to the increased risk of erosion.

PART 2 - PRODUCTS

- A. Erosion control blankets, where called for in this Section or the Drawings, or as determined by the ENGINEER, shall be AMXCO Curlax Blanket as manufactured by American Excelsior Company, Arlington, TX 76011, or equal.

PART 3 - EXECUTION

3.1 GENERAL:

- A. Erosion control practices shall be consistent with the requirements of the OWNER's procedures for

new development work and in any case shall be adequate to prevent erosion of disturbed and/or regraded areas. Construction activities and erosion control practices shall be consistent with soil and water conservation best management practices (BMPs) and Ohio Department of Natural Resources (ODNR) *Rainwater and Land Development Manual*.

- B. Erosion control systems shall be located as required by the SWP3, other parts of the plans and specifications, and/or as designated by the ENGINEER.

3.2 SEEDING AND SODDING:

Seeding and sodding for erosion or sedimentation control shall be in accordance with the materials and requirement of Section 1120. Sodding shall be required in high erosion areas, as shown on the plans or designated by the ENGINEER.

3.3 STABILIZATION PRACTICES FOR DENUDED LAND:

Preserve existing vegetation where possible and revegetate disturbed areas as soon as practical after grading.

- A. Vegetate disturbed areas that will remain idle for more than 45 days within 7 days of disturbance.
- B. Stabilize all inactive disturbed land in riparian areas within seventy- two (72) hours.
- C. Stabilize areas within 7 days after final grading on any portion of the site.
- D. Stabilize areas with mulch when conditions prohibit temporary or permanent seeding.

3.4 STOCKPILES, SIDE CASTING, AND STORAGE OF CONSTRUCTION MATERIALS

- A. Whenever possible, store construction and side-cast material away from and outside riparian areas. Locate temporary stockpile area where exposed soils and runoff will have minimal or no impact on surface water(s). All stockpile/storage areas shall be properly selected and protected with a secure silt fence properly installed and maintained to minimize impact to the surface water(s).
- B. Structural practices shall be used to control erosion and trap sediment from all sites remaining disturbed for more than 14 days. Structural practices shall be functional throughout earth disturbing activity until area is restabilized. Structural practices shall be implemented as the first step of grading and within 7 days from the start of grubbing. Acceptable structural practices, as defined by OEPA's Minimum Standards for Pollution Control, are the following:
 - 1. Use sediment barriers to protect adjacent properties and water resources from sediment transported by sheet flow (i.e. properly placed and maintained straw bales, silt fences, and basin traps).
 - 2. Prevent sediment from entering storm drain systems.
 - 3. Divert runoff from disturbed areas and steep slopes.
 - 4. Stabilize channels and outfalls from erosive flows according to Section 1170 STREAMBANK AND STREAMBED STABILIZATION AND PROTECTION.

3.5 OTHER CONTROLS

- A. Waste disposal - No solid or liquid waste shall be disposed of on-site or discharged in storm water runoff.
- B. Minimize off-site vehicle tracking of sediments.
- C. Comply with applicable State and local waste disposal, sanitary sewer or septic system regulations.

3.6 MAINTENANCE OF CONTROLS AND PERFORMANCE:

- A. Erosion and sedimentation controls will be periodically inspected by the OWNER or ENGINEER. The CONTRACTOR is responsible for replacing deteriorated straw bales, dislodged filter stone, and damaged erosion control blankets, and to make other necessary repairs to the erosion and sedimentation controls as necessary to assure continued performance of their intended function and/or as directed by the OWNER or ENGINEER.
- B. Should any of the temporary erosion and sediment control measures installed by the CONTRACTOR fail to produce results which comply with the requirements of the OWNER, the CONTRACTOR shall promptly take whatever steps are necessary to correct the deficiency. Such corrective measures shall be at the CONTRACTOR'S expense.
- C. Stormwater and erosion control measures shall be implemented and maintained during construction to maintain or improve the quality of the natural resources. Remove all temporary erosion and sedimentation controls as final landscaping and grading is performed.
- D. The CONTRACTOR shall inspect disturbed areas and storage areas for potential for or evidence of pollutants entering the drainage system. Inspection shall include discharge locations to ascertain whether control measures are effective in preventing significant impacts to receiving waters and entrances/exits for evidence of off-site tracking of sediment. CONTRACTOR is responsible to act reasonably to minimize adverse construction impacts.

PART 4 - BASIS OF PAYMENT:

Payment for erosion and sedimentation control shall be made as a lump sum or at the unit prices bid as shown on the proposal forms, unless otherwise indicated. Bid prices shall include all erosion and sedimentation control measures required by the construction documents, including associated seeding and sodding, except as provided for under separate pay items. Cost of erosion and sedimentation control shall be included in the unit prices for the pipe if separate, specific pay items are not included on the proposal forms.

END OF SECTION