SECTION 01100

SPECIAL PROJECT PROCEDURES

PART 1 GENERAL

1.01 SPECIAL PROVISIONS

A. Protection of Water Supplies

In the sewer layout, a 10-foot horizontal separation of water and sewer lines shall be provided. Should local conditions prevent a lateral separation of 10 feet, the sewer line may be laid closer than 10 feet to a water main if the elevation of the top of the sewer pipe is at least 18 inches below the bottom (invert) of the water main, and if:

1. It is laid in a separate trench, or

2. It is laid in the same trench with the water main at one side on a bench of undisturbed earth, and

3. Approval is received from HTWSA.

Where sewers must cross under water mains, the sewer shall be laid at an elevation so that the top of the sewer is at least 18 inches below the bottom of the water main. When water mains are existing, and sewer elevation cannot be varied to meet this requirement, the water main shall be relocated to provide this separation, and reconstructed with ductile iron pipe for a distance of 10 feet on each side of the sewer. One full length of water main shall be centered over the sewer so both joints will be as far from the sewer as possible.

When it is impossible to obtain proper horizontal and vertical separation as stipulated above, both water and sewer lines shall be constructed of mechanical-joint cast-iron pipe and shall be pressure tested to assure water tightness.

B. Lines and Grades

In sewer construction, the Contractor must transfer line and grade to "batter boards" and string line over the trench. The Contractor may not transfer line and grade to and/or utilize a "sideline" or string set to line and grade other than over and above the centerline of the sewer to be laid. No sewer pipe shall be laid other than "up grade" or in the direction of increasing elevation of sewer grade or invert elevation unless expressly permitted by the Engineer in writing and for a specifically defined section or sections of work only. All sewer pipe shall be laid with bell ends toward the direction of increasing sewer elevation. No pipe shall be laid to line or grade unless there are at least three batter boards ahead of the last length of pipe laid in place.

In lieu of batter boards for laying pipe as specified herein, the Contractor may use a laser beam for setting line and grade. Type of laser equipment and method of use must be approved by the Engineer.

1.01 EROSION AND SEDIMENTATION CONTROL

A. The Commonwealth of Pennsylvania Department of Environmental Protection (DEP) requires that the Contractor use all possible care to prevent siltation pollution of the waters of the Commonwealth during and after construction by implementation of an erosion and sedimentation control plan as required under Title 25, Chapter 102 of DEP Regulations. The Contractor shall conform to the following Erosion and Sedimentation Control Plan Procedures and as indicated on Drawing No. 2 and 3. Modifications or deviations from this plan will be allowed only if the Contractor first obtains written permission from Pennsylvania Department of Environmental Protection.

This plan of erosion and sedimentation control has been prepared for implementation. It will be the Contractor's responsibility to implement this plan as work progresses. Therefore, construction must be well coordinated so soil disturbances will be minimal and all construction can be completed in the shortest possible time.

This plan shall be considered in conjunction with the approved Erosion and Sedimentation Control Plan for the particular subdivision.

Some water system construction may take place in existing roadways, and some may involve clearing trees and brush along the route where adjacent trees and vegetation are to be maintained. In such cases, use of larger erosion control structures such as sedimentation basins may be prohibited. While water main construction will not permanently increase storm water runoff, absence of ground cover during construction will cause a temporary increase. Objective of this plan, therefore, is the re-establishment of vegetative growth and paving of existing or proposed roads within reasonable time after construction.

Where applicable, special care must be exercised to avoid damage to land adjacent to the construction area. Destruction of trees and of protective vegetation adjacent to the construction area will not be tolerated unless authorized by the Owner.

Constructing groundwater control devices, equipment travel, and stockpiling construction material are the most serious causes of excessive vegetation destruction. These transgressions against good erosion and sedimentation control will not be permitted.

Excavated material must be stockpiled alongside trenches away from stream channels. Flooding is less likely to move soil from the site as sediment if this practice is followed.

Temporary bridges or culverts shall be provided for machinery that must cross streams during construction. Each structure must be removed from the stream when work at that location is completed, and the stream bed returned to its original condition in such manner to cause minimum siltation to the waterway. The stream bed shall not be used as a roadway for moving machinery from one site to another.

Provisions shall be made for protection against discharge of pollutants such as chemicals, fuels, lubricants, etc., into streams. Location of portable toilet facilities over or adjacent to streams or wells is prohibited.

If are explosives are to be used along streams and flood plains, a permit is required. Permits are obtainable from the Pennsylvania Fish Commission in Harrisburg.

The local Waterways Patrolman must be notified when the project has begun and when explosives are to be used. The Contractor is responsible for obtaining said permit and contacting the Waterways Patrolman.

Diversion ditches shall be used whenever possible to divert upstream runoff away from erosive areas. They shall be stabilized by rock riprap on grades over five percent.

Stockpile areas shall also be selected and maintained by the Contractor. Site selections and stockpile design shall incorporate erosion and sediment control considerations. Temporary or interim stabilization of soil stockpiles shall be promptly instituted. Critical slopes on stockpiles shall be avoided. Stockpiling in or immediately adjacent to diversion channels shall not be allowed. If a stockpile is to remain for over sixty days, it shall be stabilized by soil stabilizing chemicals, temporary vegetation, interim structures, or other special practices. Temporary vegetative measures planned for implementation on stockpile areas shall be established immediately after the stockpile operation is complete. Proper mulching and soil stabilization in conjunction with these seeding operations shall also be carried out.

Pump water management is a practice that the contractor shall use to reduce production of sediment. Pump water should be discharged onto a stabilization area. If possible, it should be pumped to a storm sewer. However, if this option is not open, another possibility is to carry the water by hose to an adjacent water course. In any event, pump water discharge onto fill slopes, fill piles, spoil slopes, etc. will not be tolerated. If ditches are required to remove pump water, they shall be stabilized with rock riprap.

After construction activity in a work area is completed, vegetation or paving on areas disturbed must be restored. If completion of construction activity does not coincide with a season in which permanent vegetation or paving can be applied, an interim or temporary program will be required. This can include soil stabilization, mulching, establishment of filters, use of scarification, or temporary paving. In any case, erosion and sedimentation controls shall be installed promptly, their maintenance assured, and no area left unprotected for more than ten (10) days following completion of construction in that area.

B. Improper construction practices prohibited include but are not limited to:

1. Operation of equipment in such manner as to contribute to stream pollution.

2. Depositing silt laden water from trenches or other excavation or allowing indirect runoff of silt-laden water into streams without sedimentation basins.

3. Disposal of trees, brush, and other debris in streams or along banks.

4. Dumping spoil materials directly into streams; or onto stream banks where they could wash or slide into streams.

5. Unnecessary removal of trees and vegetation.

C. In order to prevent siltation, the Contractor shall:

1. Familiarize himself and be responsible for carrying out all requirements of Title 25, Chapter 102 of DEP Regulations that may be required in addition to requirements set forth in this plan.

2. Construct, as directed by the Engineer, any temporary dikes or bulkheads to prevent surface water from conveying stored excavated material or newly backfilled material to any stream or storm sewer inlet. Temporary facilities shall be removed and the area restored to its original condition after construction is completed.

3. Wherever possible, not store excavated material between trenches and bodies of water.

4. Reduce by the greatest extent practicable, the area and duration of exposure of readily erodible soil. If, during the construction period, it is not possible to seed, sod or pave promptly, then mulched material shall be used in all areas other than existing streets, driveways, etc., which shall be temporarily paved.

5. Protect soils by use of temporary vegetation or seeding, or by accelerating establishment of permanent vegetation. Complete and protect segments as rapidly as is consistent with construction requirements and schedule.

6. Sprinkle or apply dust suppressors or otherwise keep dust within tolerable limits on all existing roads.

7. Should construction be suspended by any appreciable length of time, temporary measures as outlined in items 4 and 5 shall be utilized.

8. Cleanup, regrading, reseeding, and paving shall be done as work proceeds, and not left until the end of the project.

1.02 MAINTENANCE CONTROL PROGRAM

A. The Contractor is responsible to ensure that all erosion and sedimentation procedures are adhered to. During construction, the Contractor shall periodically sprinkle and fertilize in order to maintain a good vegetation cover as a permanent erosion control measure, and also clean sedimentation control devices of silt and debris, especially after heavy rain storms. After construction, the site shall be monitored to assure that adequate vegetation cover has been established.

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS AND RELATED ITEMS INCLUDED WITHIN THIS REPORT AND ACCOMPANYING PLANS.

1.03 PERMANENT CONTROL MEASURES

A. Permanent grass area will be established as specified on plans. Other landscaped areas will be properly stabilized after planting of shrubs or groundcover.

B. Seeded areas that have washed away will be filled or graded as necessary, and then reseeded. Straw or burlap will be placed until stabilization of the area is accomplished.

C. All exposed soil will be seeded after excavation and backfill activities.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not used

END OF SECTION