

CHAPTER 9

GRADING AND EXCAVATING

PART 1

SOIL EROSION, SEDIMENTATION AND GRADING

- §101. Short Title
- §102. Purposes
- §103. Scope
- §104. Definitions
- §105. General Requirements
- §106. Activities Requiring Grading Permit
- §107. Activities Requiring No Grading Permit
- §108. Application for Permit
- §109. Data Required on Plan
- §110. Special Requirements
- §111. Approval
- §112. Standards for Issuance of Grading Permit
- §113. Inspection Procedures
- §114. Costs of Inspection
- §115. Fee
- §116. Penalties
- §117. Remedy of Violation

THIS PAGE INTENTIONALLY
LEFT BLANK

PART 1

SOIL EROSION, SEDIMENTATION AND GRADING

§101. SHORT TITLE.

This Part shall be known and may be cited as the "Soil Erosion, Sedimentation and Grading Control Ordinance," implementing Title 25, Rules and Regulations, Pt. I, Commonwealth of Pennsylvania, Department of Environmental Resources, Subpart C, Protection of Natural Resources, Article II, Water Resources, Chapter 102, Erosion Control.

(Ord. 192, 3/23/1995)

§102. PURPOSES.

The purposes of this Part are to regulate the modification of the natural terrain, the alteration of drainage, and to provide for certain erosion and sediment control measures within the Township to assure and safeguard health, safety, ecology and the general welfare in the Township.

(Ord. 192, 3/23/1995)

§103. SCOPE.

From and after the effective date of this Part, any subdivision and/or land development approved under the Subdivision and Land Development [Chapter 22] or Zoning [Chapter 27] ordinances, or activity qualified under §§105 and 106 of this Part shall be in conformity with this Part. In the event of a conflict between this Part and floodplain regulations, the floodplain regulations shall take precedence.

(Ord. 192, 3/23/1995)

§104. DEFINITIONS.

As used in this Part, the following terms shall have the meanings indicated, unless a different meaning clearly appears from the context:

ALLUVIAL SOILS - an agonal great group of soils, developed from transported and relatively recently deposited material (alluvium), characterized by a weak modification (or none) of the original material by soil-forming processes.

CUT AND/OR FILL - process of earthmoving by excavating part of an area and/or using excavated material for embankments or fill areas.

EROSION -

GRADING AND EXCAVATING

- (1) The wearing away of the land surface by running water, wind, ice, chemical or other geological agents.
- (2) Detachment and movement of soil or rock fragments by water, wind, ice or gravity.

GRADE -

- (1) The slope of a road, channel or natural ground.
- (2) The finished surface of a canal bed, roadbed, top of embankment or bottom of excavation; any surface prepared for the support of construction like paving or laying a conduit.
- (3) To finish the surface of a canal bed, roadbed, top of embankment or bottom of excavation.

RUNOFF (HYDRAULICS) - that portion of the precipitation on a drainage area or watershed that is discharged from the area in stream channels; types include surface runoff, groundwater runoff or seepage.

SEDIMENT - solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

SLOPE - degree of deviation of a surface from the horizontal usually expressed in percent or degrees.

SOIL DRAINAGE - a condition of the soil, referring to the frequency and duration of periods when the soil is free of saturation.

WATERCOURSE - a natural drainage route or channel for the flow of water.

(Ord. 192, 3/23/1995)

§105. GENERAL REQUIREMENTS.

Whenever the landscape is to be permanently disturbed as to either contours, soil or slope characteristics, or vegetation or any ground cover is to be permanently removed, a plan is required showing how resulting erosion and sediment shall be controlled. This plan shall include the following:

- A. The amount of site alteration proposed.
- B. Development schedule.
- C. Erosion and sediment control practices (both temporary and permanent) and the operation and maintenance arrangements.

(Ord. 192, 3/23/1995)

§106. ACTIVITIES REQUIRING GRADING PERMIT.

The following activities require a grading permit:

- A. Modifying, disturbing, blocking, diverting or otherwise adversely affecting the natural overland or subsurface flow of stormwater.
- B. Construction, erection or installation of any drainage dam, ditch, culvert, drain pipe, bridge or any other structure or obstruction affecting the drainage of any premises.
- C. Paving, filling, stripping, excavating, grading or regrading of any land.
- D. Disturbing the landscape, vegetation or any ground cover by any proposal involving an area in excess of five thousand (5,000) square feet.

(Ord. 192, 3/23/1995)

§107. ACTIVITIES REQUIRING NO GRADING PERMIT.

The following activities require no grading permit:

- A. Improvements, such as erection of retaining walls, driveway paving, minor regrading or activities on a property which do not adversely affect the natural overland or subsurface flow of stormwater, drainage of any premises, or adversely disturb the landscape, in a gross area of up to twenty-five (25) acres on any one (1) property.
- B. Farming, gardening or lawn restoration, but not including sod farming.

(Ord. 192, 3/23/1995)

§108. APPLICATION FOR PERMIT.

- 1. Any person, firm or corporation proposing to engage in an activity requiring a grading permit hereunder shall apply by the submission of a plan.
- 2. The applicant should, before submitting a preliminary plan for review, consult the Zoning Ordinance [Chapter 27] and the Subdivision and Land Development Ordinance [Chapter 22], which regulate the development of land in the Township.
- 3. A separate plan shall be required for each grading permit.
- 4. Five (5) copies of the proposed plan, including specifications and development schedules, shall be submitted to the Township Manager for a grading permit. The

GRADING AND EXCAVATING

Township Manager shall forward one (1) copy of the plan to the Planning Commission, one (1) copy to the Township Engineer and one (1) copy to the Zoning Officer.

5. The plan for a grading permit shall be accompanied by a fee established in the Board of Commissioners' schedule of fees and collection procedure for all applications and other matters pertaining to the Subdivision and Land Development Ordinance [Chapter 22] and this Part.

(Ord. 192, 3/23/1995)

§109. DATA REQUIRED ON PLAN.

The plan for a grading permit shall include:

- A. A valid boundary line survey of the site on which the work is to be performed.
- B. A description of the features, existing and proposed, surrounding the site which are of importance to the proposed development.
- C. A plan of the general topography (including drainage) and soil conditions on the site (latter available through the County Conservation District).
- D. The location and a description of existing and future manmade features of importance to the proposed development (i.e., cuts and/or fills, buildings, roads and driveways).
- E. Plans and specifications of soil erosion and sediment control measures in accordance with standards and specifications of the Township and the County Conservation District.
- F. A development schedule indicating the anticipated starting and completion dates of the development sequence and the time of exposure of each area prior to the completion of effective erosion and sediment control measures.

(Ord. 192, 3/23/1995)

§110. SPECIAL REQUIREMENTS.

In addition to the requirements of §109, and where deemed necessary by the Township Engineer and the Planning Commission, or the Board of Commissioners, the applicant shall submit with the plan a detailed drainage study prepared by a registered professional engineer qualified in hydrology in the Commonwealth. This study shall include:

- A. A plan of the property showing the location of all present and proposed ditches, streams, pipes and other drainage structures, and proposed cuts and/or fills. In addition to showing present elevations and dimensions, and location and extent of all proposed grading and/or drainage, the plan shall clearly indicate

all woodlands, buildings, parking areas and driveways. Further, the plan shall indicate the present and proposed sources, storage and disposition of water being channeled through or across the premises, together with elevations, gradients and maximum flow rates. The plan shall describe the work to be performed and disposition of cut and/or fill, the materials to be used and the manner or method of performance including provision for protecting and maintaining existing drainage facilities whether on public or private property. The applicant shall also supply the supporting data for the plan as developed by the engineer.

- B. Calculations to determine runoff, which shall be based on the Soil-Cover Complex Method, a description of which is available from the U.S.D.A. Soil Conservation Service and outlined in the "Erosion and Sediment Control Handbook, Montgomery County, Pennsylvania."
- (1) The design criteria for storm sewer piping on inlet systems within a subdivision being developed shall be designed for a twenty-five (25) year frequency storm; culverts across roadways shall be designed for a fifty (50) year frequency storm; open watercourses or swales shall be designed for a one hundred (100) year frequency storm as prescribed in accordance with the following:
 - (a) The coefficient of runoff used for all areas up-stream of any drainage structure shall be computed on the basis of existing land use and the projected land use described and shown on the Township Comprehensive Plan, and adjacent municipalities' comprehensive plans, where applicable.
 - (2) The following provisions apply to the carrying and disposal of storm-water runoff:
 - (a) All drainage facilities shall be designed to carry surface water in such a manner as to prevent erosion or overflow.
 - (b) The applicant shall agree to the granting and recording of easements covering the installation and maintenance of drainage facilities.
 - (c) The rate of runoff shall be no greater during and after a one hundred (100) year frequency storm when the development is completed than that which existed before the development began and appropriate measurements or calculations shall be provided to verify such provisions.
 - (3) A soils investigation report, if load-bearing fill is proposed, which shall consist of test borings, laboratory testings and engineering analysis to correlate surface and subsurface conditions with the proposed grading plan. The results of the investigation shall be presented in a report by a registered professional soils engineer and shall include data regarding the

GRADING AND EXCAVATING

nature, distribution and supporting ability of existing soils and rocks on the site, conclusions and recommendations to insure stable soil conditions and ground water control as applicable. The Township may require such supplemental reports and data as is deemed necessary by the Township Engineer. Recommendations included in such reports and approved by the Township Engineer shall be incorporated in the plan or specifications. In addition:

- (a) Fills toeing out on natural slopes steeper than four (4) horizontal to one (1) vertical shall not be made unless a report is received which is deemed acceptable by the Township Engineer and approved by the Board of Commissioners. The report shall be made by a registered professional soils engineer certifying that he has investigated the property, made soils tests and that in his opinion such steeper slopes will safely support the proposed fill.
- (b) Natural and/or existing slopes exceeding five (5) horizontal to one (1) vertical shall be benched or continuously stepped into competent materials prior to placing all classes of fill.

(Ord. 192, 3/23/1995)

§111. APPROVAL.

Upon the approval of the plan by the Township Engineer, the Township Manager shall issue the necessary grading permit.

(Ord. 192, 3/23/1995)

§112. STANDARDS FOR ISSUANCE OF GRADING PERMIT.

1. Notwithstanding any provisions of this Part or any condition of the grading permit, the permittee is responsible for the prevention of damage to other property, or personal injury, which may be effected by the activity requiring a grading permit.
2. No person, firm or corporation shall modify, fill, excavate, pave, grade or regrade land in any manner so close to a property line as to endanger or damage any adjoining street, alley, or any other public or private property without supporting and protecting such property from settling, cracking, erosion, sediment, flooding, or any other physical damage or personal injury which might result.
3. No person, firm or corporation shall deposit or place any debris or any other material whatsoever, or cause such to be thrown or placed, in any drainage ditch or drainage structure in such a manner as to obstruct free flow.
4. No person, firm, or corporation shall fail to adequately maintain, in good operating order, any drainage facility on his premises. All drainage ditches, culverts, drain pipes

and drainage structures shall be kept open and free-flowing at all times.

5. The owner of any property on which any work has been done pursuant to a grading permit granted under this Part shall continuously maintain and repair all graded surfaces and anti-erosion devices, retaining walls, drainage structures or means and other protective devices, plantings and ground cover, installed or completed. The Township is responsible for maintenance and repair within the right-of-way of Township roads.
6. All graded surfaces shall be permanently seeded, sodded and/or planted or otherwise protected from erosion within thirty (30) days, weather permitting, and shall be tended and/or maintained until growth, is well established. The disturbed area and duration of exposure shall be kept to a minimum using temporary erosion and sediment control measures immediately, as outlined in the "Erosion and Sediment Control Handbook, Montgomery County, Pennsylvania."
7. All trees in an area of extreme grade change shall be protected with suitable tree wells, unless the necessity for removal is established. Precautions shall be taken to prevent the unnecessary removal of trees.
8. Where required, adequate provisions shall be made for dust control measures as are deemed acceptable by the Township Engineer.
9. All plans and specifications submitted for a grading permit shall include provisions for both interim (temporary) and ultimate (permanent) erosion and sediment control. The design, installation and maintenance of erosion and sediment control measures shall be accomplished in accordance with standards and specifications established by the County Soil Conservation District as adopted from standards and specifications of the United States Soil Conservation Service, and as outlined in the "Erosion and Sediment Control Handbook, Montgomery County, Pennsylvania."
 - A. Technical standards for the design and installation of erosion and sediment control measures are on file with the Township, the office of the County Conservation District and other governmental agency offices.
 - B. Standards and specifications adopted for the purposes of this Part and by the County Conservation District include, but are not limited to, the following basic conservation measures:
 - (1) Temporary cover on critical areas.
 - (2) Permanent grass and legume cover for critical areas on prepared seedbed.
 - (3) Permanent grass and legume cover for critical areas on unprepared seedbed.
 - (4) Sodding.
 - (5) Mulching.

GRADING AND EXCAVATING

- (6) Temporary diversion.
 - (7) Permanent diversion.
 - (8) Grassed waterway or outlet.
 - (9) Grade stabilization structure.
 - (10) Debris basin.
 - (11) Drain.
 - (12) Drainage - mains or laterals.
10. A quality control program is critical for fills; therefore, wherever fill material is to be used, the person, firm or corporation shall be responsible for testing to determine its dry density as per ASTM D1556. The density of each layer shall be not less than ninety-five (95) percent of maximum density as determined by ASTM D1557.
- A. Inspection procedures shall follow the general procedure as stated in §113.
 - B. Compaction test reports shall be kept on file at the site and be subject to review at all times.
 - C. Degree of compaction required shall be determined by the Township Engineer following the guidelines in this Section.

(Ord. 192, 3/23/1995)

§113. INSPECTION PROCEDURES.

- 1. All inspections shall be the responsibility of the Township Engineer, or, in his absence, a qualified person acceptable to the Township Engineer and the Township.
- 2. Inspections will be carried out on a random basis, except as stated below. However, a set of "as built" plans shall be on file at the site and authenticated by a registered professional engineer. When it is deemed acceptable to the Township Engineer, a designated qualified person may authenticate the "as built" plans and will assume full responsibility for the quality of work.
- 3. Any and all "as built" plans shall be available on the site at all times and be subject to inspection and inquiry.
- 4. Engineering check notes shall accompany all "as built" plans which involve structural or mechanical measures and shall serve as supporting evidence that structures meet design standards and specifications specified herein.
- 5. A final inspection shall be conducted by the Township Engineer to certify compliance

with this Part. Satisfactory compliance with this Part shall be necessary before issuance of an occupancy or use permit.

(Ord. 192, 3/23/1995)

§114. COSTS OF INSPECTIONS.

Permittees shall bear all costs of inspections required or permitted hereunder and shall deposit with the Township such sum as the Board of Commissioners shall determine to guarantee payment of the costs of such inspections. The costs of inspections shall be in accordance with the established schedule of fees and collection procedure for matters pertaining to this Part.

(Ord. 192, 3/23/1995)

§115. FEE.

The fee for a grading permit shall be fixed by the Board of Commissioners pursuant to resolution.

(Ord. 192, 3/23/1995)

§116. PENALTIES.

Any person, firm or corporation who shall violate any provision of this Part shall, upon conviction thereof, be sentenced to pay a fine of not more than one thousand dollars (\$1,000.00) plus costs and, in default of payment, to undergo imprisonment for a term not exceeding thirty (30) days. Each day that a violation of this Part continues shall constitute a separate offense.

(Ord. 192, 3/23/1995)

§117. REMEDY OF VIOLATION.

In addition to the penalties as set forth in §116, any movement of the landscape, vegetation or any ground cover performed in violation of this Part shall be restored to its previous condition, including replacement of excavated earth, removal of illegally placed fill and restoration of grades and planting. In order to enforce this Section the Township Solicitor may seek injunctive relief in accordance with the rules of civil procedure.

(Ord. 192, 3/23/1995)