

## CHAPTER 9

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**PART 1**

**EROSION, SEDIMENTATION AND GRADING**

**§101. PURPOSE.**

The purpose of this Part is to regulate the modification of natural terrain and alteration of drainage by providing for certain runoff, grading, erosion and sediment control measures within the Township of Upper Makefield (hereinafter referred to as "Township") to protect public health, safety and welfare. This Part shall be known and cited as the "Upper Makefield Township Soil Erosion, Sedimentation and Grading Control Ordinance." This Part implements Title 25, Rules and Regulations, Part I, Commonwealth of Pennsylvania Department of Environmental Resources, subpart C, Protection of Natural Resources, Article II, Water Resources, Chapter 102, Erosion Control.

(Ord. 99, 10/27/1982, §1)

**§102. ACTIVITIES COVERED.**

Whenever the topography and vegetation are to be disturbed, a plan for the control of erosion and sediment and grading is required.

- A. It shall be unlawful for any person, firm or corporation to pave fill, strip or change the existing grade of any land within the Township without first securing the permits required herein.
- B. It shall be unlawful for any person, firm or corporation to disturb, modify, block, divert or affect the natural overland or subsurface flow of stormwater within the Township without first securing the permits required herein.
- C. It shall be unlawful for any person, firm or corporation to construct, erect or install any dam, ditch, culvert, drainpipe, bridge or any other structure or obstruction affecting the drainage of any premises in the Township without first securing the permits required herein.
- D. No permit shall be required hereunder (1) for normal agricultural operations; or (2) where the aggregate area to be stripped at one (1) time does not exceed one thousand (1,000) square feet; and the grade change does not exceed six (6) inches in any one (1) area and all bare earth is properly seeded, sodded or otherwise effectively protected from erosion.

(Ord. 99, 10/27/1982, §2)

**§103. EFFECT ON OTHER REQUIRED PERMITS.**

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Whenever any proposed activities require a building and/or driveway permit, no such building or driveway permit shall be issued unless the applicant certifies that the permits required hereunder have been issued. Furthermore, the plans and applications required hereunder may be combined, when applicable, with plans and application materials submitted for building and/or driveway permits.

(Ord. 99, 10/27/1982, §3)

### §104. APPLICATION FOR PERMIT.

1. Any person, firm or corporation proposing to engage in activity requiring a permit hereunder shall apply for a permit by written application which shall include the applicant's agreement to comply with the regulations in §107 upon issuance of the permit.
2. The applicant shall consult the Upper Makefield Zoning Ordinance, Subdivision Ordinance [Chapter 22], floodway regulations and driveway ordinance [Chapter 21] which regulate the development of land within the Township.
3. A separate application shall be required for each grading operation. Three (3) copies of all documents referred to in §§105 and 106 hereof shall be submitted with each application. The application forms submitted shall consist of the forms provided by the Township together with the required fees. All applications shall be submitted to the Township Secretary who shall retain one (1) for the Township records and forward two (2) copies of all documents to the Township Engineer.

(Ord. 99, 10/27/1982, §4)

### §105. DATA REQUIRED FOR PERMITS.

The application for an erosion, sedimentation and grading permit shall be filed on the application form provided by the Township and shall be accompanied by a plan of the property showing:

- A. An area plan or plans describing existing and proposed features of the area surrounding the site work including topography, existing vegetation, water courses, manmade features, the affected watersheds and other pertinent natural features. This may be in the form of a recent USGS map with the property and required features located thereon.
- B. A topographical survey of the site, at a suitable scale of no less than one (1) inch to fifty (50) feet and contour interval of no more than two (2) feet, prepared by a registered surveyor or registered engineer, including also a boundary line survey, the location and description of vegetative cover, soil types (available from Bucks County Soil Conservation Service) and any other pertinent existing natural or manmade features. The plan shall be eight and one-half (8 1/2) inches by eleven (11) inches.

- C. An improvements plan of the same size and scale as subsection (B) hereof, showing and describing all changes to the site including cuts, fills, structures, paving, waste disposal systems, wells and utilities (this may be combined with the topographical survey on simple projects).
- D. A written description of soil erosion and sedimentation control measures (with appropriate plans and specifications), in accordance with §44 of Chapter 102, Title 25, Rules and Regulations, Part I, Commonwealth of Pennsylvania Department of Environmental Resources, Subpart C, Protection of Natural Resources, Article II, Water Resources, Chapter 102, Erosion Control. And in accordance with standards and specifications of the USDA Soil Conservation Service, Bucks County Conservation District and Township ordinances, including, without limitation, retention basins or other erosion and stormwater control measures necessary to limit the rate of stormwater runoff to comply with the requirements of the Upper Makefield Township Subdivision and Land Development regulations [Chapter 22].
- E. A time schedule indicating the anticipated starting and completion dates of the development sequence, the expected date of completion of construction of each of the measures referred to in subsection (D) therein, and the time of exposure of each area prior to the completion of such measures.
- F. A grading plan of the same scale as subsection (B), herein, showing and describing all changes to the site including cuts, fills, structures, paving, utilities, right-of-ways and easements. Also to be shown on the plan is the exact location of onsite waste disposal systems, wells and reserve waste disposal system areas.
- G. The proposed final topographical survey of the site showing in detail the final grading upon completion of all construction activity.

(Ord. 99, 10/27/1982, §5)

#### **§106. ADDITIONAL REQUIREMENTS FOR PERMITS.**

The following information shall be supplied whenever a permit is required and it shall then be prepared by a registered professional civil engineer, agronomist or other professional qualified in hydrology (however, the Township engineer upon written application may waive in the necessity for filing a portion of or all of the following information):

- A. A plan shall indicate present and proposed sources, storage and disposition of water being channeled through or across the site, together with elevations, gradients and maximum flow rates. The application shall describe the work to be performed, the materials to be used and the manner, or method, of performance, including provisions for protecting and maintaining existing drainage facilities, whether on public or private property.
- B. Calculations to determine runoff shall be based on the soil-cover complex method and shall be based upon the assumption that the predevelopment land

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use condition is meadow land in good condition unless the actual predeveloped condition has a stormwater runoff rate less than meadow land. The condition having the least runoff shall be the basis of all stormwater runoff calculations for all portions of the subject lot or tract of land. Storm sewer piping, inlet system to retention basins, spillways, culverts, swales and all related facilities shall be designed to carry stormwater runoff of the twenty-five (25) year frequency storm. All basins shall be designed on a one hundred (100) year frequency storm basis.

(Ord. 99, 10/27/1982, §6)

### §107. SPECIFICATIONS AND REQUIREMENTS.

The following provisions apply for all activity governed by the provisions of this Part:

- A. All drainage facilities shall be designed to retard the rate of stormwater runoff to the same rate or a lesser rate as that existing prior to construction. Such a determination shall be made by the method of calculation hereinbefore set forth.
- B. Lots shall be graded to secure proper drainage away from buildings and streets, except streets where curbs exist, and to prevent the collection of stormwater and pools. Stockpiling of topsoil shall be protected from erosion.
- C. All drainage provisions shall be of such design as to efficiently carry surface waters to the nearest street (if curbs exist), storm drain or natural watercourse. If the aforementioned facilities do not exist, then in that event, stormwater shall be evenly dispersed over the lot so as to best promote infiltration of stormwater into the ground within the boundaries of the subject lot.
- D. The applicant shall construct and/or install such drainage structures and/or pipes which are necessary to prevent erosion damage and to satisfactorily handle surface waters in accordance with Title 25, Rules and Regulations, Part I, Commonwealth of Pennsylvania, Department of Environmental Resources, Subpart C, Protection of Natural Resources, Article II, Water Resources, Chapter 102, Erosion Control. Any drainage system not operating as planned shall be corrected at the expense of the applicant.
- E. The applicant shall not modify, fill, excavate or regrade the land in any manner so close to a property line as to endanger or damage any adjoining public street, sidewalk, alley or any other public or private property without supporting and protecting such property from settling, crackling, erosion, sediment, stormwater pooling or other physical damage or personal injury which might result.
- F. No person, firm or corporation shall deposit or place any debris or 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.

- G. All graded surfaces shall be seeded, sodded and/or planted or otherwise protected from erosion within sixty (60) days of breaking ground, and shall be watered, tended and maintained until growth is well established at the time completion and final inspection.
- H. Natural and/or existing slopes exceeding five (5) horizontal to one (1) vertical shall be benched or continually stepped into competent materials where vertical cut exceeds ten (10) feet prior to placing all classes of fill.
- I. Fills toeing or natural slopes steeper than four (4) horizontal to one (1) vertical shall not be made, unless approved by the Township Engineer after receipt of a report deemed acceptable by the Township Engineer, by a soil engineer certifying that he has investigated the property, made the soil tests and that in his opinion such steeper slopes will safely support the proposed fill. Costs for such investigation and report shall be borne by the applicant.
- J. A quality control program is critical for fills, therefore, whenever load bearing fill material is to be used, each layer of compacted fill shall be tested to determine its dry density per ASTM D1556. The density of each layer shall not be less than ninety-five (95) percent of the maximum dry density as determined per ASTM D1557. These tests shall be required for all fills and stormwater or sediment basins within the Township.
- K. All permanent grading shall be designed to:
  - (1) Provide positive surface drainage away from onsite sewage disposal systems.
  - (2) Provide positive surface drainage away from buildings and structures.
  - (3) Limit stormwater runoff from the subject lot to other lands so that no more occurs than that which occurred prior to any construction of any nature on the subject lot.
  - (4) No stormwater runoff or drainage water shall be diverted as to overload existing drainage systems or create flooding or the need for additional drainage structures on other private properties or public land.
  - (5) Stormwater roof drains and any basement drains shall not discharge water directly onto a sidewalk, a lane, or a street, or within the street, or within the street right-of-way, and shall be constructed to retain the discharge only on the lot which is the subject of the application or to a stormwater system.

(Ord. 99, 10/27/1982, §7)

**§108. APPROVAL OF PERMITS.**

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The Township Engineer shall approve and issue all erosion and sedimentation and grading permits on the form provided by the Township for this purpose. No building permit shall be issued by the building inspector and no driveway permit shall be issued by the Township until such time as an erosion and sedimentation and grading permit has been obtained by the applicant, whenever required. Furthermore, no occupancy permit shall be issued by the building inspector until such time as the Township Engineer certifies in letter form that all grading has been completed in accordance with the final grading plan.

(Ord. 99, 10/27/1982, §8)

### §109. REGULATIONS FOR PERMIT HOLDERS AND OTHERS.

1. The permittee is responsible for any property damage or personal injury caused by his activity authorized by the permit.
2. No person, firm or corporation shall modify, fill, excavate, pave, grade or regrade land in any manner as to endanger or damage public or private property, or to cause physical damage or personal injury. All precautions will be taken to prevent any damage to adjoining streets, sidewalks, buildings and other structures which could be caused by settling, cracking, erosion or sediment.
3. No person, firm or corporation shall fail to adequately maintain in good operating order any drainage facility on his premises. All watercourses, drainage ditches, culverts, drainpipes and drainage structures shall be kept open and free flowing at all times.
4. The owner, from time to time, of any property on which any work has been done pursuant to a permit granted under this Part shall continuously maintain and repair all graded surfaces and anti-erosion devices such as retaining walls, drainage structures or means, plantings and ground cover, installed or completed.
5. When required, adequate provisions shall be made for dust control measures as determined by the Township Engineer.
6. All plans and specifications accompanying applications for permits shall include provisions for both temporary and permanent grading.
7. The installation and maintenance of erosion and sedimentation control measures shall be accomplished in accordance with standards and specifications established by the USDA Soil Conservation Service and the Bucks County Soil Conservation District.

(Ord. 99, 10/27/1982, §8)

### §110. INSPECTIONS.

1. All inspections shall be the responsibility of the Township Engineer.

2. Inspections shall be carried out on a random basis, except as stated herein.
3. A final inspection shall be conducted by the Township Engineer to certify compliance with this Part. The permittee and owner of the subject lot shall notify the Township Engineer within fourteen (14) days of the completion of all activities for which a permit was issued hereunder. The Township Engineer shall then conduct an inspection to insure that satisfactory compliance with this Part has been accomplished. If the subject lot, as finally graded, does not conform to the final grading plan filed with the permit applications hereunder, then the Township Engineer shall note all changes on the final grading plan. When the Township engineer is satisfied that the finally graded lot complies with the provisions of this Part, he shall then have the permittee and owner of the subject lot execute the final grading plan (showing all changes in the final grading). Thereafter, the Township Engineer shall notify the Township building inspector that the subject lot is in compliance with this Part. No occupancy permit under the Township Building Code [Chapter 5, Part 1] shall be issued by the building inspector until such time as the Township Engineer certifies to him that all grading has been completed in accordance with the final grading plan.

(Ord. 99, 10/27/1982, §10)

#### §111. FEES.

Application fees shall be set from time to time by resolution by the Upper Makefield Township Board of Supervisors by resolution. All costs of inspections will be billed to the applicant as inspections are completed. Payments shall be made, within thirty (30) days and no occupancy permit shall be issued until all payments have been made.

(Ord. 99, 10/27/1982, §11)

#### §112. REVOCATION OR SUSPENSION.

Any permit issued under this Part may be revoked or suspended by the Board of Supervisors of the Township after notice of:

- A. Failure to carry out the control measures described in the application at the appropriate times as specified in the applicable time schedule or within such reasonable extensions as may be granted by the Township Engineer.
- B. Violation of any other condition of the permit.
- C. Violation of any provision of this Part or any other applicable law, ordinance, rule or regulation relating to the work.
- D. Existence of any condition or the doing of any act constituting or creating a nuisance, hazard or endangering human life or the property of others.

(Ord. 99, 10/27/1982, §12)

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### §113. REMEDIES.

In the case of any paving, filling, stripping, grading or regrading; any disturbing, modifying, blocking or diverting the natural overland or subsurface flow of stormwater; or any construction, erection and installation of any dam, ditch, culvert, drainpipe, bridge or any other structure or obstruction affecting the drainage of any premises, in violation of this Part, or any regulations pursuant hereto, the proper Township authorities, in addition to other remedies provided by law, may institute any appropriate action or proceedings to prevent such unlawful activities; to restrain, correct or abate such violations; to prevent the use of the applicable premises; or to prevent any illegal act, conduct, business or use in or about such premises. In addition, upon the failure of any permit holder to complete the control measures specified in his application, the Township may, after revoking such permit, proceed to complete such measures itself, and recover the cost thereof from the permittee.

(Ord. 99, 10/27/1982, §13)

### §114. PENALTIES.

For any and every violation of the provisions of this Part, (1) the owner, general agent or contractor of a building or premises where such violation has been committed or shall exist; (2) the lessee or tenant of an entire building or entire premises where such violation has been committed or shall exist; (3) the owner, general agent, contractor, lessee or tenant or any part of a building or premises in which part such violation has been committed or shall exist; and (4) the general agent, architect, contractor or any other person who knowingly commits, takes part or assists in any such violation or who maintains any building or premises in which any such violation shall exist; shall, on conviction thereof, be sentenced to pay a fine not to exceed one thousand dollars (\$1,000.00) plus costs and, in default of payment of said fine and costs to a term of imprisonment not to exceed thirty (30) days. Whenever such person, or persons, shall have been notified by the Township Engineer, or the Township Board of Supervisors, or the Township Solicitor, or by service of a summons in a prosecution, or in any other official manner, that he is committing a violation of this Part, each day's continuance of such violation after such notification shall constitute a separate offense punishable by a like fine or penalty. Such fines or penalties shall be collected as like fines or penalties are now collected by law.

(Ord. 99, 10/27/1982, §14; as amended by Ord. 186, 12/6/1995)

**PART 2**

**AS-BUILT FOUNDATION PLAN**

**§201. FILING OF AN AS-BUILT FOUNDATION PLAN.**

Upon completion of a building foundation and prior to framing or wall construction, any builder of a building in Upper Makefield Township shall file with the Township three (3) as-built foundation plans.

(Ord. 237, 8/2/2000, §I)

**§202. SCALE.**

All as-built foundation plans shall be a minimum of 11" x. 17", at a scale of not less than 1" = 50'.

(Ord. 237, 8/2/2000, §I)

**§203. MINIMUM REQUIREMENTS.**

The as-built foundation plan shall show all as-built features and, at a minimum, shall indicate the following:

- A. The actual building envelope of the structure with dimensions.
- B. The actual dimensions from property lines (front, side and rear) to the structure.
- C. As-built of foundation elevation, utilizing the same vertical datum as the approved plan.
- D. Finished floor elevation of the garage and first floor of the building based on as-built foundation elevation.
- E. Property lines, building setback lines and street locations.

(Ord. 237, 8/2/2000, §I)

**§204. PREPARATION OF PLAN.**

The as-built foundation plan shall be prepared by a registered professional surveyor of the Commonwealth of Pennsylvania who shall certify that all information is true and correct.

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(Ord. 237, 8/2/2000, §I)

### **§205. CERTIFICATION.**

No further construction will be permitted until certification is received by the Township Engineer and his approval is subsequently provided to the Township's Code Enforcement Officer.

(Ord. 237, 8/2/2000, §I)

### **§206. INSPECTIONS.**

1. All reviews and inspections of foundations necessary to verify information submitted on an as-built foundation plan shall be the responsibility of the Township Engineer and/or other designated Township official. Inspections shall be undertaken following the filing of an as-built foundation plan as required by this Part.
2. All inspections shall certify compliance with this Part.

(Ord. 237, 8/2/2000, §I)

### **§207. FEES.**

A fee established by resolution of the Board of Supervisors shall be paid at the time of submission of the initial grading plan.

(Ord. 237, 8/2/2000, §I)

### **§208. PENALTIES.**

For every and any violation of the provisions of this Part, the owner, general agent, or contractor of a building or premises where such violation has been committed or shall exist, who knowingly commits, takes part or assists in any such violation or who maintains any building or premises in which any such violation shall exist shall be liable on conviction therefore before a District Justice to pay a fine or penalty not to exceed one thousand dollars (\$1,000.00) for each and every offense. Each day's continuance of such violation after notification that a violation exists shall constitute a separate offense punishable by a like fine or penalty. Such fines or penalties shall be collected as like fines or penalties are now collected by law.

(Ord. 237, 8/2/2000, §I)