

## **Chapter 9**

### **Grading and Excavating**

#### **Part 1**

#### **Regulating Grading and Excavations and Fills**

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**Part 1****Regulating Grading Excavations and Fills****§9-101. Title and Purpose.**

1. *Title.* This Part shall be known and may be cited as the “Ross Township Grading Ordinance.”

2. *Purpose.* The purpose of this Part is to provide minimum standards to safeguard persons, to protect and to promote the public welfare by regulating and controlling the design, construction, quality of materials, use, location and maintenance of grading, excavation and fill.

(Ord. 2252, 11/13/2007, §2)

**§9-102. Definitions.**

Wherever used in this Part the following words shall have the meaning indicated:

*Building permit* - a permit issued by the Township pursuant to the provisions of applicable Ross Township ordinances for the construction, erection or alteration of a structure or building.

*Engineer (Township Engineer)* - an individual licensed and registered under the laws of the Commonwealth of Pennsylvania to engage in the practice of engineering, assigned or appointed by the Township of Ross to perform the duties required of the Engineer hereunder.

*Engineer of record* - an individual licensed and registered under the laws of the Commonwealth of Pennsylvania to engage in the practice of engineering that prepared the proposed grading plan for the applicant.

*Excavation* - any act by which earth, sand, gravel, rock or any other similar material is cut into, dug, quarried, uncovered, removed, displaced, relocated or bulldozed and shall include the conditions resulting therefrom.

*Fill* - any act by which earth, sand, gravel, rock or any other material is deposited, placed, pushed, dumped, pulled, transported or moved to a new location and shall include the conditions resulting therefrom.

*Grade* - the elevation of the existing ground surface at the location of any proposed excavation or fill.

*Grading* - excavation or fill or any combination thereof and shall include the conditions resulting from any excavation or fill.

*Grading permit* - any permit required under §9-104 hereof.

*Person* - a natural person but shall also include a partnership or corporation and their heirs, successors and assigns.

*Site* - a lot, tract or parcel of land, or a series of lots, tracts or parcels of land which are adjoining where grading work is continuous and performed at the same time.

*Township* - the Township of Ross.

(Ord. 2252, 11/13/2007, §2)

**§9-103. Scope.**

New grading, excavations and fills, or changes, additions, repairs or alterations made to existing excavations and fills shall conform to the provisions of this Part, except that this Part shall not apply to:

- A. Work done in a public street or alley or in a Township park, or Township property; when undertaken by the Township Department of Public Works.

(Ord. 2252, 11/13/2007, §2)

**§9-104. Permits Required.**

1. *When Required.* A grading permit shall be obtained from the Township after approval from the Engineer. A separate grading permit shall be required for each site. One permit may cover the grading, excavation, and any fill made on the same site.

- A. A grading permit is required if any of the following conditions are met:

- (1) An excavation or fill of 50 cubic yards or more.

- (2) An excavation or fill, 4 feet or more in vertical depth at its deepest point as measured from the natural ground surface of any slope with a surface area of 1,000 square feet.

- (3) Excavation below finished grade for basement, cellar, and/or foundation of any aboveground structure, swimming pool or underground structure on a lot with an average existing slope with a gradient of 25 percent or more.

- (4) Grading in an easement for a public sewer, water main, storm drain or power line.

- (5) An encroachment on or alteration of an existing drainage channel or watercourse.

- B. Surface mining involving 50 cubic yards or more.

- C. Removal of trees, vegetation or other natural ground cover:

- (1) Over an area in excess of 1,000 square feet.

- (2) On any slope with a gradient in excess of 25 percent, when in the opinion of the Engineer or Building Code Official, the removal of such ground cover could affect the stability of existing slope.

- D. Surfacing and paving of land other than streets or ways with hard surface or compacted nonpermeable material such as asphalt, concrete or slag, with area in excess of 5,000 square feet.

2. *When Not Required.* A grading permit shall not be required by virtue for any of the following:

- A. Grading or paving for a Township street improvement project.

- B. An excavation or fill made below finished grade for basements or footings of buildings, swimming pools or underground structures for new construction authorized by a building permit properly issued by the Township, other than a lot with an average existing slope with a gradient of 25 percent or more. The temporary stockpiling of the material from such excavation on the same site; provided, however, that if the material from such excavation is thereafter to be

used for fill purposes for which a grading permit is required, such permit must be obtained prior to such use in accordance with the requirements of this Part. In addition, if excavated material is stockpiled on a site for a period longer than 6 months, then a permit shall be necessary for the storage of such material.

(*Ord. 2252, 11/13/2007, §2*)

#### **§9-105. Application.**

Each applicant for a grading permit shall file the following information with the Township:

A. The purpose for which the grading application is filed, the intended use of the site, and if the Township has issued a building permit for the site which is the subject of the application, where applicable.

B. State the estimated starting and completion dates of the grading work.

C. Submit a plot plan showing the location of the grading, existing and proposed contours (2-foot contour interval), property lines, neighboring streets, ways, properties, buildings, utilities, easements, rights of ways, trees over 8 inches caliper, and sufficient dimensions and other data necessary to identify and locate the proposed work site.

D. An engineering report prepared by a professional engineer licensed by the Commonwealth of Pennsylvania and retained by the applicant. The engineering report shall:

(1) Be submitted at the discretion of the Engineer if the excavation or fill is less than 400 cubic yards.

(2) Be mandatory for all excavation or fill that exceeds 400 cubic yards.

This report shall include: a contour map of the site showing present contours (2-foot contour interval) and proposed contour after completion of grading, cross sections at 50 foot intervals across the site, with a minimum of three such cross-sections, calculations providing the volume of cut and fill proposed, a geological description and classification of the excavated materials, details and location of any proposed drainage, structures, pipes, walls and cribbing, nature of fill material. All plans and drawings shall be certified and submitted in triplicate. The applicant shall also submit one copy of the plan in digital format.

(*Ord. 2252, 11/13/2007, §2*)

#### **§9-106. Permits and Fees.**

1. The Township's Building Inspection Office shall receive all applications and shall collect all fees. The Building Code Official shall review all applications and make a preliminary on-site inspection to determine the scope of the proposed cut and/or fill and make a determination whether, in his opinion, the proposed work would affect adjoining properties. If, in the opinion of the Building Code Official, after such review and on-site inspection, the proposed work is of minor nature and scope and that the following conditions have been met: [*Ord. 2288*]

A. The maximum slope of cut or fill slopes proposed do not exceed (3:1) 3 feet of horizontal run to every 1 foot of vertical rise;

- B. No retaining walls or slope reinforcement is proposed;
- C. Cut or fill does not exceed 8 feet in vertical depth from the natural ground surface;
- D. The extent of the grading does not exceed 3,000 square feet;
- E. The volume of the proposed excavation does not exceed 500 cubic yards;

the Building Code Official may, provided that all of the other conditions and provisions of this Part are satisfied by the applicant, recommend to the Township Engineer that the building permit be issued. [Ord. 2288]

If, however, in the opinion of the Building Code Official, after such review and on-site inspection, the nature of the proposed cut and/or fill would affect adjoining property or if the cut and/or fill exceeds the conditions noted in subsection .1 above, the Building Code Official shall transmit the application to the Engineer, who shall review the application and indicate his approval thereof. In the event of disapproval by the Engineer, the Township shall note the reasons therefore and forward a copy of the disapproval to the applicant. [Ord. 2288]

2. Before issuance of a grading permit, the applicant shall post a bond, with corporate surety, or other approved security, in the amount of 50 percent of the estimated cost of the grading work to guarantee the completion of said work, including slope treatment, landscaping, stormwater management and drainage required under the permit.

3. Before issuing a grading permit, the Township shall collect a permit fee based upon the volume of material to be graded, as established from time to time by resolution of the Board of Commissioners.

4. Prior to the issuance of the grading permit the Building Code Official or Engineer shall collect all outstanding engineering review fees. [Ord. 2288]

5. An escrow account may be required to offset the cost of the special inspection requirements for substantial project.

6. Before issuing a grading permit, the applicant shall enter into a grading permit agreement with the Township.

7. All permits shall be executed by the Engineer prior to issuance.  
(Ord. 2252, 11/13/2007, §2; as amended by Ord. 2288, 4/12/2010)

#### **§9-107. Expiration of Permit.**

Every grading permit shall expire by limitation and become null and void if the work authorized by such permit has not been commenced within 6 months or is not completed within 1 year from the date of issue; provided, that the Engineer may, if the permit holder presents satisfactory evidence that unusual difficulties have prevented work being completed within the specified time limits, grant a reasonable extension of time; and, provided further, that the application for the extension of time is made before the date of expiration of the permit.

(Ord. 2252, 11/13/2007, §2)

#### **§9-108. Denial of Permit; Appeal.**

1. Wherein, in the opinion of the Engineer, the work as proposed by the applicant

is likely to endanger any property, or person, or any street or alley, or create hazardous conditions, he shall deny the grading permit. In determining whether the proposed work is likely to endanger property or streets or alleys, or create hazardous conditions, the Engineer shall give due consideration to pertinent factors including, but not limited to: possible saturation by rains, earth movements, runoff surface waters and subsurface conditions such as the stratification and faulting of rock, aquifers, springs and the nature and type of the soil or rock, for both during construction and after completion of construction.

2. Any applicant or permit holder shall have the right to appeal to any court of competent jurisdiction from any decision or determination of the Engineer.

(Ord. 2252, 11/13/2007, §2)

### **§9-109. Inspections.**

1. A. Inspections shall be conducted and documented by the applicant's engineer of record. Upon completion of work the engineer of record shall submit a final report documenting their inspection efforts and a letter of completion certifying that the proposed grading was completed as per the plans, specifications and permit requirements.

B. If in the opinion of the Township Engineer the extent and scope of the work proposed by the applicant requires inspection to protect the public safety and/or assure soil or other conditions were so stated in the plans and reports filed with the permit, the Engineer may require that the inspection hereinafter stated shall be required.

C. As directed by the Township Engineer, the inspection shall be conducted by the Township, a consultant employed by the Township, or the applicant's design engineer.

D. The cost of these inspections will be borne by the applicant. The applicant may be required to escrow the estimated amount of the inspection costs with the Township prior to the issuance of the grading permit.

2. Plans for grading work, approved by the Engineer, shall be maintained at the site during the progress of the grading work and until the work has been approved.

3. The permit holder shall notify the Township Engineer, the engineer of record (the applicant's design engineer) or Township's site consultant, as directed by the Township Engineer, in order to obtain inspections in accordance with the following schedule and at least 3 working days before the inspection is to be made:

A. *Initial Inspection.* When work on the excavation or fill is about to be commenced.

B. *Rough Grading.* When all rough grading has been completed.

C. *Drainage Facilities.* When drainage facilities are to be installed and before such facilities are backfilled.

D. *Special Structures.* When excavations are complete for key ways, retaining and crib walls and when reinforcing steel is in place and before concrete is poured.

E. *Final Inspection.* When all work, including the installation of all drainage and other structures has been completed.

4. If at any stage of the work the Engineer or his agent shall determine by inspection that further work as authorized by an existing permit issued hereunder is likely to endanger private property, or public streets, alleys or ways, or create hazardous conditions, the Township, through its Engineer, shall stop further prosecution of the work until such time as the applicant or holder of the permit shall eliminate the likelihood of such danger by, inter alia, the construction of additional drainage facilities, berms, terracing, compaction, cribbing or other means.

5. The inspections of the work by the Engineer or his agent as hereinabove set forth shall be limited to a determination by him as to whether or not the work is progressing in accordance with the application. Such inspections and/or right of inspections hereunder are not intended to include and do not include any supervision or right of supervision of the manner or means utilized by the applicant or holder of the permit in the progress of the work.

6. All actions taken by the applicant to satisfy the hazardous conditions shall in no way transfer liability to the Township.

7. Prior to the issuance of the permit, the Township may require that the applicant file a hold harmless agreement to indemnify the Township and its agents.

(Ord. 2252, 11/13/2007, §2)

#### **§9-110. Standards for Excavations.**

1. No excavation shall be made with a cut face steeper in slope than 1 vertical to 3 horizontal, unless the following conditions are met:

A. An engineering report prepared by a professional engineer, licensed by the Commonwealth of Pennsylvania, and experienced in earth sciences certifying that the material to be excavated is sufficiently stable to sustain a slope steeper than 1 vertical to 3 horizontal and that said steeper slope will not endanger or result in damage to adjacent properties.

B. A retaining wall or other approved support, designed by a professional engineer licensed by the Commonwealth of Pennsylvania, and approved by the Engineer, is provided to support the face of the excavation and prevent damage to adjacent properties.

2. No excavation will be permitted within a line 3 feet inside the property lines of the site on which excavation is made, or the grading setback as otherwise defined in the Township Zoning Ordinance [Chapter 27].

3. Excavation shall not extend below the angle of repose or natural slope of the soil under the nearest point of any footing or foundation of any building or structure unless such footing or foundation is first properly underpinned or protected against settlement.

4. Before commencing any excavation which may affect the geotechnical stability and adjoining property or structures thereon, the person making or causing the excavation to be made shall notify in writing the owners of the adjacent property or buildings not less than 30 days before such excavation is to be made that the proposed excavation is to be started. Adjoining properties and structures shall be protected as provided in the Township Building Code [Chapter 5, Part 1] as is then on file in the office of the Building Code Official. []

5. *Steep Slopes.*

A. The steep slope protections are provided to reduce grading on steep slopes areas within the Township that have not been previously graded. The intent of this provision is to preserve the esthetic, stormwater and environmental benefits provided by steep slopes. The disturbance of land, which shall include the development, grading, and stripping of vegetation thereon, shall be limited to a percentage of the land within steep slope categories established by this Section. The applicant proposing the subdivision and/or land development shall prepare a topographic site plan with 5-foot contour intervals depicting the slope of all areas within the site according to categories of 0 - 11.9 percent, 12-14.9 percent, 15-25 percent and greater than 25 percent prior to grading and as proposed in the topographic site plan. Land that has previously been graded shall be delineated on the plan and shall not be considered in the steep slope calculations.

B. Such plan shall be sealed by a professional engineer, professional land surveyor or a landscape architect. The maximum area of land which may be developed, graded and stripped of vegetation shall be as follows:

Slope	Area Which Could be Disturbed
12 - 14.9%	40% (30% in a landslide prone area)
15 - 25%	30% (20% in a landslide prone area)
25% and above	15% (5% in a landslide prone area)

C. The applicant must demonstrate that the area of the proposed development is not within a landslide prone area - failing that, the applicant must demonstrate that measures taken during development and construction will decrease the risk of landslides.

D. Within landslide prone areas, no structures, roads or vehicular use areas shall be located within 20 feet of a slope greater than 30 percent.

(Ord. 2252, 11/13/2007, §2; as amended by Ord. 2288, 4/12/2010)

**§9-111. Standards for Fill.**

1. No fill shall be made in the Township with an exposed face slope steeper than 1 vertical to 3 horizontal. These slope faces can be deviated from only when the following conditions are met:

A. An engineering report prepared by a professional engineer, licensed by the Commonwealth of Pennsylvania, and experienced in earth sciences and subsurface conditions, certifies that he has inspected the site, that the material which is to be used for fill is sufficiently stable to sustain a slope steeper than that specified above and that said steeper slope will not endanger or result in damage to adjacent properties.

B. A retaining wall or other approved support, designed by a professional engineer, licensed by the Commonwealth of Pennsylvania, and approved by the Engineer, is provided to support the face of the fill and prevent damage to adjacent properties.

C. The Engineer may require an engineering report to include whatever

subsurface test is deemed necessary to determine the bearing value and stability of the material under the proposed fill.

2. All debris which will burn or decompose and all topsoil shall be removed from the proposed fill area.

3. Coal, bony, red-dog, expansive slag, cinders, wood, trash, metals, organic material or refuse shall not be placed or used for fill material.

4. Earth and granular material used for fill shall be spread in uniform layers of 4, 6, or 8 inches (loose thickness), dependent upon the type of equipment to be used for compaction as follows:

Compaction Equipment	Maximum Layer Thickness
Sheepsfoot rollers	8 inches
Pneumatic-tired rollers	6 inches
Mechanical hand tampers	4 inches

5. Rock used for fill shall be spread in uniform layers of 18 inches or less in depth. When, in the opinion of the Engineer, the rock sizes necessitate a greater depth per layer than the height of fill will permit, the layer depth shall be increased as necessary, but in no case shall the depth of layer exceed 2½ feet.

A. Each layer shall be constructed by starting at one end and dumping rock on top of the previous layer and pushing the material ahead in such a manner that the larger rock will be placed on the ground or preceding layer and the interstices between the larger stones will be filled with small stones and spalls from this and succeeding layers.

B. The maximum dimension of any rock used in embankment shall be less than the depth of the embankment layer and, in no case, shall any rock over 2 feet in its greatest dimension be placed in the embankment. All oversized rock which is otherwise suitable for construction shall be broken to the required dimension.

6. The top 6 inches of all embankments and fill areas shall be formed of granular material or soil, and, in no case shall material of a size larger than 1 inch be placed within the top 6 inches of fill.

7. Where fills are placed, the toe of the fill shall be prepared by cutting a bench at least 10 feet wide on a reverse slope of 1 vertical to 10 horizontal.

(Ord. 2252, 11/13/2007, §2)

**§9-112. Drainage and Environmental Provisions.**

1. Adequate provisions shall be made to prevent any surface waters from damaging:

- A. The cut face of an excavation.
- B. The sloping surface of a fill.
- C. Adjacent property affected by the change in the existing natural runoff.

2. All drainage provisions shall conform to the requirements contained in the Township’s Stormwater Management Ordinance [Chapter 23].

3. Constructed benches in the fills or cuts or at the top of slopes shall have 2

percent reverse slope gradients and horizontal gradients perpendicular to the flow of the bench of at least 2 percent for the purpose of carrying off surface waters. If conditions warrant, the Engineer shall require a stabilized liner to be installed on any bench to prevent erosion.

4. The planting of sod, shrubs, trees or other vegetation on slopes to reforest the slope and prevent localized erosion shall be required. When requested by the Township a landscaping plan will be submitted for the review and approval of the Engineer.

5. The applicant shall submit an erosion and sedimentation plan and post construction stormwater management plan for review and approval of the Township Engineer. The Township Engineer or State regulation may require that the applicant's plan also be approved by the Allegheny County Conservation District or PA DEP.

(Ord. 2252, 11/13/2007, §2)

### **§9-113. Maintenance.**

1. The owner of any property on which an excavation or fill has been made shall maintain in good condition and repair the excavation or fill permitted, and also all retaining walls, cribbing, drainage structures, fences, ground cover, and any other protective devices as may be a part of the permit requirements.

2. If, at any time subsequent to the completion of the grading work, the cut face or fill slope shall evidence signs of deterioration, erosion, or other evidence which might be detrimental to the properties above or below the grading site, the Township, upon the recommendation of its Engineer, shall notify the property owner to take remedial action to restore the graded area to a safe condition, and to do so in a reasonable period of time.

3. If, after such notification, the property owner has not made the necessary repairs within the allotted time, then the Board of Commissioners may apply to a court of competent jurisdiction for an order requiring the property owner to take remedial action to restore the graded area to a safe condition.

(Ord. 2252, 11/13/2007, §2)

### **§9-114. General Requirements.**

1. The top or bottom edge of slopes shall be at least 3 feet from adjacent property lines or street right-of-way lines in order to permit the normal rounding of the edge without encroaching on the abutting property or street.

2. At the top of all cut or fill slopes which are in excess of 1 vertical to 1½ horizontal, and 6 or more feet in total height, a fence not less than 4 feet in height, and of a design meeting the Township standards, shall be erected, if required by the Engineer for the protection of the general public.

3. The owner of the property being graded shall be responsible to protect and clean up lower properties of silt and debris which have washed down onto the lower properties as a result of the grading work on the higher property.

4. In order to prevent the denuding of the landscape, wherever practicable, large trees and other natural features constituting important physical, esthetic and economic assets to existing or impending development work shall be preserved.

(Ord. 2252, 11/13/2007, §2)

**§9-115. Violation and Penalties.**

1. No person shall construct, enlarge, alter, repair or maintain any grading, excavation or fill, or cause the same to be done contrary to or in violation of any provision of this Part.

2. When written notice of violation of any of the provisions of this Part has been served by the Building Code Official on any person, such violation shall be discontinued immediately. [Ord. 2288]

3. Any person violating any of the provisions of this Part, upon conviction thereof, shall be sentenced to pay a fine of not more than \$1,000 plus costs and, in default of payment of said fine and costs, to a term of imprisonment not to exceed 30 days. Each day that a violation of this Part continues shall constitute a separate offense. Whenever such person shall have been notified by the Building Code Official by service of summons in a prosecution or in any other way that he is committing such violation of this Part, each day that he shall continue such violation after such notification, shall constitute a separate offense punishable by a like fine. [Ord. 2288]

(Ord. 2252, 11/13/2007, §2; as amended by Ord. 2288, 4/12/2010)

**§9-116. Remedies.**

In case any work is performed by any person in violation of any of the provisions of this Part, the proper officers of the Township, in addition to other remedies, may institute in the name of the Township an appropriate action or proceeding, whether by legal process to prevent such unlawful work and to restrain or abate such violation.

(Ord. 2252, 11/13/2007, §2)

**§9-117. Certification of Completion.**

Upon completion of the grading as approved by the Engineer, the applicant's engineer shall issue to the Township a certification of completion, which will certify that all work, grading, filling as stipulated in the permit has been completed in compliance with the approved plans and specifications and Township ordinance requirements. Copies of all inspection reports shall also be submitted with the certificate of completion document.

(Ord. 2252, 11/13/2007, §2)

**§9-118. As-Built Plans.**

Upon completion of the grading the applicant shall provide as-built plans, sealed by the applicant's engineer, to the Engineer in both hard copy and digital format (.pdf format).

(Ord. 2252, 11/13/2007, §2)