

## **Chapter 9**

### **Grading and Excavating**

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**Part 1****Grading Regulations****A. General Provisions.****§9-101. Purpose.**

The purpose of this Part is:

A. To provide minimum standards to safeguard persons, protect property and promote the general welfare by preventing excess erosion, hazardous rock and soil slippage, sediment production and other soil and water management problems by regulating and controlling the design, construction, quality of materials, use, location, and maintenance of grading, excavations and fills.

B. To establish performance standards that ensure land use practices based on the natural topography and capabilities of the land.

C. To prevent earthflow and rockfall landslides.

*(Ord. 2354, 7/11/2011, §101)*

**§9-102. Scope and Application.**

This Part addresses new grading, excavations and fills and changes, additions or alterations made to existing excavations, fills and embankments that shall conform to the provisions of this Part. A grading permit shall be required before the initiation of grading on any property pursuant to the requirements of this Part.

*(Ord. 2354, 7/11/2011, §102)*

**§9-103. Permit Granting Authority, Inspection.**

Carnegie Borough Council designates the Administrator or his authorized representative, to review, approve, and grant grading permits and to make inspections of the grading work.

*(Ord. 2354, 7/11/2011, §103)*

**§9-104. Separate Permit Required for Each Site.**

A separate grading permit shall be required for each land development. One permit shall cover all grading, excavation and any fills made on the same site.

A. Only one permit shall be required for the grading of a continuous parcel of land for a land development or subdivision, when the standards for the grading of the entire parcel are satisfactory to, and approved by, the Administrator or his authorized representative.

*(Ord. 2354, 7/11/2011, §104)*

**§9-105. Prerequisite.**

An approved land development plan and/or a building permit, as required pursuant to the Carnegie Borough Code, are prerequisites to the granting of any grading permit.

(Ord. 2354, 7/11/2011, §105)

**§9-106. Exceptions.**

A grading permit shall not be required for any of the following:

A. An excavation which does not exceed 3 feet in vertical depth at its deepest point measured from the natural ground surface or which does not cover a surface area of more than 1,000 square feet, provided that the surfaces of such excavation do not have a slope at any point steeper than four horizontal to one vertical. However, this subsection shall not be deemed to nullify the application of this Part, or any requirement for obtaining a grading permit, with respect to any fill made with material from such an excavation, unless otherwise excused by subsections .2 and .3.

B. A fill that does not exceed 10 cubic yards of material on any one site.

C. Fill which does exceed 3 feet in vertical depth at its deepest point measured from the natural ground surface and does not cover an area of more than 1,000 square feet, provided that the surfaces of such fills do not have a slope at any point steeper than four horizontal to one vertical.

D. An excavation which is below finished grade for basements and for footings of a building, other than a one-family dwelling, swimming pool or underground structure authorized by a building permit; and an excavation for a driveway between a building site and the street: provided, however, that a permit is required for an excavation of a driveway between the building site and the street when either excavation or filling exceeds 3 feet in vertical depth or the total volume of excavation and filling exceeds 100 cubic yards. However, this paragraph shall not be deemed to nullify the application of this Part, or any requirement for obtaining a grading permit, with respect to any fill made with the material from such an excavation unless otherwise excused by subsections .2 and .3.

E. Soil excavated under the authorization of a properly issued building permit that is stockpiled on the same site as the excavation. If, however, excavated material is stockpiled on a site for a period of longer than 120 days, then a permit shall be necessary when disposing of the fill material.

F. A one-family house site where the maximum slope between property lines or the maximum excavation or fill, exclusive of the situations referred to in paragraph .D, above, do not exceed the slopes or quantities set forth in the following table:

<b>One-family House Site (In Square Feet)</b>	<b>Maximum Slope Without Permit</b>	<b>Maximum Excavation or Fill Without Permit Exclusive of Basements &amp; Foundations</b>
From 6,000 to 10,000	15 in 100 feet	100 cubic yards
From 10,000 to 18,000	15 in 100 feet	200 cubic yards
From 18,000 to 30,000	15 in 100 feet	250 cubic yards
Over 30,000	20 in 100 feet	250 cubic yards

G. Exploratory excavations under the direction of a geotechnical engineer.

H. Excavations for wells, public utilities or cemetery graves.

I. Work performed by the Municipality or by contractors employed by the Municipality in a public street or alley, municipal park, playground, recreation area or on other municipal property.

(Ord. 2354, 7/11/2011, §106)

### §9-107. Definitions.

For the purpose of this Part, the following terms and words are defined as follows:

*Administrator*—the Borough Manager of the Borough of Carnegie, Pennsylvania.

*Applicant*—any landowner, or agent of a landowner with the written permission of said landowner, who proposes to make or causes to be made any excavation, fill or any combination thereof pursuant to the provisions of this Part.

*Architect*—a registered professional architect licensed as such by the Commonwealth of Pennsylvania.

*Base flood*—the flood that has a 1 percent probability of being equaled or exceeded in any given year (also referred to as the 100-year flood).

*Bedrock*—natural rock layer, hard or soft, in place at ground surface or beneath unconsolidated surficial deposits.

*Building Code*—Chapter 5, Part 1, of the Carnegie Borough Code of Ordinances.

*Engineer*—a registered professional engineer licensed as such by the Commonwealth of Pennsylvania. The use of the word “engineer” shall not exclude the practice of topographic surveying as provided for by the laws of the Commonwealth.

*Erosion*—the detachment and movement of soil or rock fragments by water, wind, ice or gravity, including such processes as gravitational creep.

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

*Fill and embankment*—any act by which earth, sand, gravel, rock or any other similar material is deposited, placed, pushed, dumped, pulled, transported or moved to a new location, including the condition resulting therefrom.

*Flood*—a general but temporary condition of partial or complete inundation of normally dry land areas from the overflow of streams, rivers, or other waters of this Commonwealth.

*Floodplain*—the lands adjoining a river or stream that have been or may be expected to be inundated by floodwaters in a base flood.

*Flood prone area*—any land area susceptible to being inundated by floodwater from any source.

*Flood way*—the channel of a watercourse and portions of the adjoining floodplains that are reasonably required to carry and discharge the base flood. Unless otherwise specified, the boundary of the floodway is as indicated on maps and flood insurance studies provided by FEMA. In an area where no FEMA maps or studies have defined the boundary of the base flood floodway, it is assumed, absent evidence to the contrary, that the floodway extends from the stream to 50

feet from the top of the bank of the stream.

*Geologist*—an individual licensed and registered under the laws of the Commonwealth of Pennsylvania to engage in the practice of geology and who has training and experience in the field of engineering geology.

*Geotechnical engineer*—a registered professional engineer with training and experience in geology, civil engineering, soil mechanics, the physical properties of soil and behavior of soil masses subject to various types of forces and conditions.

*Geologic hazard area*—an area containing any of the following physical characteristics: a slope of 20 percent or greater, a landslide prone area, a subsidence prone area, or an area containing physical evidence of site instability such as soil creep, slumping, rock falls, groundwater seepage, rock slides, saturated soils or landslides.

*Geologic hazard investigation report*—a report prepared and sealed by a geotechnical engineer that shall include some or all of the following as required by the Municipality:

(1) Analysis of the soil borings and samples. A sufficient number of standard soil borings must be taken to a suitable depth to accurately determine existing conditions.

(2) Global stability analysis of proposed fill embankments and slopes and the effect on existing embankments supporting municipal infrastructure, public utilities and structures on adjacent properties.

(3) Development of soil parameters and how they are to be used.

(4) Analysis of cut slope stability.

(5) Complete and dimensioned details of all critical items, if required, such as keyways, rock toe, benches, drainage blankets, drains and surface diversions. Location of these items must be shown on a grading plan and on a related land development plan, if any.

(6) Any other information and data required by the Municipal Engineer to determine the stability of the site.

(7) Complete and detailed sealed engineering design and recommendations for excavation, fill, grading, compaction and embankment construction.

(8) A plan indicating the boundaries of any minimally steep slope, somewhat steep slope, moderately steep slope, significantly steep slope, exceedingly steep slope, land slide prone areas and subsidence prone areas as defined in this Part.

(9) A plan indicating topographic contour lines at 2 foot intervals for the subject site before any development is started. The contours must be developed from an on-site field topographic survey. The plan shall also show 2-foot intervals of the proposed development. Five-foot contours may be used in areas of more than 50 percent slope.

(10) A certificate of insurance evidencing that the geotechnical engineer has in force professional liability insurance with a limit not less than the total project cost, but in any event not less than \$1,000,000.

*Grade*— the elevation of the existing or proposed ground surface at the location

of any proposed excavation or fill.

*Grading*—excavation or fill, or any combination thereof, including the conditions resulting from any excavation or fill.

*Grading permit*—any permit required pursuant to the provisions of this Part.

*Hazard*—any danger or potential danger to life, limb or health, or any adverse effect or potential adverse effect to the safety, use or stability of the property, adjacent property, waterways, public ways, structures, utilities and storm sewers, including stream pollution.

*Landscape architect*—an individual licensed and registered under the laws of the Commonwealth of Pennsylvania to engage in the practice of landscape architecture.

*Land development*—any of the following activities:

(1) The improvement of one lot or two or more contiguous lots, tracts or parcels of land for any purpose involving:

(a) A group of two or more residential or nonresidential buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot or lots regardless of the number of occupants or tenure.

(b) The division or allocation of land or space, whether initially or cumulatively, between, or among, two or more existing or prospective occupants by means of, or for the purpose of streets, common areas, leaseholds, condominiums, building groups or other features.

(2) A subdivision of land.

(3) Development in accordance with §503(1.1) of the Pennsylvania Municipalities Planning Code, 53 P.S. §10503(1.1).

*Landslide prone areas*—any geologic formation that is especially susceptible to landslides due to the presence of one or more conditions such as unstable rock formations, soil types, groundwater seepage or saturated soils, including without limitation, areas containing soils identified as landslide prone in the Soil Survey of Allegheny County or other maps or surveys in the Allegheny County Department of Economic Development.

*One hundred-year storm*—an event where rainfall has a 1 percent probability of being equaled or exceeded in any given year in that location. A 100-year 24-hour rainfall event shall be considered 5.2 inches.

*Permit holder*—any landowner, agent of said landowner, with the written permission of said landowner who has been granted a grading permit pursuant to the provisions of this Chapter.

*Retaining wall*—a structure composed of concrete, steel or other approved building material constructed for the purpose of supporting a cut or filled embankment which would otherwise not comply with the requirements or standards set forth in this Part, and which is more than 2 feet in height as measured on the exposed vertical surface of the wall.

*Site*—a single lot, tract or parcel of land, or a series of lots, tracts or parcels of land which are adjoining and with respect to which grading work is to be continuous and performed generally at the same time.

*Slope*—the percent of rise or descent of the land surface calculated by dividing the number of feet of vertical rise/descent in elevation by the number of feet of horizontal distance, expressed as a percentage. Slope shall be calculated between contour intervals used to prepare the existing site topographic plan but in no case shall the vertical interval exceed 2 feet. The percent of slope is determined from on-site topographic surveys prepared with a 2-foot contour interval or topography taken from controlled aerial photography at 2-foot intervals. The slope of the land shall be shown on a plan of the property based on the following six categories:

- |                                |                  |
|--------------------------------|------------------|
| (1) Gentle slopes              | 0%-14%           |
| (2) Minimally steep slopes     | 15%-19%          |
| (3) Somewhat steep slopes      | 20%-25%          |
| (4) Moderately steep slopes    | 26%-30%          |
| (5) Significantly steep slopes | 31%-40%          |
| (6) Exceedingly steep slopes   | Greater than 40% |

*Soil survey*—the Soil Survey of Allegheny County, Pennsylvania, as prepared by the USDA Soil Conservation Service.

*Solid waste*—any and all parts or combination of ashes, garbage, refuse, radioactive material, combustible demolition materials and industrial wastes such as food processing wastes, wood, plastic, metal scrap, and other such materials whose disposal is regulated by the Pennsylvania Department of Environmental Protection.

*Stormwater management*—the control of surface water runoff as regulated by Chapter 22 of the Carnegie Borough Code of Ordinances, as amended.

*Subdivision Ordinance*—the Subdivision and Land Development Ordinance, as amended, being Chapter 22 of the Carnegie Borough Code of Ordinances.

*Subsidence prone areas*—an area above active and abandoned mining activities, as determined from records of the Pennsylvania Department of Environmental Protection, Bureau of Mining and Reclamation; Division of Mine Subsidence Insurance and Mine Subsidence Regulations and other applicable maps and records.

*Twenty-five-year storm*—an event where rainfall has a 4 percent probability of being equaled or exceeded in any given year in that location. A 25-year 24-hour rainfall event shall be considered 4.4 inches.

*Zoning Ordinance*—the Municipality's Zoning Ordinance, as amended, being Chapter 27 of the Carnegie Borough Code of Ordinances.

(Ord. 2354, 7/11/2011, §107)

### §9-108. Word Usage.

Unless otherwise expressly stated, the terms and words shall, for the purpose of this Part, have the meaning herein indicated. Words used in the singular number include the plural, and words in the plural include the singular; words in the masculine gender include the feminine and neuter; and the word “building” includes the word “structure,” and the word “structure” includes the word “building.”

(Ord. 2354, 7/11/2011, §108)



**B. General Procedures and Requirements.****§9-111. Application Procedure.**

1. Every applicant for a grading permit shall file a written application on a form provided by the Municipality, plans and specifications therefore with the Administrator which shall include at a minimum.

A. A description of the land on which the proposed work is to be done by lot, block, tract and street address, or similar description that will readily identify and definitively locate the proposed work.

B. The estimated dates for the starting and completion of grading work.

C. The purpose for which the grading application is filed.

D. Whether or not a building, structure or other improvement, the construction of which will require a building permit pursuant to the provisions of the Carnegie Borough Code, is intended to be erected on the land on which the grading is to be done.

2. The plans and specifications shall accurately portray and describe the site and proposed soil erosion controls. All plans submitted shall be signed and sealed by an engineer, architect, geotechnical engineer or landscape architect. Plans shall be submitted in triplicate, one set of which shall be of a reproducible nature, and shall include at a minimum:

A. The name and address of the applicant.

B. The name and address of the owner of the land.

C. The written permission and approval of the owner of the property, if the applicant is an agent of the landowner, by affidavit.

D. Accurate location by lot, block, tract, street address, a location map or other similar information.

E. The boundaries of any minimally steep slope, somewhat steep slope, moderately steep slope, significantly steep slope, exceedingly steep slope, land slide prone areas, subsidence prone areas, geologic hazard areas found to exist from a field investigation of the site:

F. A plan showing topographic contour lines at 2-foot intervals and the slope categories for the site topography for the subject site before any development is started. The contours must be developed from an on-site topographic survey or controlled aerial photography. The plan shall also show 2-foot intervals of the proposed development. Five-foot contours may be used in areas of more than 50 percent slopes.

G. Cross-sections of the proposed excavation or fill at 50-foot intervals that show the method of benching, both excavation and/or fill; provided, however, there shall not be less than two cross-sections for each site.

H. A plot plan showing the location of the grading boundaries, lot lines, neighboring streets, or ways, buildings, surface and subsurface utilities and waterways, existing drainage patterns, individual specimen trees over 4 inches in diameter and sufficient dimensions and other data to show all work.

I. A description of the type and classification of the soil from the soil survey,

other standard soil surveys, or from other methods.

J. Details and location of any proposed drainage structures, drainage patterns, stormwater management facilities and pipes, walls and cribbing.

K. Seeding locations and schedules and location of debris basins, diversion channels and sedimentation traps.

L. The nature of fill material and such other information as the Administrator shall require to carry out the purpose of this Chapter.

M. The name and seal of the engineer, geotechnical engineer, landscape architect or architect, who prepared said plans.

3. An erosion and sedimentation control plan and report in accordance with the Pennsylvania Department of Environmental Protection standards shall be required and include existing site description of the topography, drainage, cover and soils; major problems such as soil limitations, erosion and sediment potential and surface runoff changes; and recommendations to minimize soil limitations, erosion and sediment and surface water disposal problems.

4. Trees and natural ground cover shall be retained wherever possible to minimize the impact of the development on the site and environment.

5. Compliance with Chapter 22 of the Carnegie Borough Code.

(*Ord. 2354, 7/11/2011, §109*)

#### **§9-112. Responsibility of the Administrator and Appeals.**

1. The Administrator shall require that the applicant submit a geologic hazard investigation report if the site is, has been, or is likely to become hazardous to persons or property. Overlay maps shall be used in part to locate hazardous areas.

2. In special cases, when grading occurs in areas of landslide-prone soil, or rockfall-prone areas as recognized by the soil survey, or other standard surveys, the Administrator shall require special precautions be taken and shall require the applicant to follow standards for steep slopes as required in §§9-302 and 9-303.

3. Following review of an application pursuant to this Part, the Administrator may issue the grading permit without conditions, issue the permit with conditions, or deny the application. The Administrator shall issue a written decision to the applicant setting forth his reasons for denial of an application. Reasons for denial of an application may include, but are not limited to, that the work proposed in the application will create a hazard.

4. Any Applicant or permit holder aggrieved by the action of the Administrator in denying, revoking, modifying or refusing to grant an extension of, a grading permit, or by any other adverse determination of the Administrator taken pursuant to this Part, shall have the right of appeal to the Codes Review Board, pursuant to procedures set forth in the Local Agency Law, 2 Pa.C.S.A., §105 *et seq.* [*Ord. 2384*]

5. If any appeal is taken from the issuance of a building permit where a grading permit has also been issued and if such appeal shall, pursuant to the provisions of the Zoning Ordinance [Chapter 27], operate as a stay of all proceedings under any such building permit, then such appeal shall also operate to stay all proceedings under any such grading permit.

(Ord. 2354, 7/11/2011, §110; as amended by Ord. 2384, 12/10/2012)

**§9-113. Developer Agreement.**

The Administrator may require that terms and conditions of applicant's performance under this Part be included in the developer agreement required pursuant to Chapter 22 (Subdivision and Land Development) of the Carnegie Borough Code of Ordinances.

(Ord. 2354, 7/11/2011, §111)

**§9-114. Expiration of Permit.**

Every grading permit shall expire and become null and void if the work authorized by said permit has not been commenced within 90 days, or is not completed within 1 year, from the date of issue, provided that the Administrator may, if the permit holder presents satisfactory evidence that unusual difficulties have prevented work from being started or 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. 2354, 7/11/2011, §112)

**§9-115. Inspections.**

1. The Administrator shall make the inspections hereinafter required and shall either approve that portion of the work which has been completed or notify the permit holder that the work fails to comply with provisions of this Part.

2. Grading and drainage plans and erosion and sedimentation control plans approved by the Administrator or other agencies shall be maintained at the site during the progress of the grading and drainage and until the work has been approved.

3. The permit holder shall notify the Administrator in order to obtain inspections in accordance with the following schedule, and the permit holder shall make such notification at least 48 hours before the inspection is requested.

A. *Initial inspection*—at the time when work is about to be commenced and stake out is completed.

B. *Rough grading*—after the time that all rough grading has been completed.

C. *Drainage facilities*— all drainage facilities that connect to, or shall become, public drainage facilities shall be continuously inspected during construction.

D. *Additional inspections*—at any time, in the opinion of the Administrator, that other inspections are necessary.

E. *Final inspection*—after all work, including the installation of all drainage, landscaping and other structures, has been completed.

4. If at any stage of the work the Administrator shall determine by inspection that the nature of any excavation or fill is such that further work as authorized by an existing permit is likely to constitute a hazard, the Administrator shall require, as a condition to allowing the work to be done, such reasonable safety precautions be taken as the Administrator considers acceptable to avoid the likelihood of danger. Safety precautions may include, but not be limited to, specifying a flatter exposed slope, construction of additional drainage facilities, berms, terracing, compaction, cribbing or

walls.

5. The permit holder shall submit to the Administrator an as-built drawing of the project before the issuance of a grading certificate of completion.

(*Ord. 2354, 7/11/2011, §113*)

#### **§9-116. Plan Changes.**

Any difference in physical conditions from the original plan uncovered in the site during the construction, such as surface water drainage, soil and bedrock dislocations, alteration of groundwater discharge or any other natural or man-made modification which would tend to undermine the basis upon which the permit was issued, must be immediately reported to the Administrator by the permit holder. If the circumstances dictate, the Administrator shall revoke the permit or otherwise modify the conditions upon which the permit was initially issued.

(*Ord. 2354, 7/11/2011, §114*)

#### **§9-117. Fees, Bonds and Escrows.**

1. At the time of application, the applicant shall pay an application review fee to cover the Municipality's cost of reviewing application documents. Any additional charges incurred by the Municipality to review the application for a grading permit shall be borne by the applicant. Any application fees not expended by the Municipality shall be returned to the applicant within a reasonable period of time.

2. Fees for review of grading permit applications and inspections shall be in accordance with the schedule set forth in the applicable resolution of the Carnegie Borough Council.

3. If work proposed in an application requires the use or occupancy of Municipal roads or streets for access by heavy construction equipment, or for hauling of spoil or borrow material, a separate bond shall be required to guarantee the repair and or replacement, determined by the Administrator, of pavements, curbs and sidewalks damaged during the grading operation.

4. As a condition of consideration of a grading permit application under this Part, the applicant shall provide the municipality with a cash bond, a letter of credit, or furnish other security acceptable to the Municipality, in the amount of 110 percent of the estimated cost to perform the work. The cost estimate shall include the complete scope of work needed to be performed by the applicant to comply with this Part and shall be prepared and certified by the applicant's engineer or architect and must be accepted as reasonable by the Administrator. The Administrator shall be the final arbiter as to the reasonableness of any cost estimates.

5. Upon completion of the grading under a grading permit, a maintenance bond in amount of 15 percent of the cost estimated pursuant to subsection .4 shall be posted (payable to the Municipality) for a period of 18 months from the date of completion of grading.

6. No security under this Section shall be required if another letter of credit or approved security is posted for construction and/or site improvements which includes the cost of grading and other control facilities.

(*Ord. 2354, 7/11/2011, §115*)

**§9-118. Certificate of Completion.**

If, upon final inspection of the site for which a permit has been issued, it is found that the work as authorized by the grading permit has been satisfactorily completed in accordance with the requirements of this Part, including but not limited to the submission of the maintenance bond and as-built plans, a grading certificate of completion covering such work and stating that the work is approved, shall be issued to the permit holder by the Administrator.

(Ord. 2354, 7/11/2011, §116)

**§9-119. 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, all retaining walls, cribbing, drainage structures, fences, ground cover, erosion and sedimentation controls and other protective devices and such maintenance shall be a continuing obligation of the property owner.

2. The continued use of such property shall be conditioned upon the proper maintenance and upkeep of all the above-mentioned items, satisfactory to the Municipality and subject to such further conditions as the Municipality shall prescribe from time to time to keep the site in a safe condition.

3. The grading certificate of completion shall be revoked by the Administrator if the conditions of the permit are not being observed, the work covered by the permit is materially extended or altered without a permit to do so, or conditions exist which prejudice the health, safety and welfare of any person, persons or property. Before such revocation, the Administrator shall first give written notice to the permit holder and to the owner of the property involved, specifying the defect or unsatisfactory condition involved, and advising that unless such defect or unsatisfactory condition is remedied within a stated period of time, the certificate shall be revoked.

4. If the permit holder shall fail to correct such defect or unsatisfactory condition within such stated period of time, the Municipality may undertake the necessary work, and the cost thereof shall be borne by the permit holder and property owner and collected in any manner authorized by law, including the imposition of a lien against the property.

(Ord. 2354, 7/11/2011, §117)

**§9-120. Hazardous Condition, Nuisance.**

1. If the Administrator determines that any existing retaining wall, excavation, embankment or fill constitutes a hazard, as defined in this Part, or is otherwise in violation of this Part, the owner of the property for which a grading permit has been issued, the permit holder or other person or agency in control of said property, upon receipt of notice, in writing, from the Administrator, shall, within the time specified in such notice, repair, reconstruct or remove such retaining wall, excavation, embankment or fill so as to eliminate the hazard.

2. If the owner of the property and permit holder shall fail to correct such hazardous or other condition within the specified time period, the Municipality may undertake the necessary work, and the costs thereof shall be borne by the permit holder and property owner and collected in any manner authorized by law, including an

imposition of a lien against the property.

3. Any grading not completed within 365 days from the date of the start of grading shall constitute a nuisance and a hazard. The permit holder and property owner shall restore, repair, reconstruct or remove such excavation, embankment or fill as directed by the Administrator within 30 days of receipt of said written notice.

4. If the permit holder or property owner shall fail to restore, repair, reconstruct or remove such excavations, embankment of fill within the specified time period, the Municipality may undertake the necessary work, and the costs thereof shall be borne by the permit holder and property owner and collected in any manner authorized by law, including an imposition of a lien against the property.

(Ord. 2354, 7/11/2011, §118)

### **§9-121. Working Conditions.**

The following working conditions shall apply to all grading sites:

A. *Dust Control.* During grading operations, acceptable measures for dust control shall be exercised such as the use of calcium chloride or water.

B. *Protection of Public Facilities.* All public utilities and municipal facilities shall be protected in the design and completion of grading operations. Construction equipment shall not be operated on public roads without the placement of protective mats. Aggregate driveway or roadway surfaces shall be provided to prevent tracking of dirt and mud onto the public roadways.

C. *Cleanup.* All soil washed or carried onto public streets during grading operations shall be cleaned up as it accumulates. The owner of the property being graded shall also be responsible to protect and clean up lower properties of silt and debris that have washed down into the lower properties as a result of the grading work on higher property.

D. *Workdays.* None of the work or activity covered by a grading permit shall be conducted on a Sunday or legal holidays without the written approval from the Administrator.

E. *Work Hours.* All of the work and activity covered by a grading permit shall be conducted between the hours of 7 a.m. and 7 p.m., prevailing time, unless these time limits are extended, excused or otherwise modified in writing by the Administrator.

(Ord. 2354, 7/11/2011, §119)

### **§9-122. Environmental Protection.**

Grading equipment shall not cross live streams. Provisions shall be made for the installation of culverts or bridges for such crossings. Permits shall be obtained from the Pennsylvania Department of Environmental Protection for temporary and permanent encroachments, relocations, enclosures and temporary crossings of streams.

(Ord. 2354, 7/11/2011, §120)

**Part 2****Performance and Design Standards****§9-201. General.**

The following requirements shall apply to all grading sites:

A. All topsoil shall be removed from the area to be graded and stockpiled and preserved for possible reuse on the site.

B. All applications for blasting shall be submitted to, and be under the jurisdiction of, the Carnegie Volunteer Fire Department.

(1) All blasting which is conducted in the Municipality shall be in conformity with State requirements and shall be in compliance with the Act of July 10, 1957, P.L. 685, 73 P.S. §§164 through 168, as amended, the Department of Labor and Industry Rules and Regulations, and the current adopted edition of the International Fire Prevention Code. [*Ord. 2384*]

C. Excavation adjacent to any footing, foundations or structure shall not extend below the minimum angle of repose or natural slope of the soil under the nearest point of the same unless such footing, foundation or structure is first properly underpinned or otherwise protected against settlement. Before commencing any excavation which will affect physically in any way an adjoining property or structures thereon, the permit holder shall give written notification to each owner of adjoining property or structures not less than 30 days before such excavation is to be made, informing them that excavating is planned. A copy of such notification shall be submitted to the Administrator. Adjoining properties and structures shall be protected as provided in the Building Code [Chapter 5, Part 1] and/or as required by the Administrator.

D. The top or bottom edge of final cut and fill slopes shall be set back at least 5 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 right of way and to allow for the location of proper drainage facilities and protective devices unless otherwise permitted under this Part.

E. Requirements for minimizing erosion and sediment of the Pennsylvania Department of Environmental Protection must be followed.

(1) Where required, the applicant shall submit an erosion and sedimentation control plan for review and approval to the Allegheny County Conservation District and/or the Pennsylvania Department of Environmental Protection. When the erosion and sedimentation control plan is not required to be reviewed and approved by the above governmental units, the erosion and sedimentation control plan must be submitted to the Administrator. The Administrator may approve erosion and sedimentation control plans not meeting the above guidelines if the proposed grading plans are approved by the County Soil Conservation Service.

F. To prevent soil erosion, the permit holder shall be required to provide adequate slope treatment and ground cover of such kind and character as shall be

approved by the Administrator.

(1) For slopes steeper than three horizontal to one vertical, the ground covering shall be an approved variety of erosion resistant vegetation.

(2) Finish grading shall be completed between March 15 and October 15 so turf and/or ground cover can be established.

G. All land, regardless of its slopes, from which structures or natural cover has been removed, shall be graded to the approximate finished surface and seeded within 30 days after each phase of the construction activity is completed.

*(Ord. 2354, 7/11/2011, §201; as amended by Ord. 2384, 12/10/2012)*



**Part 3****Slope Development Regulations****§9-301. Gentle and Minimally Steep Sloped Sites (0 Percent to 19 Percent Slopes).**

1. If any site to be graded contains a geologic hazard area, the applicant shall submit a geologic hazard investigation report.
2. If a site to be graded does not contain a geologic hazard area, then site grading shall meet the following requirements.

A. *Excavation.* Maximum steepness of a cut slope shall be no greater than two horizontal to one vertical for minimizing erosion and landslide hazards.

(1) If a slope steeper than two horizontal to one vertical is desired the applicant must meet the requirements of §9-302.

(2) A retaining wall or other approved support, designed by a professional engineer and approved by the Administrator may be used to support the face of the excavation.

(3) The Administrator shall require an excavation to be constructed with a cut slope flatter than two horizontal to one vertical if he finds the material in which the excavation is to be made is subject to erosion and is prone to landslides, or if other conditions exist which, under applicable engineering practices, requires such flatter cut slope necessary for stability and safety.

B. *Fills and Embankments.* Maximum steepness of a fill slope or embankment shall be no greater than two horizontal to one vertical.

(1) The site shall be prepared by cutting toe benches and other keyways so as to provide a firm base on which to place the fill. No fill or embankment shall be made on landslide-prone soils without adequate engineered design of the area to be filled.

(2) If a slope steeper than two horizontal to one vertical is desired the applicant must submit a geologic hazard investigation report.

(3) The Administrator shall require that an embankment or fill be constructed with a fill slope flatter than two horizontal to one vertical if he finds that specific conditions require that such a flatter surface is necessary for stability and safety.

(4) Fills, embankments and finish grading shall be designed in accordance with the following:

(a) The type of fill material available in each stage of the grading operation shall be determined in order to plan proper filling procedures.

1) Rock shall be incorporated in fills and embankments, but only in layers 24 inches thick, maximum, as per the latest edition of Pennsylvania Department of Transportation Specifications, Publication 408, with voids filled and a blanket of compacted fill separating one layer of rock from the next. Rock fill shall not be placed near the bottom of proposed foundations, building caissons and subsurface

utility installations. Suitable earth shall be reserved or provided to cover rock fill under proposed seeded or planted areas.

2) No unsuitable material, such as coal, bony, red-dog, expansive shale and cinders, shall be placed in fill areas.

3) Wood or other solid waste material shall not be placed in fill areas.

(b) No fill of any kind shall be placed over topsoil, frees, stumps or other material that would create a hazard or nuisance.

(c) Benching of the existing surface shall be required and indicated on the cross-sections.

(d) A porous drain shall be installed on the bottom and back wall of the to bench, together with a drainpipe and suitable discharge pipe to the existing non-erosive surface beyond and below the toe of the proposed fill.

(e) Overfilling of slopes is required to permit final shaping of the surface to proposed grade without the addition of loose fill over the surface of the slope, provided that no fill shall be higher than 10 feet vertically before the slope is shaped to proper grade.

(f) At the end of each workday, the horizontal surface of the fill shall be shaped, compacted and roiled to provide for drainage.

(g) All fills shall be compacted to provide stability of materials and to prevent settlement, The fill (excepting rock) shall be spread in a series of layers, each not exceeding 12 inches in thickness, and shall be compacted by a sheeps foot roller or other approved method after each layer is spread. Fill shall be placed at the optimum moisture content for the specified degree of compaction. The Administrator shall require tests or other information if, in his opinion, the conditions or materials are such that additional information is needed. Where fills are to have streets, structures or public utilities placed in or on them, a modified Proctor density of 95 percent shall be achieved (ASTM test designation D 1557).

*(Ord. 2354, 7/11/2011, §301)*

**§9-302. Somewhat, Moderately and Significantly Steep Sloped Sites (20 Percent to 40 Percent Slopes).**

1. Applicant shall submit a geologic hazard investigation report.

A. Applicant shall prepare a summary of the records, if any, of the Pennsylvania Department of Environmental Protection, Bureau of Mining and Reclamation, Division of Mine Subsidence Insurance and Mine Subsidence Regulations, regarding the location, depth and physical characteristics of any mine that underlies the subject property or adjacent properties.

B. After review by applicant's geotechnical engineer of all pertinent information, he shall submit a sealed report that includes whether or not the property as it exists is safe for the proposed use, whether the site can be made safe and stable for the proposed use, and any specific recommendations for construction and/or control -techniques. If the report states that the site, as it exists, is not safe but the site can be made safe by using engineered construction and control

techniques, then he shall prepare an engineering design, plan and specifications that will make the site safe and stable for the proposed use as well as protect adjacent properties from potential hazards. The report shall also confirm that if the recommendations and designs are followed, there is a negligible possibility of failure.

C. The applicant shall agree, in writing, to follow all the recommendations and designs of the geotechnical engineer.

2. *Review of Applicant's Submission.* The Municipality may, at its sole option, hire its own geotechnical engineer at the applicant's expense to review the engineering design, grading and construction plans and specifications of the applicant's geotechnical engineer to determine their compliance with the requirements of this Part. The Municipality shall determine the amount of the escrow account to be established for purposes of compensating its geotechnical engineer.

(Ord. 2354, 7/11/2011, §302)

### **§9-303. Exceedingly Steep Sloped Sites (Greater than 40 Percent slopes).**

1. Applicant shall submit a geologic hazard investigation report.

A. Applicant shall prepare a summary of the records, if any, of the Pennsylvania Department of Environmental Protection, Bureau of Mining and Reclamation. Division of Mine Subsidence Insurance and Mine Subsidence Regulations, regarding the location, depth and physical characteristics of any mine that underlies the subject property or adjacent properties.

B. After review by applicant's geotechnical engineer of all pertinent information, he shall submit a sealed report that includes whether or not the property as it exists is safe for the proposed use, whether the site can be made safe and stable for the proposed use, and any specific recommendations for construction and/or control techniques. If the report states that the site, as it exists, is not safe but the site can be made safe by using engineered construction and control techniques, then he shall prepare an engineering design, plan and specifications that will make the site safe and stable for the proposed use as well as protect adjacent properties from potential hazards. The report shall also confirm that if the recommendations and designs are followed, there is a negligible possibility of failure.

C. The applicant shall agree, in writing, to follow all the recommendations and designs of the geotechnical engineer.

2. *Review of Applicant's Submission.* The Municipality may, at its sole option, hire its own geotechnical engineer at the applicant's expense to review the engineering design, grading and construction plans and specifications of the applicant's geotechnical engineer to determine their compliance with the requirements of this Part. The Municipality shall determine the amount of the escrow account to be established for purposes of compensating its geotechnical engineer.

(Ord. 2354, 7/11/2011, §303)

### **§9-304. Retaining Walls and Fences.**

1. Retaining walls shall be designed and constructed in accordance with sound

engineering practice and the current edition of the International Building Code. The design for construction of any proposed retaining wall shall be included in the application for a grading permit and shall meet the requirements for approval and inspection. [Ord. 2384]

2. An engineer shall design the retaining wall and the plans submitted for approval shall bear his seal and signature on walls exceeding 4 feet in height. All walls exceeding 4 feet in height shall require safety fencing along the top of the retaining wall. The safety fencing shall be at least 4 feet in height and no more than 6 feet in height and shall be constructed of metal chain link fabric, provided that the metal chain link fabric shall have an open mesh greater than 1½ inches in width.

3. The backfilling of retaining walls and the construction of subterranean drainage facilities shall be performed in accordance with sound engineering practice,

4. Where a retaining waif is to be constructed, the vertical face of the wall shall be at least 5 feet back from the adjoining property.

A. This requirement may be waived by the Administrator if it can be satisfactorily demonstrated that such an exception is necessary to ensure reasonable use of the property and does not create a hazard.

B. No portion of the retaining wall structure shall encroach upon adjacent property. This requirement may also be waived when the proposed retaining wall is a joint venture between adjacent property owners, and the necessary documents evidencing the same are filed with the application for the permit.

(Ord. 2354, 7/11/2011, §304; as amended by Ord. 2384, 12/10/2012)

### **§9-305. Drainage Facilities.**

1. No grading work shall be started prior to approval and implementation of a stormwater management plan in conformance with the Carnegie Borough Code [§27-407].

2. Provisions shall be made according to sound engineering practice to prevent surface water from damaging the cut face of excavations, the face of fill and embankment slopes and/or adjacent properties. Interception and diversion facilities for stormwater and surface water runoff, both above and below the cut and fill slope areas, during and after construction, shall be included in the design.

3. The drainage pattern of the existing site conditions and proposed construction shall be indicated on the plans. Measures according to sound engineering practice shall be taken to prevent any erosion and water runoff damage to adjacent properties during the construction and after completion of construction.

4. Storm sewers, inlets, drainage ditches and swales necessary to protect adjacent properties, and reduce erosion, whether permanent or temporary in nature, shall be constructed before any excavation or filling is started. The storm sewers, inlets, drainage ditches and swales shall be maintained, cleaned, and kept open during and after construction. If the above is not complied with, the Administrator shall stop all clearing, grubbing and grading on the site until the necessary drainage facilities are completed.

5. New storm sewers and utilities traversing a proposed fill area shall have a minimum cover of 3 feet from top of pipe to proposed grade. Fill shall be constructed in

that area prior to installation of said sewers and utilities. The minimum size storm sewer, exclusive of toe or bench drains, shall be 15 inches in diameter unless the Administrator approves a variation in size. The type of storm sewer pipe to be located under pavement areas shall be approved by the Administrator.

6. Drainage ditches and swales with a grade of 5 percent or greater shall be surfaced with concrete, hot bituminous material, brick, half pipe, stone or other hard nonerodable material or fabric material designed and approved to prevent erosion for the proposed grades.

7. Drainage ditches with a grade of less than 5 percent shall be grassed using a fabric material and sloped in such a manner that they can be conveniently cut and maintained.

8. Drainage structures, storm sewers, detention ponds, sedimentation ponds and appurtenances shall be designed and constructed according to sound engineering practice to discharge surface and subsurface water to the nearest existing storm drain or natural watercourse approved by the Administrator or his authorized representative. Approval by the Administrator does not relieve the owner of his legal responsibilities to adjacent property owners. The owner shall also comply with all State laws and regulations dealing with enclosing or discharging stormwater runoff into existing streams; channels or storm sewers.

9. The grading plans shall follow vegetative control methods and ditch conduit control methods as specified in the current Department of Environmental Protection Erosion and Sediment Control Manual.

10. The 100-year storm shall be used to design all permanent storm sewers and drainage facilities. The 25-year storm shall be used to design all temporary storm sewers and drainage facilities.

11. No rock fill shall be placed around or over storm sewers or drainage facilities other than that designed as part of the site drainage facilities.

*(Ord. 2354, 7/11/2011, §305)*

#### **§9-306. Floodplain Management.**

All grading work within designated or known floodplains shall conform to the requirements and standards of 25 Pa.Code, Chapter 105, Environmental Resources, Dam Safety and Waterways Management, and 25 Pa.Code, Chapter 106, Flood Plain Management.

*(Ord. 2354, 7/11/2011, §306)*



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**Part 4****Liabilities and Penalties****§9-401. Liabilities.**

1. Neither the issuance of a permit under the provisions of this Part, nor the compliance with the provisions hereof or with any condition imposed by the Administrator hereunder, shall relieve any permit holder or property owner from any responsibility for damage to persons or property resulting therefrom, or as otherwise imposed by law, nor impose any liability upon the Municipality, its employees, and its consultants for damages to persons or property.

2. The permit holder and property owner shall be fully responsible for any noncompliance with approved plans. They shall carry the responsibility both for their own employees and for all subcontractors from the first day of grading until released by the Municipality. The use of qualified personnel experienced and knowledgeable in the practice of excavation and landscape restoration shall be required.

(*Ord. 2354, 7/11/2011, §401*)

**§9-402. Violations and Penalties.**

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

2. When written notice of any violation of, or noncompliance with, any provision of this Part has been given by the Administrator to the applicant and property owner, such violation shall be discontinued immediately, unless the Administrator has specifically designated a reasonable time limit for compliance. Any violation that continues after such notice shall be subject to the penalties provided in this Part.

3. Any person, partnership or corporation who or which has violated the provisions of this Part and any property owner on whose property such violation shall exist, shall, upon being found liable therefore in a civil enforcement proceeding commenced by the Municipality, pay a judgment of not more than \$500 plus all court costs, including reasonable attorney fees incurred by the Municipality as a result thereof. No judgment shall commence or be imposed, levied or be payable until the date of the determination of a violation by the Magisterial District Judge. If the defendant neither pays nor timely appeals the judgment, the Municipality may enforce the judgment pursuant to the applicable rules of civil procedure. Each day that a violation continues shall constitute a separate violation, unless the Magisterial District Judge determining that there has been a violation further determines that there was a good faith basis for the person, partnership or corporation violating this Part to have believed that there was no such violation, in which event there shall be deemed to have been only one such violation until the fifth day following the date of the determination of a violation by the Magisterial District Judge and thereafter each day that a violation continues shall constitute a separate violation. [*Ord. 2384*]

4. Whenever any person violating any of the provisions of this chapter is notified of such violation by the Administrator by service, summons or any other manner, each day or portion thereof a violation occurs or continues shall constitute a separate

violation.

(*Ord. 2354*, 7/11/2011, §401, as amended by *Ord. 2384*, 12/10/2012)

**§9-403. Other Remedies.**

In addition to the above stated violations and penalties, if any work is performed by any person, partnership, or corporation in violation of any of the provisions of this Part, the proper officers of the Municipality, in addition to other remedies set forth in this Part and the Carnegie Borough Code, may institute, in the name of the Municipality, an appropriate action or proceeding, whether by legal process or otherwise, to prevent such unlawful work and to restrain or abate such violation.

(*Ord. 2354*, 7/11/2011, §403)