

## Chapter 200. Zoning

### Article XIV. General Standards

#### § 200-88. Grading, land disturbance and agricultural activities.

[Amended 8-23-2001 by Ord. No. 01-01; 3-21-2002 by Ord. No. 02-01; 4-18-2002 by Ord. No. 02-02]

- A. All activities involving land disturbance as defined in § 1-20 of the Code of West Brandywine Township and/or which meet any of the criteria set forth in § 200-88A(1) below shall be consistent with the performance standards of this § 200-88A, except where modified as a result of specific provisions of any subdivision or land development approval or as otherwise provided under applicable provisions of the Code of West Brandywine Township.
- (1) The provisions of this subsection shall apply to all activities undertaken in connection with any of the following situations. Prior to commencement of any such activity, a grading permit shall be obtained from the Township as provided in § 200-88E.
    - (a) Installation of any public or private utility service where such installation involves any disturbance to soil or vegetation on more than one lot or is intended to serve more than one principal use.
    - (b) Any minor or major subdivision or land development where total land disturbance exceeds 5,000 square feet.
    - (c) Any addition or temporary storage of impervious or semi-impervious cover or material on any lot where such impervious cover or material, together with any associated land disturbance, exceeds 10% of lot area or 5,000 square feet, whichever is less.
    - (d) Any disturbance to land, including agricultural activities, that, in the opinion of the Township Engineer or Codes Enforcement Officer, creates a threat to the health, safety, or general welfare of the community, is critical in terms of protection of steep slopes, wetlands, and other environmentally sensitive features or is critical in terms of protection of adjoining properties. Agricultural activities operated in accordance with a conservation plan or erosion and sedimentation control plan approved by the Chester County Conservation District shall be exempt from grading permit requirements.
  - (2) All land disturbance activities shall be conducted in such a way as to prevent accelerated erosion and resulting sedimentation. To accomplish this, all persons engaged in land disturbance activities shall design, implement, and maintain erosion and sedimentation control measures which effectively prevent accelerated erosion and sedimentation.
  - (3) In order to prevent accelerated erosion and resulting sedimentation, land disturbance related to earthmoving activity, to construction (including but not limited to construction of buildings and other structures), and to paving shall be conducted only in conformance with the following principles:
    - (a) During the period when any earthmoving activity is taking place and, where in accordance with an approved subdivision or land development plan, prior to the completion of roads,

parking areas, buildings, and other improvements and prior to the establishment of vegetation or soil stabilization measures, facilities shall be installed to insure the following:

- [1] There shall be no discharge of sediment or other solid materials from the site as a result of stormwater runoff
  - [2] Peak stormwater discharges and stormwater discharge volumes from the site shall comply with the requirements of § 167-61 of the Code of the Township of West Brandywine, with the following modifications:
    - [a] Any person conducting a business or personal venture involving periodic or regular earthmoving (quarrying, topsoil removal, etc.) shall calculate runoff for facility design based upon runoff before earthmoving and runoff during the maximum period of exposure.
    - [b] Wherever soils, topography, or other conditions suggest substantial erosion potential during any earthmoving activity, the Township may require that the entire volume of a two-year storm be retained on site or that special sediment trapping facilities be installed, as recommended by the Township Engineer.
  - (b) No earthmoving activity or stripping of vegetation shall be conducted within the Severe Slope District, except in connection with a permitted use in accordance with the provisions of Article XIII of this chapter and where specifically permitted as a special exception authorized by the Zoning Hearing Board upon the recommendation(s) of the Township Engineer.
  - (c) Earthmoving activities, including the addition of fill, shall be minimized in order to preserve the natural features and topography and, where undertaken, shall comply with all applicable provisions of § 167-61 of the Code of the Township of West Brandywine and, specifically, the guidelines in Appendix A thereto.<sup>[1]</sup>
    - [1] *Editor's Note: Appendix A, Comprehensive Stormwater Management Procedure, is included at the end of Ch. 167, Subdivision and Land Development.*
  - (d) Stripping of vegetation, regrading, or any other land disturbance or development shall be undertaken in such a way as to minimize erosion.
  - (e) To the maximum extent practicable, natural vegetation shall not be removed except as provided in an approved final subdivision or land development plan. The stockpiling of soil over the roots of trees to be preserved is prohibited within the dripline of the tree.
  - (f) The amount of disturbed area and the duration of exposure shall be kept to a practical minimum.
  - (g) Permanent (final) vegetation and structural erosion control and drainage measures shall be installed as soon as practical.
  - (h) Sediment in runoff water shall be trapped and removed through means approved by the Township Engineer to assure adequate capacity in basins or traps.
  - (i) Such other requirements or modifications to these provisions as are consistent herewith may be imposed or permitted as conditions of approval of any subdivision or land development plan, or where approved as a conditional use, special exception or variance, subject to the recommendation(s) of the Township Engineer.
- B. Disturbance related to agricultural activities. To prevent accelerated erosion and resulting sedimentation, agricultural activities shall be conducted only in conformance with the following principles:
- (1) Unless clearly impractical or unwarranted, plowing will generally conform to the topographic contours of the property.

- (2) Drainage swales will be maintained with a permanent cover of grasses or other appropriate plants.
- (3) A permanent vegetation cover shall be maintained within a minimum of 15 feet of any stream, within 10 feet of the edge of the cartway of any road, and within 10 feet of any neighboring property line where the slope of the land falls toward or drains upon such property line, unless otherwise specified in a conservation plan approved by the Chester County Conservation District.
- (4) Runoff from buildings and other impervious surfaces shall be directed around areas where compost and manure is stored, where sod or plants are regularly removed, where livestock are confined or where tillage crops are planted, or shall be otherwise controlled, to prevent direct transport or pollutants (including sediments) to streams.
- (5) Tillage and nursery operations shall not be conducted on slopes exceeding 15%, and sod operations shall not be conducted on slopes exceeding 8%, except where consistent with a conservation plan approved by the Chester County Conservation District.
- (6) Diversion terraces or cover crops no less than 10 feet in width shall be provided at a maximum of two-hundred-foot intervals on slopes of 8% to 15% where tillage or sod crops are planted.
- (7) Any significant earthmoving, grading, or land disturbance, other than tillage operations, shall conform to all earthmoving standards of this section.

C. Protection of adjacent property.

- (1) No person shall engage in any earthmoving activity sufficiently close to a property line to endanger any adjoining public street, sidewalk, alley, or other public property from settling, cracking, or other damage which might result from such earthmoving. If, in the opinion of the Township Engineer, the nature of any earthmoving activity is such as to create a hazard to life or property unless adequately safeguarded, the party undertaking such earthmoving activity may be required to construct walls, fences, guide rails, or other structures to safeguard the public street, sidewalks, alley, or other public property and persons.
- (2) No person shall dump, move, or place any soil or bedrock or increase the flow of water so as to cause the same to be deposited upon or roll, flow or wash upon or over the premises of another without the express consent of the owner of such premises so affected, or upon or over any public street, street improvement, road, storm sewer drain, watercourse, or right-of-way or any public property.
- (3) No persons shall, when hauling soil, bedrock or other material over any public street, road, alley, or public property, allow such material to blow or spill over and upon such street, road, alley, or public property or adjacent private property.
- (4) If any soil, bedrock, or other material or water or liquid is caused to be deposited upon or to roll, flow, or wash upon any public property or right-of-way in violation of the above paragraphs of this subsection, the Township may undertake such removal and the cost of such removal shall be paid to West Brandywine Township by the person who failed to so remove the material. If said person fails to pay the Township within a reasonable period of time, the cost of such removal shall be placed as a lien against all property and all rights to property, real or personal, of any person liable to pay the same from and after the time said cost is due and payable. The cost of such removal shall be collected in the manner of said taxes or from escrow funds established for the land development activity.

D. Stripping of topsoil and sod. The stripping and/or removal of topsoil or sod shall be permitted in accordance with the foregoing provisions and only under the following conditions:

- (1) In connection with the construction, alterations, or grading of a street, building or parking lot, provided the least amount of disturbance occurs and that stabilization is achieved to control soil erosion and sedimentation as controlled by Chapter 167, Subdivision and Land Development, of the Code of the Township of West Brandywine.

- (2) In connection with agricultural pursuits, provided that areas where topsoil is removed shall be reseeded and stabilized with an appropriate native ground cover within one year.
- (3) Stripping operations shall be set back from any street line or property line a minimum of 25 feet to prevent runoff and sedimentation from leaving the site.

E. Grading permit requirements.

- (1) Application requirement. Any person, firm, partnership, or corporation proposing to engage in an activity requiring a grading permit in accordance with § **200-88A(1)** shall apply for a grading permit.
- (2) Application procedure. Application for a grading permit shall be made by written application on a form furnished by West Brandywine Township and shall be accompanied by submission of the information and documentation prescribed in § **200-88E(3)** below, except as follows:
  - (a) To the extent that any required information and documentation is otherwise submitted in fulfillment of the submission requirements for a preliminary and/or final subdivision or land development plan, and is on file with the Township, it may be incorporated into the grading permit application by appropriate reference and need not be separately submitted.
  - (b) To the extent that, in the opinion of the Township Engineer or Codes Enforcement Officer, any required information and documentation is not applicable due to the nature of the subject application, submission requirements may be modified appropriately.
- (3) Information and documentation to accompany application for grading permit.
  - (a) A map, diagram, plan or series of plans, as appropriate, prepared by a professional engineer, professional land surveyor, registered landscape architect, or registered architect having proficiency in grading, drainage, erosion and sedimentation control in accordance with Pennsylvania Act 367. Such plans accompanying the grading permit application shall show the following information:
    - [1] The metes and bounds of the property, including site area.
    - [2] The location of all existing and proposed swales, berms, ditches, streams, pipes, culverts and other drainage structures and cuts or fills.
    - [3] Existing and proposed contours, showing spot elevations where necessary as well as dimensions to determine the extent of all proposed grading and drainage. Invert as well as rim, grate, or top of wall elevations shall be included for all drainage features as well as all sanitary sewer facilities that may be affected by the proposed work.
    - [4] Plans shall also clearly indicate the location of all existing and proposed buildings, parking areas, driveways and roads.
    - [5] Plans shall be drawn at a scale of no less than one inch equals 50 feet with both existing and proposed contours being indicated at two-foot-point-zero-inch contour intervals. For properties with relatively flat slopes one-foot-point-zero-inch contour intervals with spot elevations to more appropriately identify proposed work may be required.
    - [6] Plans shall indicate the extent of all wetlands and one-hundred-year floodplain limits.
    - [7] Plans shall contain a sequence of construction as well as a grading, drainage, and erosion control narrative that addresses all erosion and sedimentation control measures, techniques, and maintenance that shall be employed for the project.
    - [8] Plans shall indicate the location and extent of all soil types found on the property, including a brief description of each soil type and indicate erosion and sedimentation control techniques, measures, and specifications to be utilized, including details and location of installation of such measures. These details shall include (where

applicable) but are not limited to tire cleaning strip, silt barrier fence, sediment trap, sedimentation basin, rip-rap apron, riser details, spillway details, jute matting details, inlet protection details, stone filter berms, dewatering facilities, etc.

- (b) The grading permit application also shall indicate the present and proposed sources, storage and dispositions of waters being channeled through or across the premises, together with elevations, gradients and maximum rates of flow of such waters. 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 in West Brandywine Township, whether on public or private property.
  - (c) If load bearing fill is proposed, a soils investigation report shall be submitted which shall consist of test borings, laboratory testing and an engineering analysis to correlate surface and subsurface conditions with the proposed rating plan. The results of the investigation shall be presented in a report by the soils engineer which shall include data regarding the nature, distribution and supporting ability of existing soils and rock on the site. Also contained within this soils report shall be conclusions and recommendations for grading requirements and erosion control and recommendations to ensure stable soil conditions and groundwater control as applicable.
  - (d) Where deemed necessary by the Codes Enforcement Officer or the Township Engineer, and where not otherwise required, a comprehensive stormwater management plan shall be submitted conforming with the requirements of § 167-61 of the Code of the Township of West Brandywine to the extent deemed appropriate by the Township.
  - (e) Copy of any required submission(s) to the Pennsylvania Department of Environmental Protection and/or the United States Army Corps of Engineers, including but not limited to any jurisdictional wetlands delineation, stream or wetlands encroachment permit, and any submission to the Chester County Conservation District, and/or in connection with application for an NPDES permit, as well as documentation of ultimate approval of all such permits, shall be submitted to the Township.
  - (f) Copy of any easement(s) across the lands of any other party which may be necessary to implement or undertake the proposed activity. Prior to issuance of any grading permit, the Township shall receive evidence indicating that any such easement has been recorded in the office of the Chester County Recorder of Deeds.
  - (g) The Township may require such supplemental reports and data it deems necessary. Recommendations included in such reports and approved by the Township shall be incorporated in the plan or specifications.
- (4) Permit fee. The application for a grading permit shall be accompanied by a fee as shall be set and may be modified, increased, reduced or otherwise amended from time to time by resolution of the Board of Supervisors. In addition, any applicant for a grading permit shall be required to pay all engineering review fees associated with the application.
  - (5) Bond requirements. Any applicant for a grading permit involving an area to be disturbed in excess of one acre shall, prior to the issuance of permit, post a bond or cash escrow with West Brandywine Township in the sum of at least \$10,000, the exact sum to be determined by the Township Engineer, with corporate surety to be approved by the Township Solicitor, the conditions of which shall be full and complete compliance with this section and all terms of the permit.
  - (6) Issuance of permit. Upon the submission of a complete application conforming to the provisions of this section, the Township Code Enforcement Officer, after consultation with and approval of the Township Engineer, if deemed necessary, shall issue the necessary permit.
  - (7) Standards for permit approval. In addition to all other applicable requirements of the Code of West Brandywine Township, approval of a grading permit shall be conditioned upon

compliance with the following:

- (a) All necessary stormwater management and drainage facilities shall conform to the requirements of § 167-61 of the Code of the Township of West Brandywine. No person, firm, partnership, or corporation shall fail to adequately maintain, in good operating order, any stormwater management and/or drainage facility on his/her premises. All drainage ditches, swales, culverts, drainpipes, and drainage structures shall be kept open and free-flowing at all times.
  - (b) The owner of any property on which any work has been performed pursuant to a permit granted under the provisions of this section shall continuously maintain and repair all graded surfaces and anti-erosion devices, retaining walls, drainage structures, and other protective devices, plantings and ground cover installed or completed.
  - (c) All plans and specifications accompanying applications for permits shall include provisions for both interim (temporary) and ultimate (permanent) erosion and sediment control.
    - [1] The design, installation and maintenance of erosion and sediment control measures shall be accomplished in accordance with the guidelines as may be established from time to time by the United States Department of Agriculture as administered by the Chester County Conservation District and in accordance with the "Clean Streams Law" and Pennsylvania Chapter 102 as prepared by the Pennsylvania Department of Environmental Protection, including latest revisions or amendments.
    - [2] All graded surfaces shall be seeded, sodded and/or planted or otherwise protected from erosion as soon as practicable and shall be watered, tended and maintained until growth is well-established at the time of completion and final inspection.
  - (d) Natural and/or existing slopes exceeding one vertical unit to four horizontal units shall be benched or continuously stepped into competent materials prior to placing all classes of fill. Cut slopes shall not exceed one vertical unit to three horizontal units, except that cut slopes up to one vertical unit to two horizontal units may be permitted where the Township is satisfied that such steeper cut slopes will reduce negative impacts of grading disturbance overall and that adequate erosion control is provided.
  - (e) Fills toeing out on natural slopes steeper than one vertical unit to three horizontal units shall not be made unless approved by the Township after receipt of a report, deemed acceptable by the Township Engineer, by a soils engineer certifying that he/she has investigated the property and made soil tests and that in his/her opinion such steeper slopes will safely support the proposed fill.
  - (f) The top or bottom edge of filled or cut slopes shall be at least three feet from property or right-of-way lines of streets in order to permit the normal rounding of the edge without encroaching on the abutting property.
  - (g) When required, adequate provisions shall be made for dust control measures as are deemed acceptable by the Township.
  - (h) When required, the applicant shall agree to the granting and recording of easements for drainage facilities, including acceptance of the discharge of water on the property of others, provisions for maintenance of slopes and swales and access for the maintenance of anti-erosion facilities.
- (8) Inspections.
- (a) The applicant, in any activity requiring a permit and which involves 10 or less single-family residences, after commencing initial operation, shall request inspections by the Township Engineer or designated agent at the following intervals:
    - [1] Upon completion of stripping, the stockpiling of topsoil and disposal of all unsuitable material but prior to beginning any other preparation of the ground.

- [2] Upon completion of preparation of ground to receive fill but prior to beginning of any placement of fill.
  - [3] Upon completion of rough grading but prior to placing topsoil, permanent drainage or other site development improvements and ground covers.
  - [4] Upon completion of final grading, permanent drainage and erosion control facilities, including establishment of ground covers and planting and all other work of the permit.
- (b) The applicant, in all cases other than those referred to in Subsection E(6)(a) above, after commencing initial operations, shall request inspections by the Township Engineer or designated agent at the following intervals:
- [1] Prior to commencement of grading operations to determine suitability of all proposed fill materials.
  - [2] Upon completion of stripping, the stockpiling of topsoil and disposal of all unsuitable material but prior to beginning of any other preparation of the ground.
  - [3] Upon completion of the preparation of the ground to receive fill but prior to beginning or placement of fill, an inspection of proof rolling.
  - [4] Upon completion of structural fill placement such that the following earthfill procedures are assured:
    - [a] Prior to placing fill in any area, grading should be performed as required to provide for drainage. Ditching or filling around the area should be performed to intercept or divert all surface water. Within the area on which fill is to be placed, the ground should be graded so as to provide for unobstructed drainage from every point to some approved disposal point.
    - [b] The area should be closely examined to determine whether excessive wetness, springs, or other seepage of water can be observed. If such conditions exist, drainage must be provided before placement of fill is undertaken. Under no circumstances shall fill be placed upon frozen ground or ground underlain by tree stumps, branches, or other vegetative material subject to rot and decomposition.
    - [c] When fill areas have been prepared as specified, the existing ground surface should be compacted by the specified method for compacting fill.
    - [d] Fill should begin at the lowest section of the area. Fill should be spread in six-inch layers prior to compaction. Each layer should be approximately horizontal, but small slopes can be permitted in order to provide for surface water runoff.
    - [e] Each layer of fill should be inspected prior to compaction. All roots, vegetation or debris should be removed. Stones larger than six inches in diameter should be removed or broken. The moisture content of each layer should be determined to be suitable for compaction.
    - [f] The compaction of the fill should be done with a sheepsfoot roller, rubber-tired roller or a vibratory roller. Other compaction equipment should be used only after it has been demonstrated that satisfactory results can be obtained with its use.
    - [g] Each layer of compacted fill should be tested to determine its dry density as per ASTM D1556, including latest revisions. The density of each layer should be not less than 95% of maximum dry density as determined by ASTM D1557. The moisture content of the compacted layer should be not more than 4% less or 2% greater than the optimum moisture content as determined by ASTM D1557.
    - [h] Only when the compacted layer has been shown to be as specified should other layers of fill be placed above it.

[i] Visual inspections of borrow material should be made periodically to assure that no variation in fill material has occurred.

[5] Upon completion of rough grading but prior to placing topsoil, permanent drainage or other site development improvements and ground covers.

[6] Upon completion of trench backfilling operations so testing can be performed as specified in Subsection E(8)(b)[4][g] above.

[7] Upon completion of final grading, permanent drainage and erosion control facilities, including establishment of ground covers and planting, and all other work of the permit.

(9) Inspection costs. All applicants shall bear all costs of inspections required hereunder and, if deemed necessary by the Township Code Enforcement Officer (Building Inspector), shall deposit with the Township Treasurer such sum as the Township Supervisors shall determine to guarantee payment of the costs of such inspections. The costs of inspections shall be at the rate charged to the Township by the Township Engineer.

F. Violations and penalties.

(1) In addition to any other remedies available under law, the Township may institute and maintain appropriate actions at law or in equity to restrain, correct or abate a violation of this section, or to restrain, correct or abate unlawful conduct or a public nuisance resulting from or causing such violation.

(2) In addition to other remedies, the Township may, but without obligation to do so, abate or remove the violation in event the responsible party fails to do so upon notice. Where the Township proceeds to abate or remove the violation, the cost and expense of such work and fines and penalties shall be a lien against the property charged to the persons affected, and upon nonpayment, the Township may file a municipal claim therefor upon the affected premises, in addition to other remedies available at law or equity for the collection of municipal debts. The lien shall attach as of the time the work commenced.

(3) The penalties and remedies prescribed herein shall be deemed concurrent. The existence or exercise of any remedy shall not prevent the Township from exercising any other remedy provided by this section or otherwise provided at law or equity.