
CHAPTER 27. LAND EXCAVATION AND FILLING

Section:

- 9-27-1 Purpose.
- 9-27-2 Exceptions.
- 9-27-3 General Conformance.
- 9-27-4 Minor Excavation/Filling Permit.
- 9-27-5 Major Excavation/Filling Permit.
- 9-27-6 Permit Requirements.
- 9-27-7 Excavation/Filling Operations.
- 9-27-8 Filling in Floodway.
- 9-27-8 Inspection.
- 9-27-9 Suspension or Revocation.
- 9-27-10 Fees.
- 9-27-11 Financial Security.
- 9-27-12 Amended Permit.
- 9-27-13 Erosion Control.
- 9-27-14 Final Reports
- 9-27-15 Notification of Completion.

9-27-1 Purpose.

It is unlawful for any person to do any grading, excavation or filling without first having obtained a permit from the City. Changes or deviation from previously approved plans require that an amended permit be applied for and approved before the work is performed.

9-27-2 Exceptions.

The provisions of this Section shall not apply to, nor shall permits under this Section be required for, the following:

- A. Excavations or filling of less than fifteen (15) cubic yards of material.
- B. Construction of buildings for which a permit has been applied for and issued, provided the contemplated excavation or filling operation was sufficiently described at the time of building permit application.
- C. Excavations or filling operations that have been approved with a development project on platted property which have commenced within two (2) years after an approved plat has been filed with Scott County.
- D. Excavations or filling operations by state, county, or city authorities in connection with the construction or maintenance of roads, highways, parks, or utilities or on slope or utility easements provided such activity is conducted within public right-of-way or easements.
- E. Curb cuts, utility hook-ups or street openings for which a permit is required from the City.
- F. Any development for which a conditional use permit has been approved and granted and a final grading plan approved as a part thereof.

9-27-3 General Conformance.

Whenever the City determines that any existing excavation or embankment or fill on private property has become a hazard to life and limb, or endangers property, or adversely affects the drainage, safety, use or stability of a property, public way or drainage channel, the owner of the property upon which the excavation or fill is located, or other person or agent in control of said property, upon receipt of notice in writing from the City, shall within the period specified therein repair or eliminate such excavation or embankment so as

to eliminate the hazard, and be in conformance with the requirements of this Chapter. The City may inspect any property for compliance.

9-27-4 Minor Excavation/Filling Permit.

- A. Excavation or filling of any material in excess of fifteen (15) cubic yards, but less than two-thousand (2,000) cubic yards, or to a depth of one (1) foot or more, but less than three (3) feet over an area of one-hundred thirty (130) square feet or more shall require a minor excavation/filling permit from the City Engineer.
- B. Application for minor excavating and filling permits shall be made in writing on forms supplied by the City and shall be submitted to the City Engineer for processing. Applications shall be filed jointly by the landowner and the earth moving contractor. The following information and exhibits shall be submitted with the completed application form:
 - 1. Legal description of property.
 - 2. Two (2) copies of the plat map or half-section map of the property proposed to be excavated or filled indicating the area where the activity is to occur together with an estimate of the amount of material to be moved.

9-27-5 Major Excavation/Filling Permit.

- A. Excavation or filling of any material in the amount equal to two-thousand (2,000) cubic yards or more, or to a depth of three (3) feet or more, shall require a major excavation/filling permit from the City Engineer.
- B. Application for major excavating and filling permits shall be made in writing on forms supplied by the City and shall be submitted to the City Engineer for processing. Applications shall be filed jointly by the landowner and the earth moving contractor. The following information and exhibits shall be submitted with the completed application form:
 - 1. Legal description of the property.
 - 2. A map showing existing conditions both on the property and three-hundred (300) feet beyond the boundaries of the property. This information shall include but not be limited to land ownership, structures, utilities, platting and easements, street and railroad right of ways, vegetation, waterways and topography shown by a two (2) foot contour minimum. This information shall be no more than two (2) months old at the time of application.
 - 3. A plan to show materials removed from, or deposited upon, the property. Said plan shall include final topography at two (2) foot contours or less, steps to be taken to conserve topsoil and to minimize erosion, areas where topsoil is to be stockpiled and the proposed phasing and timing of restoration.
 - 4. Identification of proposed truck hauling routes and method of controlling dust on-site and along haul routes.
 - 5. Hours and period of operation.
 - 6. Copies of any agreements contemplated or entered into between the owner of the property and any other person charged with performance of the earth work.
 - 7. In the case of commercial sand and gravel mining operations, a concept plan showing the ultimate development of the property including future streets, lots, topography and proposed land use.

9-27-6 Permit Requirements.

- A. *All operations.*
 - 1. At the end of excavation or filling operations, the disturbed area shall be restored with topsoil or other approved cover material and shall be reseeded to establish approved

- vegetation.
2. Finished grades shall not adversely affect adjacent properties.
 3. Drainage facilities shall be provided to effectively divert or convey storm water runoff.
 4. It shall be unlawful for any person to dig and leave open, unfenced, unbarricaded or uncovered, any pit, quarry, hole or excavation, including basements, wells, septic tanks or cesspools.
 5. Sufficient erosion controls shall be installed and maintained to prevent soil movement off-site until turf and vegetation is established.
- B. *Major operations.*
1. Provisions shall be made for effectively controlling dispersal of material by wind or by hauling to and from the site, and for general maintenance of the site.
 2. Spillage of material on and damage to public streets used as haul roads shall be cleaned up and repaired to the satisfaction of the City Engineer.
 3. Hours of operation shall be limited to between the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturdays. Operations on Sunday shall be prohibited. The City Council shall have authority to modify, on an individual basis, such operational hours. Applicants must make a specific request and must provide documentation to support the request. Such modifications shall be made only after a public hearing has been held.
 4. All operations shall be conducted no closer than one-hundred (100) feet to an adjacent property, unless under common lease or ownership, and no closer than one-hundred (100) feet to any right-of-way line.
 5. All operations shall be conducted no closer than three-hundred (300) feet to an existing dwelling, school, hospital, or similar residential or public use.
 6. The operator shall post a restoration bond or letter of credit as designated by the City that names the City as the obligee. The City shall be in possession of the bond or letter of credit prior to issuance of a permit. The bond or letter of credit shall remain in effect for a period of not less than one (1) year and shall expire on August 1 following the expiration of the permit. The amount of the bond or letter of credit shall be five-thousand (5,000) dollars per acre for excavating/mining operations, and shall be as determined by the City Council for filling operations.

9-27-7 Excavation/Filling Operations.

- A. *Cuts.* Unless otherwise recommended in a soils engineering and/or engineering geology report submitted by a professional deemed qualified by the City, cuts shall conform to the provisions of this Chapter. In the absence of such report, these provisions may be waived by the City for minor cuts not intended to support structures.
- B. *Slope.* The slope of cut surfaces shall be no steeper than is safe for the intended use and shall be no steeper than two (2) units horizontal to one (1) unit vertical, for a short term interim period, unless the owner furnishes a soils engineering or an engineering geology report, or both, stating that the site has been investigated and giving an opinion that a cut at a steeper slope will be stable and not create a hazard to public or private property. Unless specifically approved, permanent slopes shall be no steeper than three (3) horizontal units to one (1) vertical unit.
- C. *Filling.* Unless otherwise recommended in a soils engineering and/or engineering geology report submitted by a professional deemed qualified by the City, filling shall conform to the provisions of this Chapter. In the absence of such report, these provisions may be waived by the City for minor filling not intended to support structures.
1. *Clearing area to be filled.* All timbers, logs, trees, brush and rubbish shall be removed from the site. All clearing must conform with the tree preservation regulations.

2. *Preparation of ground.* The ground surface shall be prepared to receive fill by removing vegetation, non-complying fill, topsoil and other unsuitable material, scarifying to provide a bond with the new fill and, where slopes are steeper than five to one and the height is greater than five (5) feet, by benching into sound bedrock or other competent material as determined by the soils engineer. The bench under the toe of a fill on a slope steeper than five to one (5:1) shall be at least ten (10) feet wide. The area beyond the toe of fill shall be sloped for sheet overflow or a paved drain shall be provided. When fill is to be placed over a cut, the bench under the toe of fill shall be at least ten (10) feet wide but the cut shall be made before placing the fill and accepted by the soils engineer or engineering geologist, or both, as a suitable foundation for fill.
3. *Fill material.* Organic material shall not be permitted in building pad or roadway areas. Except as permitted by the City, no rock or similar irreducible material with a maximum dimension greater than twelve (12) inches shall be buried or placed in fills.
4. *Fill material exceptions.* The City may permit placement of larger rock when the soils engineer properly devises a method of placement, continuously inspects its placement and approves the fill stability. The following conditions shall also apply:
 - a. Prior to issuance of the permit, potential rock disposal areas shall be delineated on the plan.
 - b. Rock sizes greater than twelve (12) inches in maximum dimension shall be ten (10) feet or more below grade, measured vertically.
 - c. Rocks shall be placed so as to assure filling of all voids with fines.
- D. *Compaction.* All fillings shall be compacted to a minimum ninety (90) percent of maximum density as determined by the Specified Density Method. In-place density shall be determined in accordance with ASTM D698-70.
- E. *Slope.* The slope of fill surfaces shall be no steeper than is safe for the intended use, or three (3) horizontal units to one (1) vertical unit, whichever is less.
- F. *Grading and Terracing.* Grading and terracing shall be provided and the area above fill slopes and the surfaces of terraces shall be graded and paved as required by this Chapter.
- G. *Setbacks.* Cut and fill slopes shall be set back from site boundaries in accordance with this Chapter. Setback dimensions shall be horizontal distances measured perpendicular to the site boundary. Setback dimensions shall be shown on the grading plan.
- H. *Top of Cut Slope.* The top of cut slopes shall be made not nearer to a site boundary line than one-fifth (1/5) of the vertical height of cut with a minimum of two (2) feet and a maximum required setback of ten (10) feet. The setback may need to be increased for any required interceptor drains.
- I. *Toe of Fill Slope.* The toe of fill slopes shall be made not nearer to the site boundary line than one-half (1/2) the height of the slope with a minimum of two (2) feet and a maximum required setback of twenty (20) feet. Where a fill slope is to be located near the site boundary and the adjacent off-site property is developed, special precautions shall be incorporated in the work as the City deems necessary to protect adjoining property from damage as a result of grading. These precautions may include but are not limited to:
 1. Additional setbacks.
 2. Provision for retaining or slough walls.
 3. Mechanical or chemical treatment of the fill slope surface to minimize erosion.
 4. Provisions for the control of surface waters.
- J. *Modification of Slope Location.* The City may approve alternate setbacks based upon an investigation and recommendation by a qualified engineer or engineering geologist stating that the intent of this Chapter has been satisfied.
- K. *Drainage and Terracing.* Unless otherwise indicated on the approved plan, drainage facilities and

terracing shall conform to the provisions of this Chapter for cut or fill slopes.

1. *Terraces.* Terraces at least six (6) feet in width shall be established at not more than thirty (30) foot vertical intervals on all cut or fill slopes to control surface drainage and debris except that where only one (1) terrace is required, it shall be at the mid-point of the vertical height. For cut or fill slopes greater than sixty (60) feet and up to one-hundred twenty (120) feet in vertical height, one (1) terrace at approximately mid-height shall be twelve (12) feet in width. Terrace widths and spacing for cut and fill slopes greater than one-hundred twenty (120) feet in height shall be designed by a geotechnical engineer and reviewed by the City. Suitable access shall be provided to permit proper cleaning and maintenance. Swales or ditches on terraces shall have a minimum gradient of five (5) percent and must be paved with reinforced concrete not less than three (3) inches in thickness or an approved equal paving. They shall have a minimum depth at the deepest point of one (1) foot and a minimum paved width of five (5) feet. A single run of swale or ditch shall not collect runoff from a tributary area exceeding thirteen-thousand five-hundred (13,500) square feet (projected) without discharging into a down drain.
2. *Subsurface Drainage.* Cut and fill slopes shall be provided with subsurface drainage as necessary for stability.
3. *Disposal.* All drainage facilities shall be designed to carry waters to the nearest practicable drainage way approved by the City for the deposit of such waters. Erosion of ground in the area of discharge shall be prevented by installation of non-erosive down-drains or other devices. Building pads shall have a drainage gradient of two (2) percent toward approved drainage facilities, unless waived by the City.
4. *Exceptions.* The gradient from the building pad may be one (1) percent where the following conditions exist throughout the site:
 - a. No proposed fills are greater than ten (10) feet in maximum depth.
 - b. No proposed finish cut or fill slope faces have a vertical height in excess of ten (10) feet.
 - c. No existing slope faces, which have a slope face steeper than ten (10) horizontally to one (1) vertically, have a vertical height in excess of ten (10) feet.
5. *Interceptor drains.* Paved interceptor drains shall be installed along the top of all cut slopes where the tributary drainage area above slopes towards the cut and has a drainage path greater than forty (40) feet measured horizontally. Interceptor drains shall be paved with a minimum of three (3) inches of concrete or granite and reinforced. They shall have a minimum depth of twelve (12) inches and a minimum paved width of thirty (30) inches measured horizontally across the drain. The slope of drain shall be approved by the City.

9-27-8 Filling in Floodway District.

Any material proposed to be deposited in the Floodway District other than filling small localized depressions for the purpose of landscaping, or the deposition of topsoil for the purpose of landscaping, shall require a conditional use permit according to procedures outlined in Section 9-2-7, and shall be subject to the standards for Floodway District uses contained in Chapter 19. Issuance of a land excavation or filling permit in any floodway district shall be made subject to all provisions of this Title and such other requirements as the City Engineer or City Council may specify to protect the public interest.

9-27-9 Inspection.

All grading operations for which a permit is required shall be subject to inspection by the City. When required by the City, special inspection of grading operations and special testing shall be performed. The Special Inspector shall be a qualified person who shall demonstrate competence, to the satisfaction of the City, for inspection of the particular type of grading or operation requiring special inspection. The duties and responsibilities of the special inspector shall be as follows:

- A. The Special Inspector shall observe the work assigned for conformance with the approved design drawings and specifications.
- B. All discrepancies shall be brought to the immediate attention of the contractor for correction. If corrections are not undertaken by the contractor in a timely manner, discrepancies shall be brought to immediate attention of the proper design authority and to the City.
- C. The Special Inspector shall submit a final signed report stating whether the work requiring special inspection was, to the best of the Inspector's knowledge, in conformance with the reviewed plans and specifications. The report shall be furnished to the City and other designated persons.
- D. Inspections may be made on a periodic basis to satisfy the requirements of continuous inspection, provided the periodic inspection is performed as outlined in the project plans and specifications and approved by the City.

9-27-10 Suspension or Revocation.

The City may, in writing, suspend or revoke a permit issued under the provisions of this Chapter whenever the permit is issued in error or on the basis of incorrect information supplied, or is found to be in violation of any regulation or provision of the City Code.

9-27-11 Fees.

Fees shall be established for grading and excavation permits and for plan review. When a plan or other data are required to be submitted, a plan review fee shall be paid at the time of submitting plans and specifications for review. Fees shall be charged in accordance with the provisions of this Chapter as set forth in the fee schedule adopted by the Council.

9-27-12 Financial Security.

The City may require bonds in such form and amounts as may be deemed necessary to assure that the work, if not completed in accordance with the reviewed plans and specifications, will be corrected to eliminate hazardous conditions. In lieu of a surety bond the applicant may file a cash bond or instrument of credit with the City in an amount equal to that which would be required in the surety bond. If requested by the applicant, the amount of the financial security may be reduced by the City based upon the extent to which the grading and restoration have been completed and shall consider the continued need for erosion control.

9-27-13 Amended Permit.

Any changes desired to be made to the grading plan by the applicant following the issuance of a permit shall be submitted to the City for review. No changes may be implemented by the applicant unless approved by the City. Any desired change to the plans shall be supported by information showing the change desired, the reasons for the change, the effect the change would have upon buildings, structures, drainage facilities and patterns. The request shall be accompanied by soils engineering and geology reports as necessary. If the changes requested by the applicant are acceptable, the City may issue an amendment to the permit.

9-27-14 Erosion Control.

All areas disturbed by grading activities shall be prepared and maintained to control against erosion. Where necessary, check dams, cribbing, riprap or other devices or methods shall be employed to control erosion and provide for site safety. Grading operations, construction sites, and other erosion sources shall provide for erosion control devices.

- A. *Notification of non-compliance.* If the designer, soils engineer, engineering geologist or testing agency finds that the work is not being completed in conformance with this Section or the reviewed grading plans, the discrepancies shall be reported immediately in writing to the person in charge of grading work and to the City. Recommendations for corrective measures, if necessary, shall be

submitted.

- B. *Areas of responsibility.* The soils engineer's area of responsibility shall include, but need not be limited to, the professional inspection and approval concerning the preparation of ground to receive fills, testing for required compaction, stability of all finish slope, and the design of buttress fills, where required, incorporating data supplied by the engineering geologist.

9-27-15 Final Reports.

Upon completion of the rough grading work and at the final completion of the work the City may require the following reports and drawings and supplements thereto:

- A. An as-graded grading plan prepared by the designer including original ground surface elevations, as-graded ground surface elevations, lot drainage patterns, and location, and elevations of all surface and subsurface drainage facilities. The designer shall state that to the best of his/her knowledge the work was done in accordance with the final approved grading plan.
- B. A soils-grading report prepared by the soils engineer, including locations and elevations of field density tests. Summaries of field and laboratory tests and other substantiating data and comments on any changes made during grading and their effect on the recommendations made in the soils engineering investigation report. The soil engineer shall render a finding as to the adequacy of the site for the intended use.
- C. A geologic grading report prepared by the engineering geologist, including a final description of the geology of the site and any new information disclosed during the grading and the effect of same on recommendations incorporated in the approved grading plan. The geologic engineer shall render a finding as to the adequacy of the site for the intended use as affected by geologic factors.

9-27-16 Notification of Completion.

The City shall be notified when the grading operation is ready for final inspection, but not before all work, including installation of drainage facilities and their protective devices, and erosion-control measures, have been completed and turf has been established in accordance with the final approved grading plan and the required reports have been submitted.

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