

**TITLE 4
CHAPTER 8**

EROSION AND SEDIMENT CONTROL REGULATIONS

SECTION 4-801 GENERAL PROVISIONS

801.1 PURPOSE AND SCOPE

The purpose of these regulations is to safeguard life, limb, property and the public welfare by regulating clearing, earthwork and other land disturbing activity and by requiring temporary and permanent provisions for erosion and sediment control.

These regulations set forth rules governing clearing and earthwork, including temporary and permanent controls for storm water drainage, erosion, and sedimentation; establishes the administrative procedure for issuance of permits and the enforcement thereof; and requires the submission of plans and the observation of clearing and/or earthwork operations.

801.2 COMPLIANCE WITH OTHER MUNICIPAL CODES AND REGULATIONS

These regulations shall be used in compliance with and in conjunction with all other pertinent municipal codes and regulations including the following:

- A. Cookeville Municipal Code Title 4, Chapter 11, Control of Natural Drainage Systems
- B. Cookeville Zoning Code
- C. Cookeville Subdivision Regulations
- D. Cookeville Building Codes

801.3 DEFINITIONS

Architect. A person who is trained in the design and observation of the construction of buildings for the health, safety and welfare of the general public, and who is a registered professional architect in the State of Tennessee.

Bedrock. In-place, solid, and undisturbed rock.

Best Management Practices (BMP's). Schedule of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of storm water runoff. BMP's also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage of raw material storage.

Borrow. Earth material acquired from an off-site location for use as fill on a site.

Building Official. The officer or employee of the City of Cookeville charged with the responsibility of enforcing these Erosion and Sediment Control Regulations.

Civil Engineer. An engineer whose training or occupation is in the designing and construction of public works, and of various private works, and who is a registered professional engineer in the State of Tennessee.

Civil Engineering. The application of the knowledge of the forces of nature, principles of mechanics, and the properties of materials to the evaluation, design, and construction of civil works for the beneficial uses of mankind.

Clean Water Act. The Federal Water Pollution Control Act, as amended, codified at 33 U.S. C. 1251 et. seq.

Clearing. The removal from land of trees, shrubs, grass, and/or other varied ground cover and vegetation useful for windbreaks, water retention and the maintenance of topsoil.

Community Waters. Any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wetlands, wells, and other bodies of surface or subsurface water, natural, or artificial, lying within or forming a part of the boundaries of the City of Cookeville, and the waters into which the Cookeville Storm Water System outfalls flow.

Compaction. The densification of a material by mechanical means.

Cut. See excavation.

Detention facility. A dam or holding system constructed for the purposes of temporary storage of stream flow or surface water runoff and for releasing the stored water at controlled rates.

Drainage system. The system of pipes, ditches, swales, terraces, and structures by which surface or subsurface waters are collected and conducted from the site.

Earth Material. Any rock and/or natural soil exclusive of any decomposable matter.

Earthwork. Excavation, fill and backfill, compaction and grading.

Engineering Geologist. A geologist experienced and knowledgeable in engineering geology.

Engineering Geology. The application of geologic knowledge and principles in the investigation and evaluation of naturally occurring rock and soil for use in the design of civil works.

Erosion. The wearing away of the ground surface as a result of the movement of wind, water, and/or ice.

Erosion and sediment control plan. A written plan, including drawings or other graphic representations, for the control of soil erosion and sedimentation resulting from a land disturbing activity.

Excavation. The mechanical removal of earth material.

Field Report. A record of observations of actual conditions on a site existing at the time such observations are made.

Fill or backfill. A deposit of earth by artificial means.

Finish or final grade. The grade of the site which conforms to the permitted plan.

Grade. The vertical location of the ground surface to a predetermined elevation datum.

Grading. The operation of raising or lowering the ground surface to a predetermined grade.

Impervious. Not allowing the passage of water through the surface of the ground or ground covering, or a substantial reduction in the capacity for water to pass through the surface of the ground or ground covering.

Lake. A body of water one (1) acre or more in surface area, created either by a manmade dam or other means of holding backwater.

Landscape architect. An architect whose training or occupation is in the design and observation of the development of land areas in order to preserve and enhance the proper, safe, and aesthetic use of land, and who is a registered professional landscape architect in the State of Tennessee.

National Pollution Discharge Elimination System (NPDES) Permit. A permit issued pursuant to Section 402 of the Act (33 U.S.C. 1342).

Nonpoint source. A contributing factor to water pollution that cannot be traced to a specific location, e.g. pesticides, agricultural fertilizer runoff, sediment from construction activity, etc.

Notice of Intent (N.O.I.). A written notice by a discharger of storm water to the Commissioner of the Tennessee Department of Environment and Conservation, or his designee, that the person wishes his discharge to be authorized under a general permit authorized by state law or regulation, particularly Rule 1200-10-.04 or Rule 1200-4-10-.04, Rules and Regulations of the State of Tennessee.

Point Source. A stationary location where pollutants are discharged.

Pond. A body of standing water less than one (1) acre in surface area, created either by a manmade or natural dam, or other means of holding back water.

Riprap. A protective course of stone or other like material placed on embankment slopes, channels, discharge areas, and other locations to prevent erosion.

Rough grade. The stage of construction at which the grade approximately conforms to the permitted plan.

Sediment. Solid material, both material and organic, that is in suspension, is being transported or has been moved from its site of origin by air, water, gravity, or ice, as a product of erosion.

Sediment basin. A depression formed from the construction of a barrier or dam built at a suitable location to retain sediment and debris.

Site. Any lot or parcel of land or contiguous combination thereof, under the same ownership, including joint ownership, where clearing and/or earthwork is proposed, performed, or permitted.

Soil. Naturally occurring surface deposits overlying bedrock.

Soils engineer/geotechnical engineer. A professional engineer experienced and knowledgeable in the practice of soils engineering that is a registered professional engineer in the State of Tennessee.

Soils engineering. The application of the principles of soils mechanics in the investigation, evaluation, and design of civil works involving the use of earth materials, and the inspection and testing of the construction thereof.

Storm water. Storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm water management. The collection, conveyance, storage, treatment, and disposal of storm water runoff in a manner to meet the objectives of these regulations, and its terms, including, but not limited to measures that control the increased volume and rate of storm water runoff and water quality impacts caused by manmade changes to the land.

Topsoil. The friable surface of soil, usually containing organic matter.

Vegetation/vegetative practice. Stabilization of erosive or sediment producing areas by covering the soil with:

- (a) Permanent seeding, producing long-term vegetative cover; or
- (b) Short term seeding, producing temporary vegetative cover; or
- (c) Sodding, producing areas covered with a turf of perennial sod-forming grass.

Watercourse. Any natural or artificial stream, river, creek, ditch, culvert, drain, or other waterway, in which water flows either continuously or intermittently, and which has a definite channel, bed and banks, including any adjacent area subject to inundation by reason of overflow of floodwater.

801.4 COMPATIBILITY

If any provisions of these regulations and any other provisions of law impose overlapping or contradictory requirements, or contain any restrictions covering any of the same subject matter, that provision which is more restrictive or imposes higher standards or requirements shall govern. These regulations do not relieve the applicant from provisions of any other applicable codes, ordinances, or regulations not explicitly repealed by these regulations.

801.5 SEVERABILITY

If any section, subsection, sentence, clause, phrase, or portion of these regulations is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions of these regulations.

801.6 PERMITTING

The review and permitting of plans and specifications for clearing and/or earthwork is not intended as approval of the overall layout, structural design, grading procedures, situation control, engineer's reports, or construction procedures. These responsibilities shall remain with and be those of the owner or his consultants.

801.7 DISCLAIMER OF LIABILITY

The issuance of a Grading Permit by the City of Cookeville signifies only that the applicant has met all the application requirements specified by these regulations, including the submittal of plans prepared by qualified designers. The approval of those plans for permit purposes shall not mean that those plans have been checked in detail for technical competency. The developer and his design consultant shall remain totally responsible for the adequacy of the plans to protect neighboring properties, and the developer and his contractor shall be responsible for constructing the project in accordance with the plans.

These regulations are considered reasonable for regulatory purposes, and shall not create a liability on the part of, or a cause of action against, the City of Cookeville or any officer or employee thereof for any damages that result from reliance on these regulations, or any administrative decision lawfully made thereunder.

SECTION 4-802 GRADING PERMIT REQUIRED

No person shall do any clearing or earthwork within the City of Cookeville without first having obtained a Grading Permit therefore from the Building Official, except as provided in Section 802.1. A separate permit shall be required for and be prominently posted at each site. The following provisions shall apply for Grading Permits:

802.1 EXCEPTIONS TO GRADING PERMIT REQUIREMENTS

The following described operations shall not require a permit to do clearing or earthwork:

- A. Cemetery graves.
- B. Sanitary landfill or refuse disposal sites controlled by other governmental regulations.
- C. Excavations for wells or tunnels.
- D. Mining operations controlled by other regulatory agencies.
- E. Temporary stockpiling of materials provided such operations do not affect the lateral support or increase the stresses in or pressure upon any adjacent or contiguous property and all drainage meets the standards specified in this ordinance. Temporary stockpiling shall be defined as ninety (90) days or less.
- F. Exploratory excavations under the direction of soils engineers or engineering geologists.
- G. Any structure located within an approved subdivision for which there exists an approved grading, drainage, and erosion control plan with which the developer intends to comply.
- H. Accepted agricultural land management practices, such as plowing; cultivation; construction of agricultural structures; nursery operations such as the removal of or transportation of cultivated sod and trees; tree cuttings at or above existing ground level; and logging operations leaving the stump, ground cover, and root mat intact. All agricultural uses shall be subject to the Best Management Practices as defined by the Natural Resources Conservation Service to minimize increased runoff quantity and decreased quality from disturbed sites.
- I. Public utility installations as follows: lateral sanitary sewer lines, water lines, storm sewer lines, telephone lines, cable television lines, electrical lines, and gas lines. Although exempt, public agencies are required to notify the Public Works Department prior to starting any construction and to submit plans, if requested, to allow coordination with other activities.
- J. Construction, repair, or rebuilding of tracks or other related facilities of a railroad company.

- K. The following described operations shall not require a permit provided that the proposed work is not located in identified flood hazard or sinkhole retention areas, or other established fragile environments.
1. Any project involving the movement of not more than 100 cubic yards of earth material.
 2. An excavation below finished grade for basements and footings of a building, retaining wall or other necessary structure or site improvements which is authorized by a valid building permit. This, however, shall not exempt the following:
 - a. Any fill made with the material from such excavation or from borrow from noncontiguous sites;
 - b. Any excavation having an unsupported height greater than five (5) feet after the completion of such structure; or
 - c. Any excavation or fill where the adjoining properties do not have established vegetation.
 3. An excavation of less than 10,000 square feet which:
 - a. Is less than two (2) feet in depth, or
 - b. Does not create a cut slope greater than five (5) feet in height nor steeper than two (2) horizontal to one (1) vertical. This shall include such minor land-disturbing residential activities as home gardens, landscaping, repairs, maintenance work and other related activities that result in minor soil erosion.
 4. A fill which:
 - a. Is less than one (1) foot in depth and placed on natural ground surface with a slope flatter than five (5) horizontal to one (1) vertical, or
 - b. Does not exceed fifty (50) cubic yards on any one lot, is less than three (3) feet in depth, is not intended to support structures, and does not obstruct a drainage course.
 5. Controlled disposal areas for earth material provided the owner fulfills the requirements of these regulations.
 6. Any project carried out under the technical supervision of the Soil Conservation Service of the United States Department of Agriculture.

802.2 RESPONSIBILITY NOT WAIVED

Although the activities listed in Section 802.1 may be undertaken without a permit, the persons conducting these excluded activities shall remain responsible for controlling erosion and for protecting adjacent properties and drainage facilities from sedimentation in accordance with the provisions of these regulations.

802.3 HAZARDOUS CONDITIONS MUST BE RECTIFIED

Whenever the Building Official or Director of Public Works is made aware of and determines that any existing land condition or exposed surface created or caused by means of clearing, earthwork or other land-disturbing activity has: (1) become a hazard to life and limb; (2) endangered property; (3) affected the safety, use or stability of a public way or drainage channel, or (4) caused erosion, the owner, upon receipt of notice in writing from the Building Official or Director of Public Works, shall rectify or eliminate the stated hazardous condition within the time period specified therein to bring the property into conformance with the requirements of these regulations.

It shall be a violation of these regulations for the owner to fail to eliminate the hazardous condition within that time.

802.4 APPLICATION REQUIRED

To obtain a Grading Permit, the owner shall first file with the Building Official an application therefore in writing on a form furnished for that purpose. Each application shall provide:

- A. The names, addresses, and telephone numbers of the owner or owners of the subject property.
- B. The names, addresses, and telephone numbers of the contractor and any subcontractor(s) who shall perform the land disturbing activity, and who shall implement the plans for erosion and sediment control.
- C. The address and legal description of the subject property, and a description of that portion of the property upon which the land disturbing activity is proposed, or a map or plat of the property upon which the limits of the land disturbing activity is shown.
- D. If required under these regulations three (3) copies each of the Grading Plan as specified in Section 802.5, the Soil Erosion and Sediment Control Plan as specified in Section 802.6, and the Drainage Plan as specified in Section 802.8 shall be submitted with the application.
- E. A statement setting forth the nature, extent and purpose of the land disturbing activity including the size of the area for which the permit shall be applicable, and a schedule for the starting and completion dates of the land disturbing activity.
- F. An estimate of the cost of work involved.

- G. A certification by the owner that prior to beginning any work he agrees to the following:
1. Hold the City of Cookeville, its officers, agents and employees, harmless from any and all claims made against the City of Cookeville which arise out of any action or omission of the owner, contractor or subcontractor, or any of their officers, employees or agents, and any and all claims which result from any condition arising out of, created or maintained by the owner, contractor, or subcontractor or any of their officers, employees or agents.
 2. That no work, including clearing and/or earthwork shall be performed without first installing all temporary erosion control measures and until the applicant has requested review by the Department of Public Works of the completed temporary erosion control measures.
 3. That the applicant has read the application and that all information contained therein is true and correct.
 4. That the applicant agrees to comply with all City ordinances and State laws regulating this construction.
 5. That the applicant is the owner or is authorized to act as the Owner's Agent for the described work.

802.5 GRADING PLAN REQUIRED

Each application for a Grading Permit shall be accompanied by three (3) sets of Grading Plans and specifications for erosion and sediment control. If a project involves clearing only, a Grading Plan will be required only if, in the opinion of the Building Official or Director of Public Works, storm water runoff will increase in quantity and/or decrease in quality to the detriment of downstream property owners and/or drainage facilities. However, the application requirements of Section 802.4 shall be met.

Plans shall be drawn to scale and shall be of sufficient clarity to indicate the nature and extent of the work proposed and show in detail that they will conform to the provisions of these regulations and all relevant laws, ordinances, and rules. The first sheet of each set of plans shall give the location of the work and the name and address of the owner and the person by whom they were prepared. The plan shall be prepared by a person or firm qualified by training and experience to have expert knowledge of erosion and sediment control methods.

The Grading Plan shall include the following information:

- A. General vicinity of the proposed site.
- B. Property limits and accurate contours of the existing ground in two foot contour intervals, and details of terrain and area drainage. Contour intervals other than two (2) feet may be approved by the Director of Public Works upon request and for good cause shown.

- C. Limiting dimensions, elevations or finish contours, using the same contour intervals as in Section 802.5B above, to be achieved by the grading, and proposed drainage channels and related construction.
- D. Detailed plans of all surface and subsurface drainage devices, walls, cribbing, dams, and other protective devices to be constructed with, or as a part of, the proposed work together with a map showing the drainage area and the estimated runoff of the area served by any drains.
- E. Location of any buildings or structures on the property where the work is to be performed, and the location of any buildings or structures on land of adjacent owners which are within fifteen (15) feet of the property or which may be affected by the proposed grading operations.
- F. For projects not requiring a separate Erosion and Sediment Control Plan, provide details showing all temporary and permanent soil erosion control measures to be installed to comply with Section 802.6. To include, where applicable, but not be limited to:
 - 1. Provisions for saving topsoil for later vegetation.
 - 2. Provisions for saving trees and other vegetation and any retention of a buffer.
 - 3. Intended means and schedule of revegetation and any provision of a buffer.
 - 4. Proposed protective measures for controlling erosion and sediment, both temporary and permanent.
 - 5. Intended means for disposition of removed vegetation.
- G. All elevations must be stated in Mean Sea Level Datum and this fact indicated in a note on the plan sheet.
- H. Areas of special flood hazard and/or sinkhole retention areas shall be clearly shown on all site plans where applicable. Areas of special flood hazard shall be identified by the Flood Insurance Rate Maps for Cookeville, Tennessee dated August 19, 1986, or any subsequent amendments to said maps, or by the Flood Hazard Boundary Maps for Putnam County, Tennessee dated October 21, 1977, or any subsequent amendments to said maps. Sinkhole retention areas shall be identified by the Sinkhole Retention Maps of the City of Cookeville or as determined by the Director of Public Works.
- I. Specifications shall contain information covering construction and material requirements. It shall be acceptable to reference existing specifications that have been approved by the Director of Public Works, and that are on file in the Public Works Department.

802.6 SOIL EROSION AND SEDIMENT CONTROL PLAN REQUIRED

A Soil Erosion and Sediment Control Plan shall be required whenever a NPDES Permit is required. In addition, a Plan shall be required if the Public Works Director determines that the development is so complex that soil erosion and sediment controls cannot be included in the Grading Plan in a clear and understandable manner, or if the Building Official or Public Works Director determine that the site is located in a special hazard area.

The Soil Erosion and Sediment Control Plan shall be prepared by a person or firm qualified by formal training and experience to have expert knowledge of erosion and sediment control methods. This plan may be incorporated into and permitted as part of a Grading Plan, but must be clearly identified as a "Erosion and Sediment Control Plan".

The plan shall apply erosion and sediment control measures that conform to sound conservation and engineering practices, and meet the requirements of Section 4-803. It shall accurately describe the potential for soil erosion and sedimentation problems resulting from the land disturbing activity and shall explain and illustrate the measures that are to be taken to control these problems.

The length and complexity of the plan is to be commensurate with the size of the project, severity of the site condition, and potential for off-site damage. The plan shall contain:

- A. A description of the existing site conditions, a description of adjacent topographical features.
- B. A description of soil types and characteristics in the area.
- C. Potential problems of soil erosion and sedimentation.
- D. Stabilization specifications.
- E. Storm water management considerations.
- F. A time schedule for completion of the land disturbing activity and for maintenance after completion of the project.
- G. Clearing and grading limits.
- H. Any other information required by the Director of Public Works to accurately depict solutions to potential soil erosion and sedimentation problems.

802.7 STANDARDS FOR EROSION AND SEDIMENT CONTROL PLAN

Any Erosion and Sediment Control Plan shall meet an approved Best Management Practices Manual and shall be approved by the Director of Public Works prior to the issuance of the Grading permit. Following are approved Best Management Practices manuals that may be referenced by the designer to meet the specifications required:

- A. Tennessee Erosion & Sedimentation Control Handbook. (Latest edition)
- B. Other specifications may be used upon review and approval by the Director of Public Works. Any approved specifications must be placed on file in the office of the Director of Public Works.

802.8 DRAINAGE PLAN REQUIRED

Three (3) sets of a drainage plan shall be required if a project requires a Grading Permit and:

- A. Involves clearing and/or earthwork on a site which changes the natural course and/or runoff rates of storm water; or
- B. Involves a site that is subject to flashflooding or local ponding as a result of soil conditions and/or lack of identified drainage channels.
- C. Is located wholly or partially within an identified flood hazard area, sinkhole retention area, or other fragile lands as may be designated for environmental protection.
- D. Involves hillside development on slopes steeper than ten (10) percent, and where stormwater will be concentrated into an erosive force to the detriment of downstream properties.
- E. Involves a residential subdivision of ten (10) or more lots.
- F. Involves a new commercial, institutional or industrial development.

802.9 STANDARDS FOR DRAINAGE PLANS

The Drainage Plan shall be prepared by a registered civil engineer proficient in the field of hydrology and hydraulics and licensed by the State of Tennessee. The plan may be submitted as part of the Grading Plan, but must be clearly identified as a "Drainage Plan". Drainage plans shall be drawn at an appropriate scale that will enable ready identification and recognition of submitted information and shall include:

- A. Flow lines of surface waters onto and off the site.
- B. Building pads and existing and proposed finished floor and street elevations if building construction is proposed.

- C. Existing and proposed drainage channels, including drainage swales, wetlands, ditches and berms.
- D. Locations of all manmade facilities, such as buildings, parking lots, sidewalks, etc.
- E. Location and design of any proposed facilities for storage or for conveyance of runoff into indicated drainage channels, including sumps, basins, channels, culverts, retention or detention ponds, storm drains, and drop inlets.
- F. Estimates of existing and increased runoff resulting from the proposed improvements and a statement of the proposed effects on the existing drainage system and adjacent property.
- G. Plans and specifications for all drainage provisions, retaining walls, planting, anti-erosion devices, or other protective devices whether temporary or permanent to be constructed in connection with or as a part of the proposed project shall be required.
- H. A map depicting the drainage area of land tributary to the site and a statement explaining the amount of estimated runoff used to determine the design characteristics of any drainage device.
- I. Upstream drainage shall be considered in the design calculations.
- J. Downstream improvements may be required of the developer if such improvements are required to handle storm water generated by the proposed development.

802.10 NPDES PERMIT REQUIRED

If five (5) acres or more (or the area specified in the most current Tennessee Department of Environment and Conservation regulations) are to be disturbed the developer is required to apply for coverage under the “State of Tennessee’s General NPDES Permit for Storm Water Discharges Associated with Construction Activity.” To seek coverage under the Tennessee Department of Environment and Conservation General Permit, a Notice of Intent (NOI) shall be submitted to the Storm Water Coordinator, Division of Water Pollution Control, Tennessee Department of Environment and Conservation at least fifteen (15) days prior to site disturbance. Notice of Intent forms may be obtained at the Division of Water Pollution Control’s central office in Nashville, Tennessee. Three (3) copies of the NOI, and of any site specific erosion control plan developed for submittal with the NOI, shall accompany the developer’s application for a City of Cookeville Grading Permit.

802.11 SOIL ENGINEERING REPORT

A soil engineering report shall be required if deemed necessary by the owner's architect, landscape architect, or civil engineer.

This report shall include data regarding the nature, distribution, and strength of existing soils conclusions and recommendations for grading procedures and design criteria for corrective measures when necessary, and opinions and recommendations covering the adequacy of sites to be developed by the proposed grading.

802.12 ENGINEERING GEOLOGY REPORT

An engineering geology report shall be required if deemed necessary by the owner's architect, landscape architect, or civil engineer.

This report shall include an adequate description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions of the proposed development, and opinions and recommendations covering the adequacy of sites to be developed by the proposed grading.

802.13 FEDERAL AND STATE PERMITS

Approval by the City of Cookeville does not relieve the applicant of responsibility for obtaining any permits required by the U.S. Army Corps of Engineers, Tennessee Division of Water Pollution Control, Tennessee Division of Ground Water Protection, Region IV of the U.S. Environmental Protection Agency, or by any other federal or state agencies. Following is a non-inclusive list of permits that may be required:

A. U. S. Army Corps of Engineers:

Section 301 of the Clean Water Act prohibits the discharge of dredged or fill material into waters of the United States unless the work has been previously authorized by a permit pursuant to Section 404 of the same Act. Placement of dredged or fill material below ordinary high water of any water in conjunction with drainage improvements (e.g., channel realignments, concrete slope paving) will require a DA permit prior to construction.

The placement of dredged or fill material or any grading activities within a wetland must also be in compliance with Section 404 of the Clean Water Act.

If a permit is required, approximately sixty (60) days would normally be required for permit processing. Depending on the nature and location of the work, it is possible that the work has been previously approved under authority of the Nationwide Permit and individual processing would not be required.

B. Tennessee Division of Water Pollution Control

In accordance with the Tennessee Water Quality Control Act, T.C.A. 69-3-108, any activity which alters the course or physical character of a stream, defined by a blue line on a 7 ½ minute U.S.G.S. (United States Geological Survey) quadrangle, requires an Aquatic Resource Alteration Permit (ARAP). This permit is required for activities such as stream channelization, stream enlargement, dredging, and diversions in box culverts.

SECTION 4-803 GENERAL REQUIREMENTS FOR EROSION AND SEDIMENT CONTROL

The following general requirements shall apply for all land disturbing activities:

- 803.1 Stripping of vegetation, regrading and other development activities shall be conducted so as to minimize erosion. Clearing and grubbing must be held to the minimum necessary for grading and equipment operation. Pre-construction vegetative ground cover shall not be destroyed, removed or disturbed more than twenty (20) calendar days prior to grading or earth moving. Construction must be sequenced to minimize the exposure time of cleared surface area.
- 803.2 Property owners shall be responsible upon completion of land disturbing activities to leave slopes so that they will not erode. Such methods could include revegetation, mulching, or rip-rapping. Regardless of the method used, the objective will be to leave the site as erosion-free and maintenance-free as practicable.
- 803.3 Whenever feasible, natural vegetation shall be retained, protected and supplemented.
- 803.4 Permanent or temporary soil stabilization must be applied to disturbed areas to the extent feasible within seven (7) days on areas that will remain unfinished for more than thirty (30) calendar days. Permanent soil stabilization with perennial vegetation shall be applied immediately after final grading is reached on any portion of the site. Soil stabilization refers to measures which protect soil from the erosive forces of wind, raindrop impact and flowing water, and includes the growing of grass, sod, application of straw, mulch, fabric mats, and the early application of gravel base on areas to be paved.
- 803.5 A permanent vegetative cover shall be established on disturbed areas not otherwise permanently stabilized.
- 803.6 To the extent necessary, sediment in runoff water must be trapped by the use of debris basins, sediment basins, silt traps or similar measures until the disturbed area is stabilized.
- 803.7 Neighboring persons and property shall be protected from damage or loss resulting from excessive storm water runoff, soil erosion or deposition upon private property or public streets of water transported silt and debris. Adjacent property owners shall be protected from land devaluation due to exposed bare banks.

803.8 Erosion and sediment control measures must be in place and functional before earth moving operations begin, and must be constructed and maintained throughout the construction period. Temporary measures may be removed at the beginning of the workday, but must be replaced at the end of the workday.

803.9 Structural controls shall be designed and maintained as required to prevent pollution. All surface water flowing toward the construction area shall to the extent practicable be diverted by using berms, channels, or sediment traps as necessary. Erosion and sediment control measures shall be designed according to the size and slope of disturbed drainage areas, to detain runoff and trap sediment. Discharges from sediment basins and traps must be through a pipe or lined channel so that the discharge does not cause erosion. Muddy water to be pumped from excavation and work areas must be held in settling basins or treated by filtration prior to its discharge into surface waters where practicable. Water must be discharged through a pipe or lined channel so that the discharge does not cause erosion and sedimentation.

803.10 MONITORING AND MAINTENANCE OF CONTROL MEASURES REQUIRED

The permittee shall ensure that all erosion and sediment control measures are regularly monitored and repaired as necessary. At a minimum all control measures shall be checked weekly in dry periods and within 24 hours after any rainfall of 0.5 inches within a 24-hour period. During prolonged rainfall, daily checking and repairing is necessary. The permittee shall maintain records of such checks and repairs.

803.11 A specific individual shall be designated to be responsible for erosion and sediment controls on each site. The name, address and phone number of the individual responsible for the erosion and sediment controls shall be indicated on the permit application.

803.12 There shall be no distinctly visible floating scum, oil or other matter contained in the storm water discharge. The storm water discharge must not cause an objectionable color contrast in the receiving water. The storm water discharge must result in no materials in concentrations sufficient to be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.

803.13 When the land disturbing activity is finished, and stable perennial vegetation has been established on all remaining exposed soil, the developer shall notify the Building Official of these facts and request termination of the permit issued under these regulations. The Building Official or Director of Public Works (or their designees) shall then inspect the site within twenty (20) days after receipt of such notice, and when advisable may require additional measures to stabilize the soil and prevent erosion. If such requirements are given by letter, the owner or developer shall continue to be covered by the provisions of these regulations, until a request for termination of the permit has been accepted by the Building Official.

SECTION 4-804 DESIGN STANDARDS

The following minimum design standards for erosion and drainage control shall apply:

- 804.1 Erosion, sedimentation, and drainage control measures, pipes, structures, and devices shall be planned, designed, constructed, operated and maintained so as to provide effective soil and drainage control from the peak runoff rates using a ten (10) year frequency storm as a minimum. Higher runoff rates of up to a 100 year frequency storm may be required if determined necessary by the Director of Public Works.
- 804.2 Where warranted by local controlling factors, such as protection of downstream structures, or as determined by the Director of Public Works, a different storm frequency may be required.
- 804.3 Runoff shall be calculated using the Rational Formula or the Natural Resources Conservation Service (NRCS) methods for drainage areas up to 100 acres. For watersheds larger than 100 acres but smaller than 2000 acres NRCS methods may be used. For larger watersheds, flood frequency methods or Corps of Engineer's methods may be used. Other alternative methods may be used upon approval by the Director of Public Works.

SECTION 4-805 AFFIDAVITS

- 805.1 When a project site involves unusual, fragile, complex, or hazardous areas, such as unstable slopes, wetlands, and sinkholes, the Building Official or Director of Public Work may require that affidavits be executed by the property owner and his consultants that any or all of the following have been prepared by a registered civil engineer qualified by experience to prepare said report:
 - A. Compaction report where a site is proposed to be filled to be used for a building pad.
 - B. Soil engineering report.
 - C. Engineering geology report.
 - D. Other affidavits or reports as deemed necessary by the Building Official or Director of Public Works.
- 805.2 The affidavits as required herein shall be submitted to the Building Official prior to the issuance of a Grading Permit. Affidavits shall also be furnished by the property owner and his consultants after completion of construction covered by the permit, affirming that appropriated measures were taken and that the completed construction conforms to the requirements of these regulations.

SECTION 4-806 PERMITTING PROCEDURES

The following procedures for applying for a Grading Permit shall apply:

806.1 PRE-APPLICATION CONFERENCE

A pre-application conference with the Building Official and Public Works Director is required to assure timely permit application preparation and review. This conference should be used to determine if a proposed project qualifies for exemption and to determine how technical guidelines and criteria should be applied.

806.2 SUBMITTAL

Submission of the permit application shall be made to the Building Official located in the Department of Planning and Codes.

806.3 REVIEW

The Building Official shall review the permit application to ensure that all information is provided in accordance with the requirements of these regulations. Should the application be determined to be incomplete, it will be returned to the applicant with a written request for additional information.

When plans are included, one set of all documents shall be forwarded to the Director of Public Works for his review of technical requirements. If the Building Official or Director of Public Works determine that additional information or reports are necessary the applicant will be notified by written request. The application shall not be further processed until such time as any requested additional information or reports is submitted.

806.4 PERMIT ISSUANCE

- A. If the work described in the permit application, including drawings, conforms with the requirements of these regulations and any other pertinent laws and ordinances, and when the fees and warranty of improvements required in Sections 807 and 808 have been paid, a Grading Permit shall be issued.
- B. If the work described in the permit application, including drawings, does not conform with the requirements of these regulations and any other pertinent laws and ordinances, the application shall be disapproved. The denial shall be accompanied by written reasons and shall be returned to the applicant.
- C. When the Grading Permit is issued, the Building Official shall stamp "PERMIT APPROVED" on all sets of drawings and specifications. The Public Works Department and Building Official shall each retain a set of the permitted plans and a set shall be returned to the applicant.

- D. The issuance of a Grading Permit shall not be construed as approval for violation of any of the provisions of these regulations or any other laws or regulations; and such permit shall not be valid, except insofar as the work or use that it authorizes is lawful.
- E. The issuance of a Grading Permit shall not prevent the Building Official or Director of Public Works from thereafter requiring the correction of errors or changes due to unforeseen problems in permitted plans and specifications. The Building Official or Director of Public Works may require operations and project design be modified if significant problems occur which were not considered at the time the permit was issued.
- F. The issuance of a Grading Permit shall in no way imply that a Building Permit will be issued or approved.

806.5 REVISIONS TO APPROVED PLANS

Should prior to or during construction, changes be anticipated that would constitute a revision of the plans already approved by the Building Official, the approved plans shall be revised and resubmitted in triplicate with a letter stating why such changes are believed necessary.

806.6 EXPIRATION

Every permit issued by the Building Official under the provisions of these regulations shall expire by limitation and become null and void if the work authorized by such permit is not commenced within ninety (90) days from the date of issuance of such permit, provided that consecutive renewal of such permit may be granted, at no additional cost, upon written request to the Building Official with good cause shown. The work authorized by such permit shall not be suspended or abandoned at any time after the work is commenced and shall be carried to completion or the permit shall be void. If work is suspended or abandoned, the required warranty of improvements may be used to correct or eliminate erosion, drainage problems, or hazardous conditions.

806.7 SUSPENSION OR REVOCATION

The Building Official shall suspend or revoke a permit issued under provisions of these regulations by giving notice in writing to the owner whenever the permit is issued in error, on the basis of incorrect information supplied, when the valuation of the work to be done has been underestimated, or in violation of any ordinance, regulation or any of the provisions of these regulations.

SECTION 4-807 FEES

A Grading Permit shall not be issued until the fee prescribed below has been paid. Nor shall an amendment to a permit be released until the additional fee, if any, due to an increase in the estimated cost of the work has been paid.

If in the opinion of the Building Official the valuation of the work to be done appears to be understated on the application, permit shall be denied, unless the applicant can show detailed estimates to meet the approval of the Building Official.

Fees shall be based upon the valuation of the work to be done according to the "Schedule of Permit Fees". Should a Grading Permit only be applied for, the fee will be based upon the value of the clearing and/or earthwork to be performed. Should a Building Permit be applied for at a later date, the fee for the Building Permit will be based upon the total value of the project minus the clearing and/or earthwork fee already paid. If the developer prefers, a Grading Permit and a Building Permit will be issued at the same time, and the total fee will be issued based upon the total value of the project. A Building Permit will not be issued when a Grading Permit is required, until after the Grading Permit has been issued or is issued in conjunction with the Building Permit.

Following is the recommended schedule of permit fees charged. This schedule may be updated from time to time by the City Council and a copy of the current fee schedule shall be posted in the Building Official's office.

SCHEDULE OF PERMIT FEES

Total Valuation	Fee
\$1,000.00 and less	No fee, unless an inspection is required, in which case a \$15.00 fee for each inspection shall be charged.
\$1,001.00 to \$50,000.00	\$15.00 for the first \$1,000.00 plus \$5.00 for each additional thousand or fraction thereof, to and including \$100,000.00.
\$50,001.00 to \$100,000.00	\$260.00 for the first \$50,000.00 plus \$4.00 for each additional thousand or fraction thereof, to and including \$100,000.00.
\$100,001.00 to \$500,000.00	\$460.00 for the first \$100,000.00 plus \$3.00 for each additional thousand or fraction thereof, to and including \$500,000.00
\$500,000.00 and up	\$1,660.00 for the first \$500,000.00 plus \$2.00 for each additional thousand or fraction thereof.

PENALTIES

Where work for which a Grading Permit is required by these regulations is started prior to obtaining said Grading Permit, the fees herein specified shall be doubled, but the payment of such double fee shall not relieve any persons from fully complying with the requirements of these regulations in the execution of the work nor from any other penalties prescribed herein.

SECTION 4-808 WARRANTY OF IMPROVEMENTS REQUIRED

- 808.1 For work involving more than \$2,000.00 in value or more than (1) acre in land area, the property owner shall submit to the Building Official a warranty of improvements to assure that the work is completed in accordance with the permitted plans and specifications. Said warranty of improvements shall be in the form of a letter of credit, certified check, or escrow account. The Director of Public Works may approve an alternate method of warranty of improvements such as a surety bond for work involving more than \$10,000.00 in value or more than (10) acres in land area.
- 808.2 The Director of Public Works shall determine the specific length of time that the warranty of improvements shall remain in force. At a minimum the warranty of improvements shall remain in force for one (1) year after the anticipated date of the completion of the installation of vegetation. The expiration date shall be specified in the warranty of improvements along with an exact description of the work being guaranteed.
- 808.3 The Director of Public Works may approve an extension of a warranty of improvements upon written request from the property owner. Such requests shall be submitted at least two (2) months prior to the expiration date of the warranty of improvements and a replacement guarantee shall be submitted at least one (1) month prior to the expiration date of the original guarantee.
- 808.4 The warranty of improvements for clearing operations only shall be in the amount of \$1,000.00 per acre for each acre or fraction thereof disturbed or affected by such operations.
- 808.5 The warranty of improvements for earthwork or clearing and earthwork operations shall be in the amount of \$3,000.00 per acre for each acre or fraction thereof disturbed or affected by such operations.
- 808.6 Additional surety, equal to double the amounts required in subsections 808.4 and 808.5 herein, shall be required where clearing or earthwork is performed in areas designated as floodways, floodplains, sinkhole retention areas or if determined by the Director of Public Works, is susceptible to landslides.

SECTION 4-809 CONSTRUCTION PROCEDURES

809.1 PERMIT REQUIRED PRIOR TO COMMENCING ANY WORK

A person, firm, or corporation required to obtain a Grading Permit in compliance with these regulations must do so prior to commencing any work pertaining to the permit. Corrective measures, including but not limited to, stop work orders, penalties, and injunctions may be taken as required to enforce the terms of this requirements.

809.2 POSTING OF PERMIT

Work requiring a Grading Permit shall not be commenced until the permit holder or his agent shall have posted the Grading Permit in a conspicuous place on the front of the premises. The permit shall be protected from the weather and be placed to allow easy access for recording entries. The permit shall remain posted by the permit holder until the certificate of occupancy has been issued by the Building Official.

809.3 NOTIFICATION OF CONSTRUCTION

After posting the permit, the permittee shall install all soil erosion and sediment control measures as shown on the plans. No additional work shall be performed until the permittee has notified the Director of Public Works of the completion of the temporary erosion control measures.

All clearing and/or earthwork operations for which a Grading Permit is required shall be subject to observation by the Director of Public Works, or his designee. If the Director of Public Works determines that additional erosion control measures are needed they shall be promptly acquired and installed by the permittee.

809.4 OBSERVATION OF CONSTRUCTION

The owner shall be responsible for the ongoing observation, review and field issuance of reports in the actual earthwork. This responsibility shall include, but need not be limited to, testing, inspection and issuing of field reports as to the establishment of line, grade and drainage of the project area. Civil engineering record documents shall be preserved in accordance with state law.

809.5 NOTIFICATION OF NON-COMPLIANCE

If the owner, his contractor, or his consultants finds that the work is not being done in conformance with these regulations or the permitted plans, the discrepancies if not corrected in a timely manner, shall be reported immediately in writing to the Director of Public Works. Plans for corrective measures shall be submitted to the Director of Public Works along with an appropriate schedule for completion of such corrections.

809.6 REPLACEMENT OF CONTRACTORS OR CONSULTANTS

If the owner's contractor, civil engineer, soil engineer, engineering geologist or the testing agency of record are changed during the course of the work, the owner shall replace the contractor or consultants of record with a qualified individual, and shall so notify the Director of Public Works in writing.

809.7 NOTIFICATION OF COMPLETION

The owner shall notify the Director of Public Works when the project has been completed, including installation of all **erosion and sedimentation controls in accordance with the final permitted plans, and when** all the required reports have been submitted.

809.8 RELEASE OF WARRANTY OF IMPROVEMENTS

One (1) year following the completion of vegetation and upon receipt of the as-built plans, the city will release the warranty of improvements to the owner provided that if vegetation has not been established for an entire growing season the warranty of improvements shall not be released for one (1) year plus one (1) growing season after the vegetation becomes established with standing growth. **If the warranty of improvements is for more than the amount required to complete the vegetation, it shall be released upon the filing of a new warranty in the amount required to complete the work.**

SECTION 4-810 ADMINISTRATION

810.1 DEPARTMENT OF PLANNING AND CODES

The Department of Planning and Codes receives Grading Permit applications, reviews them for completeness, and refers those applications that include plans to the Department of Public Works for review and approval. Once the application has been approved, this department is responsible for collecting fees and warranty of improvements and for issuing the permit.

810.2 DEPARTMENT OF PUBLIC WORKS

This department is responsible for reviewing all plans submitted with applications for Grading Permits and for site inspections to insure compliance with these regulations. The plan review shall be conducted by the Director of Public Works or his designee, and site inspections shall be conducted by the Director of Public Works or his designee.

810.3 RIGHT OF ENTRY

The Director of Planning and Codes and the Director of Public Works or any of their duly authorized representatives may enter upon the premises of any land located within the Cookeville, Tennessee city limits for the purpose of inspecting the site before, during, and after construction to determine compliance with these regulations.

810.4 STOP WORK ORDERS

Upon notice from the Director of Planning and Codes, work being performed on any site within the City of Cookeville contrary to the provisions of these regulations shall be immediately stopped. Such notice shall be in writing and shall be given to the owner or developer of the property or to the person doing the work, and shall state the conditions under which the work may be resumed.

810.5 PENALTIES

Any person who shall violate a provision of these regulations or fails to comply therewith, or with any of the requirements thereof, or who shall do any clearing or earthwork in violation of a detailed statement or drawing submitted and permitted hereunder, shall be guilty of a misdemeanor. Each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this ordinance is committed or continued, and upon conviction of any such violation such person shall be punished by a fine of not less than \$50.00 or more than \$5,000.00 for each and every violation, in addition to any applicable State or Federal fines.

Any non-permitted drainage system or construction of fill located within a flood plain shall, upon written notice from the Director of Planning and Codes, be removed at the property owner's expense.