

**TITLE XV UNIFIED DEVELOPMENT CODE
CHAPTER 169: PHYSICAL ALTERATION OF LAND**

169.01 INTENT 3

169.02 GENERAL REQUIREMENTS 3

169.03 PERMITS REQUIRED/EXCEPTIONS..... 3

169.04 MINIMAL EROSION CONTROL REQUIREMENTS 4

169.05 ONE-TIME APPROVALS 4

169.06 LAND ALTERATION REQUIREMENTS 4

169.07 GRADING PLAN SPECIFICATIONS 8

169.08 GRADING PLAN SUBMITTAL 9

169.09 MINOR MODIFICATIONS 9

169.10 APPROVAL 9

169.11 DISCOVERY OF HISTORIC RESOURCES..... 9

169.12 CERTIFICATE OF OCCUPANCY 9

169.13 OWNER RESPONSIBILITY 9

169.14-169.99 RESERVED 9

Fayetteville Code of Ordinances

CHAPTER 169: PHYSICAL ALTERATION OF LAND

169.01 Intent

- (A) It is the city's intent to safeguard the health, safety, and welfare of Fayetteville citizens by implementing standards and procedures for the physical alteration of land. It is not the city's intent to supersede federal or state regulations such as, but not limited to, the Occupational Health & Safety Act.
- (B) The purpose of this chapter is to control grading, clearing, filling, and cutting (or similar activities) which alone or in combination cause landslides, flooding, degradation of water quality, erosion and sedimentation in storm sewer systems and water storage basins. It is also the intent of this chapter that through the implementation of the guidelines and regulations contained herein, the existing scenic character and quality of the neighborhood and city as a whole not be diminished.

(Code 1991, §161.01; Ord. No. 3551, 6-4-91; Ord. No. 4100, §2 (Ex. A), 6-16-98; Ord. No. 4113, §1, 8-18-98)

169.02 General Requirements

- (A) *Protection.* Persons engaged in land alteration activities regulated by this chapter shall take measures to protect public and private properties from damage by such activities.
- (B) *Site conditions.* Development shall generally conform to the natural contours of the land, natural drainage ways, and other existing site conditions.
- (C) *Adjacent properties.* All developments shall be constructed and maintained so that adjacent properties are not unreasonably burdened with surface waters as a result of such development. More specifically, new development may not unreasonably impede water runoff from higher properties nor may it unreasonably channel water onto lower properties.
- (D) *Restoration.* Land shall be revegetated and restored as close as practically possible to its original conditions so far as to minimize runoff and erosion are concerned. Previously forested areas shall follow the City's Landscape Manual for mitigation of forested areas.

(Code No. 1991, §161.02; Ord. No. 3551, 6-4-91; Ord. No. 4100, §2 (Ex. A), 6-16-98; Ord. No. 4113, §1, 8-18-98; Ord. 4855, 4-18-06)

169.03 Permits Required/Exceptions

- (A) *Permit required.* No grading, filling, excavation, or land alteration of any kind shall take place without first obtaining:
 - (1) A grading permit pursuant to this chapter except as specified in §169.03(B);
 - (2) A stormwater management, drainage and erosion control permit (hereinafter referred to as a "drainage permit") except as specified in §170.03(C) and §170.03(D); and
 - (3) An Arkansas Department of Environmental Quality Stormwater Construction Permit and incorporated Stormwater Pollution Prevention Plan, if required by state law.
 - (4) A grading permit is required by the City for any development occurring within the Hillside/Hilltop Overlay District boundaries. If a parcel of land is divided by the Hillside/Hilltop Overlay District boundary, then only that portion of land lying within the boundary is subject to the requirements of this chapter.
- (B) *Exceptions where no grading permit is required.* Grading permits are not required for the following:
 - (1) *Excavation below finish grade.* Excavations below finished grade for basements, footings, swimming pools, hot tubs, septic systems, retaining walls, and like structures authorized by a valid building permit.
 - (2) *Cemetery graves.* Cemetery graves.
 - (3) *Refuse disposal.* Refuse disposal sites controlled by other regulations.
 - (4) *Single-family/duplex.* Construction of one single-family residence, or duplex not located within the 100 year flood plain, the Hillside/Hilltop Overlay District, or on a slope 15 % or greater.
 - (5) *Building additions.* Building additions of less than 2,000 square feet where associated land alteration activities are not beyond the scope of what is necessary to construct said addition.
- (C) *Grading permit application and approval.* No grading permit shall be issued until the grading plan, endorsed by a registered architect, landscape architect, or engineer, is approved by the City Engineer. A separate permit shall be required for each site; it may cover both excavations and fills. Grading permits may be

issued jointly for parcels of land that are contiguous, so long as erosion control measures are in place until project completion. Any application for a required grading permit under this chapter shall be submitted concurrently with the application and calculations for a drainage permit if such a drainage permit is required by §170.03., coordination with Chapter 167. Tree Preservation and Protection is required.

- (D) *Permit posted.* A copy of the grading permit cover page shall be posted at or near the street right-of-way line and shall be clearly visible from the street.

(Code 1991, §161.03; Ord. No. 3551, 6-5-91; Ord. No. 4100, §2 (Ex. A), 6-16-98; Ord. No. 4113, §1, 8-18-98; Ord. No. 4313, 5-15-01; Ord. 4855, 4-18-06)

169.04 Minimal Erosion Control Requirements

If exempt under §169.02, If exempt under 169.03, a grading permit is not required. However, exempt as well as non-exempt activities shall be subject to the following minimal erosion and sedimentation control measures.

- (A) *Natural vegetation.* The potential for soil loss shall be minimized by retaining natural vegetation wherever possible. Development in the Hillside/Hilltop Overlay District should comply with the recommendations of the Hillside/Hilltop Best Management Practices Manual with regard to the retention of natural vegetation on Hillside/Hilltops.
- (B) *Stabilization.* All graded and otherwise disturbed areas shall be stabilized within 15 days immediately after the grading or disturbance has been completed. Stabilization methods such as baled straw, filter fabric, ditch checks, diversion ditches, brush barriers, sediment basins, matting, mulches, grasses and groundcover shall be used.
- (C) *Intermittent/perennial streams.* No intermittent or perennial stream, including a 25 foot perimeter strip measured from the top of the bank, shall be graded, developed, channeled, or physically altered unless adequate guarantees are made for erosion and sedimentation control. Likewise, cuts or fills shall be setback sufficiently from intermittent and perennial streams and other stormwater drainage systems to guarantee that there will be no damage from erosion or sedimentation.
- (D) *Excavation material.* Excavation material shall not be deposited in or so near streams and other stormwater drainage systems where it may be washed downstream by high water or runoff. All

excavation material shall be stabilized immediately with erosion control measures.

- (E) *Fording streams.* Fording of streams with construction equipment or other activities which destabilize stream banks shall not be permitted.
- (F) *Removal of mud/dirt from public streets.* Any debris, soil, or mud from development sites reaching a public street shall be immediately removed.

(Code 1991, §161.04; Ord. No. 3551, 6-5-91; Ord. No. 3947, §1, 2-6-96; Ord. No. 4100, §2 (Ex. A), 6-16-98; Ord. No. 4113, §1, 8-18-98; Ord. 4855, 4-18-06)

169.05 One-Time Approvals

- (A) *Utilities.* Public and private utility organizations may obtain a one-time approval from the City Engineer for all routine underground electric, water, sewer, natural gas, telephone, or cable facilities. The approval will include a utility organization and its contractors, agents, or assigns and will be permanent in nature as long as the original approved procedures are followed.
- (B) *Stockpiling materials.* One-time approval may be obtained by public or private entities for the stockpiling of fill material, rock, sand, gravel, aggregate, or clay at particular locations, subject to Zoning, Chapters 160 through 165.

(Code 1991, §161.05; Ord. No. 3551, 6-4-91; Ord. No. 4100, §2 (Ex. A), 6-16-98)

169.06 Land Alteration Requirements

- (A) *Grading plan evaluation.* Grading plans shall be evaluated by the City Engineer for conformance with the minimal erosion control requirements of §169.04 and the following requirements.
- (B) *Requirements varied.* Requirements may be varied by the City Engineer with the approval of the Planning Commission. The extent to which variations may be made will depend on the soil types encountered, planned slopes, planned vegetation, and investigative engineering reports. In no case shall the City Engineer waive or modify any of the minimum erosion control requirements as given in §169.04.
- (C) *Cut or fill slopes.*
 - (1) *Finish grade.* Cut or fill slopes shall have a finish grade no steeper than 33% (3.00 horizontal to 1 vertical), when approved by the City Engineer. Land located within the Hillside/Hilltop Overlay District may have cut or fill slopes with a finish grade no steeper than 50% (2.00 horizontal to 1 vertical) with approval of the City Engineer.

TITLE XV UNIFIED DEVELOPMENT CODE

- (2) *Maximum length.* The maximum length of any cut or fill slope without a terrace (as described in (D) below) shall be 100 feet as measured along the ground. The terrace shall be at least six feet (6') wide.
- (3) *Existing topography.* Cut or fill slopes shall be constructed to eliminate sharp angles of intersection with the existing terrain and shall be rounded and contoured to blend with the existing topography.
- (4) *Setback requirements.* The following setback requirements shall be reviewed by the City Engineer for purposes of assessing safety, stability, and drainage problems: (See illustrations). Setbacks from property lines may be filled or cut if a grading plan is submitted jointly by the owners of both properties.
 - (a) *Setback from top or toe of cut or fill.* Buildings shall be setback from the top or toe of a cut or fill in accordance with Zoning, Chapters 160 through 165; Building Regulations, Chapter 173; or the approved grading plan, whichever is greatest.
 - (b) *Setbacks from property lines.* The required setback of retaining walls, cut slopes, and fill slopes from property lines shall be as given in the illustrations. Property lines may be filled over or cut if a grading plan for the cut or fill is submitted jointly by the owner of both properties and if no utility easements are involved. If utility easements are involved, approval is required as given in (c) below in addition to the joint submittal requirement.
 - (c) *Setbacks from the edge of an easement.* The required setback of retaining wall, cut slopes, and fill slopes from the edge of easements shall be as given in the illustrations. Where no utilities are present in an easement, or where utilities are planned to be relocated, and where such action is approved by all utilities, then easements may fall within a cut or fill section.
 - (d) *Setbacks from structures.* The required setback of retaining walls, cut slopes, and fill slopes from structures shall be as given in the illustrations. If a structure forms an integral part of the retaining wall, then the setbacks do not apply to that structure.

- (e) *Public rights-of-way.* Cuts adjacent to public rights-of-way shall be setback a minimum of 25 feet, excluding driveways or access roads.
- (f) *Calculating setbacks.* For the purpose of calculating setbacks, any cut or fill section which is on a slope of one to one or greater shall be considered a retaining wall.
- (g) *Administration variance.* Setbacks from easement lines and structures may be varied administratively by the City Engineer if geotechnical and/or structural information is provided that in the opinion of the City Engineer justifies the variance.
- (h) *Additional information required.* The City Engineer may require further geotechnical and/or structural information to show that setbacks greater than those given are not needed to protect property, utilities, or the integrity of property lines.

(D) *Cuts.*

- (1) *Vertical height.* Cuts shall be limited to 10 feet in vertical height unless information demonstrating slope stability, erosion control, and drainage control is provided together with a revegetation plan. For nonsolid rock cuts, terraces shall be required for cuts greater than 10 feet in height. It is recommended that terracing be at a maximum ratio of one foot of horizontal terrace for every foot of vertical surface.
- (2) *Maximum vertical cut.* In solid rock, as determined by geotechnical and engineering data approved by the City Engineer, the maximum vertical cut shall be 30 feet.
- (3) *Fill material.* In no case shall a cut be allowed primarily for the purpose of obtaining fill material to a different site, unless the exporting site is located within an extraction district.

(E) *Fills.*

- (1) *Rocks/fill.* All imported fill shall be free of rocks greater than 12 inches in diameter and any detrimental organic material or refuse debris.
- (2) *Compaction.* Fill shall be placed and compacted as to minimize sliding or erosion of soil. Fill compaction shall equal the compaction of undisturbed, adjacent soil,

except fills covered by Building Regulations, Chapter 173, or other structural fills. The City Engineer may require soil tests during compaction work or upon its completion at the expense of the permittee.

- (3) *Grade.* Fill shall not be placed on existing slope with a grade steeper than 15% (6.67 horizontal to 1 vertical) unless keyed into steps in the existing grade and thoroughly stabilized by mechanical compaction.
- (4) *Terraces.* Terraces shall be required for fills greater than 10 feet in height. It is recommended that terracing be at a maximum ratio of one foot of horizontal terrace for every foot of vertical surface.

(F) *Erosion and sedimentation control.*

- (1) *Permanent improvements.* Permanent improvements such as streets, storm sewers, curb and gutters, and other features for control of runoff shall be scheduled coincidental to removing vegetative cover from the area so that large areas are not left exposed beyond the capacity of temporary control measures.
- (2) *Top soil.* Top soil shall be stockpiled and protected for later use on areas requiring landscaping. If top soil or other soil is to be stockpiled for more than 30 days, a temporary cover of annual rye or other suitable grass shall be planted.
- (3) *Existing vegetation.* Every means shall be taken to conserve and protect existing vegetation.
- (4) *Revegetation.* Revegetation shall be required to meet the following performance standards:
 - (a) *Zero to 10% grade:* Revegetation shall be a minimum of seeding and mulching. Said seeding shall provide complete and uniform coverage that minimizes erosion and runoff in no more than two growing seasons.
 - (b) *10% to 15% grade:* Revegetation shall be a minimum of hydroseeding with mulch and fertilizer, staked sod and/or groundcover. Said planting shall provide complete and uniform coverage in no more than two growing seasons.
 - (c) *15% to 20% grade:* The slope shall be covered with landscape fabric and planted with groundcover as set forth in (b) above.

(d) *More than 20% grade:* Any finish grade over 20% shall be stabilized with retaining walls, cribbing, terraces, landscape fabric, vegetation, or riprap. If riprap is used the slope's stability and erodibility must be equivalent to or better than its predevelopment state.

(e) *Hillside/Hilltop Overlay District.* Revegetation of lands within the Hillside/Hilltop Overlay District shall be planted immediately after the physical alteration of the land with complete and uniform ground cover. Sod, erosion fabric, herbaceous groundcover (in wooded areas), and/or a hydroseed with warm season grasses is required. Re-vegetation requirements shall be met prior to the issuance of a certificate of occupancy. Cut and Fill tie-back slopes shall be re-vegetated with appropriate tree species to achieve a minimum of 25% tree canopy at maturity.

(5) *Plant/water.* Plant materials shall be watered or irrigated and tended. Where irrigation or regular watering is not available, only native or acclimated plant species shall be used. If the soil cannot properly sustain vegetation, it must be appropriately amended. If revegetation is not firmly established and healthy after one year, the landscape administrator shall require that it be redone in part or total.

(6) *Plant/terrace bench.* Plant materials shall be planted along terrace benches. (See: §169.01). Said plantings shall be spaced as necessary to thoroughly stabilize the terrace bench. The remainder of the terraced slope shall be revegetated and stabilized according to §169.06(F)(4) above.

(7) *Permanent erosion control.* The developer shall incorporate permanent erosion control features at the earliest practical time. Temporary erosion control measures will be used to correct conditions that develop during construction that were unforeseen during the design stage, that are needed prior to installation of permanent erosion control features, or that are needed temporarily to control erosion that develops during normal construction projects, but are not associated with permanent control features on the project.

(8) *Allowable soil loss.* Allowable soil loss shall not exceed the "T" factor, which is a component of the universal soil loss equation.

TITLE XV UNIFIED DEVELOPMENT CODE

(G) *Undisturbed land requirements.* In the development of residential subdivisions, allowable grading of slopes shall be in accordance with this table.

Average Grade	Minimum Undisturbed Area
10 to 15 percent	40 percent
15 to 20 percent	50 percent
> 20 percent	60 percent

In the development of Large Scale Developments and lots within the Hillside Overlay District, the minimum amount of undisturbed land shall equal the percent minimum tree canopy pursuant to §167.04 (C). Planned Zoning Districts shall show undisturbed areas, but may be approved by the City Council with lesser percentages of undisturbed area than required above.

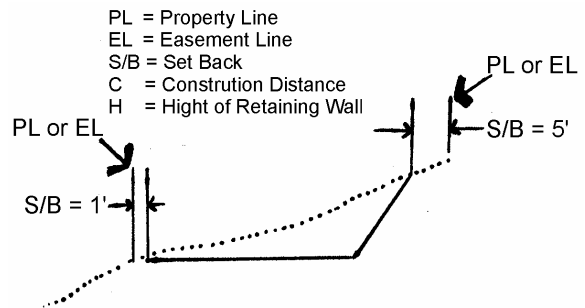
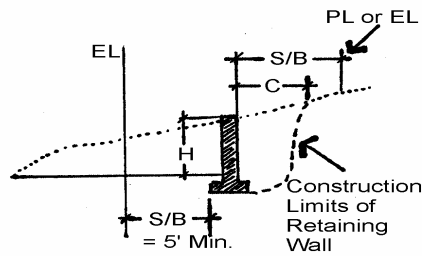
(H) *Required retaining wall and rock cut design.*

(1) *Design/inspection.* Any retaining wall more than four feet in height shall be designed by a registered professional engineer and shall be field inspected by the design engineer. The City Engineer may require retaining walls less than four feet in height to be designed by a professional engineer.

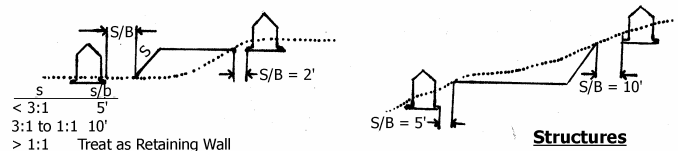
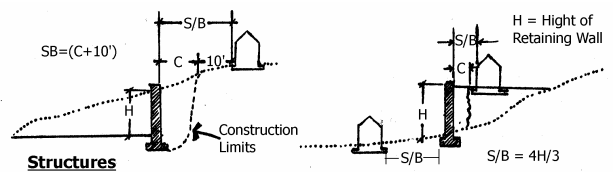
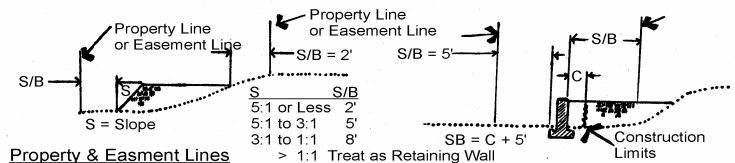
(2) *Investigation/report.* All proposed rock cuts and any cut 10 feet or greater will require a geotechnical investigation and a formal report submitted by a registered professional engineer qualified to make such investigations.

(3) *Safety railings.* Safety railings may be required on any retaining wall 2.5 feet or higher. The decision as to whether to require safety railing shall be based on potential pedestrian and public access to the retaining wall and applicable building codes. This requirement for safety rails shall also apply to vertical or near vertical rock cuts and to steep cut or fill slopes.

(Code 1991, §161.07; Ord. No. 3551, 6-4-91; Ord. No. 4100, §2 (Ex. A), 6-16-98; Ord. No. 4113, §1, 8-18-98; Ord. No. 4855, 4-18-06)



Note: Setbacks may be increased when adjacent to easements with deep sanitary sewer or other deep lines



169.07 Grading Plan Specifications

(A) *Grading plan.* The applicant shall prepare a grading plan as follows:

- (1) *Site plan.* Site plan at a scale no smaller than one inch equals 50 feet, showing property lines; vicinity map; name of owner, developer and adjacent property owners.
- (2) *Existing grades.* Existing grades shall be shown with dashed line contours and proposed grades with solid line contours. Grading plans shall be required to show both the proposed grade and the undisturbed area. Contour intervals shall be a maximum of two feet. Spot elevations shall be indicated.
- (3) *Designation of grade.* Areas with 0 to 10%, 10 to 15%, 15 to 20% and more than 20% grade shall each be identified in a distinguishing manner.
- (4) *Identify land to be disturbed.* Land areas to be disturbed shall be clearly identified.
- (5) *Engineer/architect.* Seal of a registered engineer, architect, or landscape architect certifying that the plan complies with this chapter.
- (6) *Cuts and fills.* All cuts and fills, including height and slope, shall be clearly shown on the plan.
- (7) *Streets and rights-of-way.* Location and names of all existing or platted streets or rights-of-way within or adjacent to tract and location of all utilities and easements within or adjacent to the property shall all be indicated.
- (8) *Lot/building, etc. identification.* The proposed location of lots, buildings, streets, parking lots and parks, playgrounds or greenspace shall be indicated. Also to be indicated is any existing or proposed building within 100 feet of the site.
- (9) *Soil type.* Soil types shall be identified according to the Unified Soil Classification System.
- (10) *Natural features.* Location of natural features such as drainage ways, ponds, rock outcroppings, and tree cover. Indication of 100 year floodplains as defined by FEMA.
- (11) *Streets and drainage ways.* Profiles and cross sections for proposed streets and drainage ways.

- (12) *Acreage/zoning.* Total acreage and zoning classification.
- (13) *Surface water.* Provisions for collecting and discharging surface water.
- (14) *Underground utilities.* Profiles and cross sections of streets, drainage systems, and underground utilities, if they are necessary to clarify the grading plan in terms of potential erosion or runoff, or if the grading on site has the potential of disturbing the utility line.
- (15) *Treatment of slopes and benches.* The method of treatment for all slopes and benches shall be indicated.

(B) *Preliminary grade plan.* The preliminary grading plan shall include all the above items except (5), (7), (11), (13), and (14) above. In addition to the above items, the city may require a cross section through the property showing existing and proposed grades as part of the preliminary submission.

The following additional required information may be reported in text rather than shown on the grading plan.

- (1) *Time schedule.* A time schedule indicating the anticipated starting and completion dates of the development sequence and time of exposure of each area prior to stabilization measures.
- (2) *Description / fill material / compaction.* Description of quantity (in cubic yards), source, and composition of imported fill material and compaction specifications. Also, note the quantity (in cubic yards) and destination of excavation materials to be removed from the site.
- (3) *Natural vegetation preservation.* Proposals for preserving natural vegetation and description of revegetation or other permanent erosion control strategy.
- (4) *Runoff/sedimentation.* Specification of measures to control runoff and sedimentation during construction indicating what will be used such as straw bales, silt dams, brush check dams, lateral hillside ditches, catch basins, and the like.
- (5) *Dust.* Where excessive dust may become a problem, a plan for spraying water on heavily traveled dirt areas shall be addressed.
- (6) *Soils engineering study.* The City Engineer may require a soil engineering study, or soil loss calculations if site conditions so warrant.

TITLE XV UNIFIED DEVELOPMENT CODE

(Code 1991, §161.08; Ord. No. 3551, 6-4-91; Ord. No. 4100, §2 (Ex. A), 6-16-98; Ord. No. 4113, 8-18-98; Ord. No. 4855, 4-18-06)

169.08 Grading Plan Submittal

- (A) *Preliminary grading plan.* A preliminary grading plan shall be submitted at the time of preliminary plat submission for subdivisions or plat submission for large scale development, whichever is applicable.
- (B) *Final grading plan.* No subdivision may be finalized, nor large scale development plat approved before a final grading plan has been submitted to the City Engineer and approved. The final grading plan and the final plat of land located within the Hillside/Hilltop Overlay District shall have the following plat note stating: "Property and lot owners of lands located within the Hillside/Hilltop Overlay District are strongly encouraged to have a geotechnical analysis of their property prior to any development in order to identify potential geological hazards and determine appropriate techniques to mitigate against hazards such as the swelling and shrinking of soils, slumping, Hillside/Hilltop creep, and seeps.
- (C) In cases where neither subdivision plat, nor LSD plat is applicable, proof of notification of adjacent property owners and grading plan must be submitted simultaneously with the application for a grading permit

(Code 1991, §161.09; Ord. No. 3551, 6-4-91; Ord. No. 4100, §2 (Ex. A), 6-16-98; Ord. No. 4855, 4-18-06)

Cross reference(s)--Notification and Public Hearings, Ch. 157.

169.09 Minor Modifications

Finish grades shall be allowed no more than a 0.50 foot tolerance from the grading plan. However, the City Engineer may authorize in writing minor modifications so long as they do no alter the direction of run-off and otherwise comply with the intent of this chapter. When applicable, major modifications must be brought before the Subdivision Committee for their approval.

169.10 Approval

Approval of a grading plan is contingent on meeting all the requirements of this ordinance plus any set of varied requirements approved by the Planning Commission.

(Code 1991, §161.10; Ord. No. 3551, 6-4-91; Ord. No. 4100, §2 (Ex. A), 6-16-98; Ord. No. 4113, 8-18-98)

169.11 Discovery Of Historic Resources

Whenever, during the conduct of grading any historical, pre-historical, or paleontological materials are discovered, grading shall cease and the City Engineer shall be notified.

(Code 1991, §161.21; Ord. No. 3551, 6-4-91; Ord. No. 4100, §2 (Ex. A), 6-16-98)

169.12 Certificate Of Occupancy

All revegetation and grading plan improvements shall be in place before a certificate of occupancy shall be issued. When a property owner has finished building construction but has yet to install plant material, said owner may apply for a temporary certificate of occupancy. In evaluating whether or not to grant a temporary certificate of occupancy, the Building Safety Division Director shall consider weather conditions and temporary stabilization measures.

(Code 1991, §161.15; Ord. No. 3551, 6-4-91; Ord. No. 4100, §2 (Ex. A), 6-16-98)

169.13 Owner Responsibility

The property owner shall be responsible both for his or her employees and for all contractors and subcontractors from the onset of development until the property is fully stabilized. If property is transferred anytime between the onset of development and at the time it is fully stabilized, all responsibility and liability for meeting the terms of the chapter shall be likewise transferred to the new property owner.

(Code 1991, §161.16; Ord. No. 3551, 6-4-91; Ord. No. 4100, §2 (Ex. A), 6-16-98)

169.14-169.99 Reserved

