

ORDINANCE 26-2002

**ORDINANCE OF THE BOROUGH OF MADISON
AMENDING CHAPTER 195, ARTICLES VI AND VII, OF
THE BOROUGH CODE ENTITLED “LAND
DEVELOPMENT ORDINANCE OF THE BOROUGH OF
MADISON”**

WHEREAS, pursuant to N.J.S.A. 40:55D-26, the Mayor and Council requested the Madison Planning Board review the Land Development Ordinance; and

WHEREAS, the Planning Board has recommended that the Council amend Article VI entitled “Stormwater, Wetland Protection, Steep Slopes and Flood Control” and Article VII entitled “Soil Erosion and Sediment Control; Soil Moving” of the Land Development Ordinance; and

WHEREAS, the proposed amendment promotes the goals and objectives of the Master Plan; and

WHEREAS, the Borough Council desires to amend Articles VI and VII of Chapter 195 of the Borough Code.

NOW, THEREFORE, BE IT ORDAINED, by the Council of the Borough of Madison, in the County of Morris and State of New Jersey, as follows:

SECTION 1: The Borough Code, Chapter 195, entitled “Land Development of the Borough of Madison”, Articles VI & VII are hereby amended as follows:

ARTICLE VI, Stormwater, Wetland Protection, Steep Slopes And Flood Control

§ 195-37. SUPPLEMENTAL DEFINITIONS

For the purpose of this Article VI, certain terms are hereby defined and shall be constructed to having the following meanings.

AREA OF SPECIAL FLOOD HAZARD - means the land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year.

BASEMENT--Any area of a building having its floor subgrade (below ground level) on all sides.

BREAKAWAY WALL--A wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or supporting foundation system.

ELEVATED BUILDING—A nonbasement building which is built, in the case of a building in an area of special flood hazard, to have the top of the elevated floor above the ground level by means of pilings, columns (posts and piers) or sheer walls parallel to the flow of the water and which is adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In an area of special flood hazard, “elevated building” also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of floodwaters.

HIGHEST ADJACENT GRADE - means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

HISTORIC STRUCTURE - means any structure that is:

[a] Listed individually in the State or National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the State Historic Preservation Officer as meeting the eligibility requirements on the State or National Register;

[b] Certified or preliminarily determined by the State Historic Preservation Officer as contributing to the historical significance of a registered historic district preliminarily determined by the State Historic Preservation Officer to qualify as a registered historic district;

[c] Individually listed on a State inventory of historic places in States with historic preservation programs which have been approved by the Secretary of the Interior; or

[d] Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:

1. By an approved State program as determined by the State Historic Preservation Officer; or
2. Directly by the Secretary of the Interior in States without approved programs.

LOWEST FLOOR—The lowest floor of the lowest enclosed area, including basement. An unfinished or flood-resistant enclosure, usable solely for the parking of vehicles, building access or storage in an area other than a basement is not considered a building's "lowest floor," provided that such enclosure is not built so to render the structure in violation of other applicable non-elevation design requirements.

MANUFACTURED HOME—A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For floodplain management purposes, the term "manufactured home" also includes park trailers, travel trailers and other similar vehicles placed on a site for greater than 180 consecutive days. For insurance purposes, the term "manufactured home" does not include park trailers, travel trailers and other similar vehicles.

MANUFACTURED HOME PARK OR MANUFACTURED HOME SUBDIVISION—A parcel, or contiguous parcels, of land divided into two or more manufactured home lots for rent or sale.

START OF CONSTRUCTION—Includes substantial improvement and means the date that the building permit was issued, provided that the actual start of construction, repair, reconstruction, placement or other improvement was within 180 days of the permit date. The "actual start" means either the first placement of permanent construction of a structure on a site, such as the pouring of a slab or footings, the installation of piles, the construction of columns or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling, nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of a

building, whether or not that alteration affects the external dimensions of the building.

SUBSTANTIAL DAMAGE - means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

§ 195-37.1 STORMWATER CONTROL

A. General

- (1) It is the intent and purpose of this section that all land in the Borough be developed according to the following requirements.
- (2) Any application for a building permit shall include sufficient information to carry out the intent and purpose of this section, which shall be administered by the Borough Engineer, except that applications for additions or alterations of less than 400 s.f. to one and two-family residences shall be exempt from this requirement.
- (3) Evaluation shall be made of the individual drainage structures proposed, the entire site runoff, the off-site subwatershed(s) of which the site is a part, downgradient properties, and the receiving stream channel capacities. A point of confluence shall be maintained so that valid comparisons of time of concentration can be made between existing and proposed conditions.
 - (4) Control of water quality in surface water, soil erosion, transport of sediment, and nonpoint source pollution related to development activities shall be demonstrated and promote natural and nonstructural management approaches and which maximize prevention of stormwater generation as well as mitigation of unavoidable stormwater impacts wherever possible.
- (5) In support of comprehensive stormwater management, the State of New Jersey's Surface Water Quality Standards (N.J.A.C. 7:9B-1.1 et seq.) establish surface water quality standards and antidegradation policies applicable to all surface waters, the

Revised Manual for New Jersey: Best Management Practices for Control of Nonpoint Source Pollution from Stormwater provides effective and economical alternatives for better stormwater management and, in particular, the control of nonpoint source pollution from land development, and New Jersey Residential Site Improvement Standards have been enacted (N.J.A.C. 5:21-1) to standardize stormwater management standards for residential development projects.

B. Runoff Standards. All land area in the Borough shall be developed so that:

- (1) The peak rate of stormwater runoff occurring from the site as a result of the development proposed in the application shall be reduced as follows:
 - to 50% of the pre-development rate for the 2-year storm,
 - to 75% of the pre-development rate for the 10-year storm, and
 - to 80% of the pre-development rate for the 100-year storm.
- (2) For the Water Quality Storm (1.25 inches over 2 hours) or any storm of lesser intensity, there shall be no increase in stormwater runoff volumes over pre-development levels.
- (3) The drainage of the adjacent areas is not adversely affected.
- (4) Soil absorption and groundwater recharge capacity of the area shall not decrease below what occurs there under existing conditions.
- (5) The natural drainage pattern of the area is not significantly altered and surface water runoff shall generally not be transferred from one watershed to another.
- (6) Recharge of the aquifer and associated groundwater must be maintained.
- (7) Maximum use shall be made of presently existing surface water runoff control devices, mechanisms or areas, such as existing berms, terraces, grass waterways, favorable hydrologic soils, swamps, swales, watercourses, woodlands and floodplains in accordance with their functional capabilities, as well as any proposed retention structures.
- (8) The plan shall avoid the concentration of flow and shall provide for the dissipation of velocities at all concentrated discharge points.

- (9) Reestablishing vegetative cover shall be in accordance with Standards and Specification for Soil Erosion and Sediment Control in New Jersey, adopted by the Morris County Soil Conservation District, latest edition, and with all other applicable statutes.
 - (10) Timing for the plan shall establish permanent surface water management measures prior to construction or other land disturbance.
- C. Runoff Control Details. In order to duplicate as nearly as possible natural drainage conditions, regulation and control of stormwater runoff and erosion for any land area to be developed shall be through on-site stormwater detention and/or ground absorption systems which include, but are not limited to, the following:
- (1) Reduce site runoff to pre-development conditions through any and all of the following methods:
 - (a) Reduction in the amount of impervious coverage.
 - (b) Consider a cluster development design.
 - (c) Reserve open space.
 - (d) Divert stormwater to pervious areas.
 - (e) Minimize use of storm sewers.
 - (f) Maximize use of natural vegetated overland flow.
 - (g) Recharge of stormwater runoff.
 - (h) Other methods approved by the Borough Engineer.

Additionally, new developments should:

 - (a) Minimize disruption of natural channels,
 - (b) Minimize storm sewers and paved drainage structures.
 - (c) Promote filtering and infiltration.
 - (2) Detention areas which may be depressions in the parking areas, excavated basins, basins created through use of curbs, stabilized earth berms or dikes, or any other form of grading which serves to temporarily impound and store water.
 - (3) Seepage pits which control stormwater runoff through ground absorption and temporary storage.
 - (4) Porous asphaltic pavement, which preserves the natural ground absorption capacity of a site and provides a subsurface reservoir for temporary storage of stormwater.

- (5) Any system or porous media, such as gravel trenches drained by porous wall or perforated pipe, which temporarily stores and dissipates stormwater through ground absorption.
- (6) Pre-treatment of stormwater runoff through the use of sediment forebay or micropools; grass filter strips and grass swales; catch basin pre-treatments; and/or sediment chambers.
- (7) Any combination of the above-mentioned techniques.

D. Design of Stormwater Detention Facilities.

(1) General Standards.

- (a) Stormwater detention facilities shall be designed to contain an amount equal to the increase in volume of runoff which results from development of a site.
- (b) Provisions for water quality within a detention facility shall be addressed with the goal of maintaining 18 hour detention time to promote settlement.
- (c) For estimating runoff discharge, design engineers shall have the option to choose the methodology to calculate peak rate and volume of discharge, as follows:
 - (i) For relatively small drainage areas of up to twenty acres (20 acres), the peak rate of runoff may be calculated by the Rational Method, Modified Rational Method, or more recent derivatives as approved by the Borough Engineer.
 - (ii) For areas up to 320 acres, Urban Hydrology for Small Watersheds, Technical Release No. 55 (TR-55), U.S. Department of Agriculture, Soil Conservation Service, Engineering Division, as supplemented or amended to date.
- (d) When the proposed stormwater management control measures (infiltration basins, etc.) depend on the hydrologic properties of soils to function properly, then a soils report shall be submitted. The soils report shall include an on-site geotechnical evaluation including borings or test pit documentation, in combination with documentary evidence of regional soils and geology, in order to determine the type, distribution and long-term suitability of soils present at the

location of the proposed facility and surrounding region, to be reviewed and approved by the Borough Engineer.

(2) Design Standards

- (a) Stormwater management systems shall be designed in accordance with the following criteria and methods:

Criteria	Method
Surface conditions	Existing and proposed conditions
Collection system	25 year storm
Storage	100-year storm
Outlet discharge	10-, 25-, 50- and 100-year storms
Emergency spillway	100-year storm or flood of record, whichever is greater
Top of Berm	1 foot above high water elevation (min)
Maximum velocity at pipe outlets	4 feet per second or per Soil Conservation District limitations

- (b) All outfalls are to be designed in a manner to retard velocities at the outfall and to provide stream channel protection.
- (c) When a natural drainage pattern is necessarily intercepted, as by a street, provisions shall be made to accommodate surface water runoff from the areas upstream from the point of interception.
- (d) All water-carrying structures and/or retention areas shall be completed and stabilized prior to diversion of water to them.
- (e) The surface water management plan shall include an inventory of the site showing all existing natural and man-made drainage features (berms, terraces, grass waterways, favorable hydrologic or poorly drained soils, swamps, swales, watercourses, woodlands, floodplains). These shall be incorporated in the plan to the greatest possible extent in accordance with their functional capability.

- (f) The design plan and calculations shall show that due consideration has been given to the relationship of the subject property to the natural or established drainage pattern of the subwatershed(s) of which it is a part.
- (g) Increased runoff resulting from disturbance of soil and vegetation during development, construction, or other activity shall be minimized into those drainage ways and watercourses which normally carry or receive surface water runoff
- (h) Surface water runoff controls shall be designed to assure that the land in question uses no more than its proportionate watershed share of the natural stream and culvert capacity.
- (i) Additional surface water runoff control and recharge devices may be proposed, such as sediment forebay or micropools; grass filter strips and grass swales; catch basin pre-treatments; and/or sediment chambers.

(3) Drywell/Seepage Pit Requirements for Roof Runoff

- (a) New roof areas less than 400 square feet are exempt from the dry well requirements of this ordinance.
- (b) Runoff from roof areas shall be transported to seepage pits for recharge of groundwater resources.
- (c) Seepage pits shall have the capacity to temporarily store a volume equal to four (4) inches of runoff from roof areas. Alternatively, the capacity of the seepage pit wells may be determined by routing a 50-year, 24-hour storm through the dry well system taking into consideration soil infiltration and permeability, water table depth, and dry well capacity.
- (d) Roof gutters, vertical conductors and leaders, and horizontal storm drains shall conform with Chapter 13 of the National Standard Plumbing Code, most recent edition. Design shall be based on a rainfall intensity of six (6) inches per hour.
- (e) All roof gutters shall be protected from the accumulation of leaves and litter.

- (f) Where gutters are not used on a building, a gravel filled trench with a perforated pipe shall be constructed under the roof overhang to collect roof runoff, having a capacity not less than a comparable roof drain system, subject to approval by the Borough Engineer.
- (g) Seepage pits shall have an overflow pipe extending to grade. Aluminum pins, or gutter nails, shall be extended through the pipe at its outlet to prevent small animals from entering.
- (h) Seepage pits shall generally be constructed of pre-cast concrete rings surrounded by clean crushed stone or gravel. The nominal stone size shall be 1-½ inches. A bed of coarse sand not less than 4 inches thick shall be placed in contact with the surface of the soil at the bottom of the excavation. A layer of crushed stone or gravel not less than 6 inches thick shall be placed on top of the coarse sand.
- (i) There shall be a vertical separation of not less than two (2) feet between the bottom of the stone in dry wells and the seasonal high water table, as verified by a competent field investigation.
- (j) All applications shall include calculations and details to show compliance with the ordinance.

(4) Surface Impoundment. If detention facilities utilizing surface impoundment, such as detention basins are used, sufficient volume to fully contain the total volume of rainfall excess shall be provided. The outlets of such facilities shall be designed to limit the maximum discharge rate of stormwater runoff to what occurs at the site under existing conditions and shall discharge in such a way as not to adversely affect any other property. If earth berms or dikes are used to create the impounding area, they shall be adequately stabilized and the slopes protected with vegetative cover, paving or rip-rap to protect against failure or breaching.

(5) Vegetated or Biofilter Swales:

- (a) The water velocity shall not exceed two feet per second (FPS) to allow for settlement of Total Suspended Solids (TSS) during the water quality design storm. The slope shall not be less than 0.5 percent so that positive drainage is maintained. The swale shall be of sufficient length to allow for settlement of TSS taking into consideration the velocity, depth of flow, and expected loading of TSS;

- (b) Where feasible, vegetation shall be used in the swale to filter out the Total Suspended Solids (TSS) and to provide a treatment by absorption of pollutants leached into the soil. Vegetation used in the swale shall be native or non-intrusive exotic species approved by the Morris County Soil Conservation District;
- (c) If the swale is designed to provide infiltration, the soil texture shall be sand, loamy sand, or sandy loam as defined by the U. S. Department of Agriculture and there shall be a minimum of three feet separation between the bottom of the swale and the seasonal high water table, as verified by a competent field investigation.
- (d) The swale shall be used internally within the stormwater collection system and in conjunction with other methods such as vegetated filter strips to increase their effectiveness.

(6) Above Grade Infiltration Facilities:

- (a) There shall be at least three feet vertical separation between the bottom of the facility and the seasonal high water table, as verified by a competent field investigation.
- (b) The maximum depth of impoundment shall be two feet;
- (c) The soil texture of the upper six inches of the facility (i.e., immediately below the surface layer of turf, gravel, paving blocks, etc.) shall be sand, loamy sand or sandy loam, as described by the U. S. Department of Agriculture. As necessary, the applicant will import appropriate select material to comply with this requirement;
- (d) The surface of the facility shall be stabilized by turf, gravel, porous asphalt pavement, modular paving blocks, or other measures approved by the Borough Engineer;
- (e) The entire volume of the runoff impounded during the water quality storm shall be recharged to groundwater within 72 hours; and
- (f) The design of the infiltration facility shall be based on infiltration rates measured using procedures outlined in EPA and NJDEP design manuals.

(7) Below Grade Infiltration Facilities:

- (a) Where porous media are used (e.g., gravel surfaced parking areas, gravel filled trenches), the applicant shall provide documentation of the in-place porosity of the media for purposes of estimating the retained runoff volume;
- (b) A media separation (e.g., geotextile or graded sand filter) shall be used to maintain the integrity of the interface between porous media and the native soil;
- (c) The design of the facility shall be based on infiltration rates measures using procedures outlined in EPA and NJDEP design manuals.
- (d) The entire volume of the runoff impounded during the water quality storm shall be recharged to groundwater within 72 hours. Standpipes are required in all below grade infiltration facilities for the purpose of inspecting water levels; and
- (e) As required by the Borough Engineer, runoff shall be treated to remove TSS and other nonpoint source pollutants prior to discharge to a below grade infiltration facility. Treatment may consist of a vegetated buffer strip, sediment trap, etc.

(8) Porous Asphalt Pavement:

- (a) The soil beneath the pavement shall be sand, loamy sand, or sandy loam as defined by the U. S. Department of Agriculture and compaction must be considered in the infiltration rate of the soil.
- (b) The porous pavement shall be buffered with vegetative screening to prevent the intrusion of aeolin sand and silt;
- (c) The permittee shall undertake a strict maintenance schedule including, but not limited to, vacuum sweeping on a weekly basis and high-pressure water washing on a monthly basis.
- (d) The porous pavement shall be used in light traffic areas subject to automobiles only and is marked by a sign restricting traffic to only passenger vehicles;
- (e) No asphalt sealer may be used; and

- (f) No sand or other non-soluble traction agent which may fill porous voids may be used during periods of snow and ice.

(9) Sediment Traps and Oil-Grease Separators:

The drainage areas serviced shall be less than one-tenth of an acre in size and particular attention shall be paid to maintenance responsibilities, inspection schedules and tasks as will be clearly shown in the plan.

- (10) Combination of Techniques.** If a combination of different stormwater detention techniques is used, the combined volume of the systems shall be large enough to fully contain the total volume of rainfall excess.

- (11) Safety Measures.** Stormwater detention, sedimentation or infiltration facilities shall incorporate safety measures including but not limited to warning signs, gauges, fencing, shallow grade benches, trash racks, etc.

- (12) Maintenance.** Stormwater facilities shall be constantly maintained by the owner or association to assure continual functioning of the system at design capacity and to prevent the health hazards associated with debris buildup and stagnant water. Maintenance responsibilities, inspection schedules and tasks will be clearly shown in the proposed plan. In no case shall water be allowed to remain in any facility long enough to constitute a mosquito breeding, disease or any other type of health problem. The maintenance plan must include inspection routines to reduce the potential for extensive, difficult, and costly remedial or emergency maintenance efforts, including inspection checklists. Inspection checklists may include such items as:

- obstruction of inlet or outlet devices by trash and debris
- evidence of erosion, sedimentation or instability
- malfunctioning of valves, gates, locks, access hatches, or equipment
- deteriorated conduit outlet or seepage around outlet
- cracks or other deterioration of inlets, outlets, pipes, and conduits
- inadequate draining, clearing or clogging of control devices
- trimming, cutting or mowing of vegetation as required
- erosion and debris in emergency spillways and/or filter strips
- deterioration of downstream channels/conduits
- invasive or noxious weeds out of character with those specified
- saturated conditions or standing water
- animal burrowing
- vandalism or other non-specified occurrences

If the land for stormwater detention facility or facilities is proposed to be dedicated to the Borough and said dedication is accepted by the Borough,

the procedures for the construction, dedication and acceptance set forth in this chapter including, but not limited to, performance and maintenance bonds, inspections, etc., shall govern.

§ 195-37.2 WETLAND PROTECTION

- A. Wetland Delineation. A wetlands letter of interpretation (LOI) from the New Jersey Department of Environmental Protection (NJDEP) shall be submitted as part of the application for any major subdivision or major site plan application. A minor subdivision application or a building permit application for an individual lot shall be required to perform an on-site wetland delineation as prepared by a wetland expert suitably qualified to submit an LOI, but no LOI will be required by this section. If wetlands or transition areas are present that could be impacted by the proposed improvements, a NJDEP approved LOI shall be submitted with the minor subdivision application or building permit application. If no wetlands are observed, a note to that effect shall be shown on the plans.
- (1) Documentation. All wetland and transition areas required pursuant to N.J.A.C. 7:7A-1 et seq. (New Jersey Freshwater Wetlands Protection Act Rules) or any successor statutes or regulations shall be clearly shown on all plats or site plans submitted for approval.
 - (2) All final plats, final site plans or individual lot building plans shall include the wetland line(s) identification number as assigned by NJDEP, pursuant to the Freshwater Wetlands Protection Act.
- B. Wetland Protection Standards. To prevent adverse impacts on delineated wetlands, the following guidelines shall be employed:
- (1) A snow fence shall be installed along the limit of disturbance outside of the final wetland transition area boundary line prior to any other site disturbance, so as to prevent encroachment into these regulated areas.
 - (2) A silt fence and/or hay bales should be installed downstream from disturbance areas adjacent to the state-mandated wetland transition area line (or buffer) so as to prevent the transport of silt into the wetland areas.

- (3) Prior to signing of the final plat for site plan, the applicant shall provide evidence of the filing of any deed restriction required by NJDEP to permit transition area modifications.
- C. Conservation Easement. When an LOI or wetlands delineation is required under Subsection A above, all wetlands and transition areas to remain undeveloped shall be protected by a conservation easement.

§ 195-37.3 STEEP SLOPES ANALYSIS.

- A. The purpose of this subsection is to regulate the intensity of use in areas of steeply sloping terrain in order to limit soil loss and erosion and the degradation of surface water. Steep slopes are present on a site when the existing terrain has a slope of 15% or greater as defined below:
- (i) A slope is considered a “moderate slope” when the grade of the existing terrain ranges from 15% to 25%.
 - (ii) A slope is considered a “critical slope” when the grade of the existing terrain is 25% or greater.
- B. If the steep slopes are present on the subject property, the applicant shall prepare a steep slope map showing topography at two-foot contour intervals. The moderate and critical slopes shall be determined based upon the slope of the all land areas showing slope classes of 0% to 14.99%, 15% to 24.99% and 25% or greater. The map shall also include a calculation of the area of proposed disturbance of each slope class on each existing and proposed lot, as well as within any proposed road right-of-way, and be regulated as follows:
- (1) Areas with slopes ranging from 0% to 14.99% are not restricted to development.
 - (2) Areas of moderate slopes shall require detailed site grading and architectural plans which focus on minimizing development activity in these areas. Up to one quarter of all moderate slopes identified onsite are permitted to be developed. The architectural plans must be specifically designed to accommodate the topography. Roads and driveways should be designed to follow the natural topography to the greatest extent possible and minimize disturbance.
 - (3) Areas of critical slopes are restricted from development unless the disturbance is for roadway crossings or utility construction, it is demonstrated that the roadway or utility improvements are critical

and no reasonable alternatives exist. The applicant may be required to provide additional documentation of soil types, land cover, tree surveys, stability calculations or field controls on specific encroachment areas in order to justify the control of impacts.

- C. Disturbance of steep slope areas in an amount greater than that indicated in the foregoing section shall require variance.

§ 195-38. SITE PLAN IN FLOODPLAIN AREAS.

A. Site plan data. In addition to the site plan approval requirements contained in this chapter, no building or structure shall hereinafter be erected, enlarged, expanded, externally altered or modified nor shall any paving, fill, excavation or improvements be permitted within any floodplain area unless a site plan shall have been submitted to the Planning Board for its review and approval.

(1) Said site plan shall be drawn to a scale not less than one inch equals 50 feet and shall show, in addition to the information required under other ordinances, the following information:

- (a) Existing and proposed buildings and structures.
- (b) Proposed finished grade elevations at the corners of any structure or structures.
- (c) Existing topography and proposed grading at contour intervals of at least one foot.
- (d) The lowest elevation within any proposed structure after its completion.
- (e) The location, type and size of all existing and proposed storm drainage facilities and other utilities servicing or proposed to service the premises in question.
- (f) The location, size, and nature of all existing and proposed drainage rights-of-way or easements and the location, size and description of any lands to be dedicated to the municipality, county or state.

- (g) The layout and size of existing and proposed public or private streets.
- (h) The elevation of any existing or proposed pumping facilities.
- (i) The nature and extent of any construction alterations or repairs.
- (j) The location, size and nature of the entire lot or lots in question and any contiguous lots owned by the applicant has a direct or indirect interest.
- (k) Proof of stream encroachment lines obtained from the New Jersey Department of Environmental Protection.
- (l) Flood hazard elevations and boundaries shall be shown based upon the latest information shown on "Flood Insurance Rate Map" prepared by the Federal Emergency Management Agency.
- (m) The extent of filling of the land, if any.
- (n) The location, type and size of all existing and proposed erosion and siltation control measures, such as slope protection, soil stabilization, sedimentation basins, sediment traps, headwalls, aprons and the like.
- (o) The applicant shall submit proof that:
 - [1] Proposed structures are designed and adequately anchored to prevent flotation, collapse or lateral movement.
 - [2] Materials and utility equipment used are resistant to flood damage.
 - [3] Construction utilizes methods and practices that minimize flood damage.
 - [4] Subdivision proposals are consistent with the need to minimize flood damage in flood-prone areas.

- [5] All public utilities and facilities, such as sewer, gas, electrical and water systems are designed, constructed and located to prevent, minimize or eliminate flood damage or infiltration.
- (p) Any and all other information and data necessary to meet any of the requirements of this article.
- (2) In addition, where required by the Board, the developer shall furnish information relating to subsurface conditions, based on percolation tests and soil borings or probes. Test borings or probes shall be performed by a licensed professional engineer with proven competency in the field of soils engineering and shall be in accordance with acceptable engineering standards and practices. A detailed report of the test shall be submitted to the Board and Borough Engineer for review.
- (3) Any application for site plan approval under this section shall be acted upon by the Board within 45 days of the filing date, or within 95 days of the filing date if the site plan requires a variance as provided for in §195-41. The filing date shall be that date when a complete application is filed with the Secretary of the Board.
- (4) Action by the Board may be conditioned upon any required approval by the New Jersey Department of Environmental Protection.
- (5) Board disapproval shall include written findings upon any site plan element found contrary to the provisions or intent of this article.
- (6) Any application shall include a certification by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting the applicable provisions of this Article VI. A copy of such certification shall be provided to the official as set forth in §195-43. [Added 3-23-1987 by Ord. No. 7-86].
- B. Permits. No person or persons shall engage in a permitted use within a delineated floodplain until all necessary permits have been obtained from those governmental agencies from which approval is required, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. § 1334.

- C. Conditions. The Board may impose such conditions on permitted uses as it deems appropriate to promote the public safety, health and welfare, to protect public and private property, wildlife and fisheries and to preserve, protect and enhance the natural environmental of the floodplain. No certificate of occupancy shall be issued unless all conditions of approval have been complied with.

§ 195-39. SPECIFIC FLOODPLAIN REQUIREMENTS.

- A. Preservation of natural land.

(1) It is hereby found that natural floodplains display complex intimate relationships among streams, periodic flooding, soils, vegetation, fish and wildlife and that periodic flooding of lowland areas, marshes and swamps adjacent to stream channels produces a rich physical-chemical environment for many living organisms. It is further found that floodplains contain biological communities which are among the most productive of natural systems and perform the following functions essential to the natural environment:

- (a) Passage and storage of storm floodwaters.
- (b) Removal of sediment loads from streams through deposition.
- (c) Replenishment of groundwater supplies through soil infiltration.
- (d) Dissipation of energy of flood flows, thereby reducing downstream destruction.
- (e) Provide areas of recreational and aesthetic pleasure.

(2) Because of the importance of the natural floodplain as cited above all natural land within any delineated floodplain, except for land to be developed in accordance with this chapter, shall be preserved in its natural state, and where possible, developed land within the floodplain shall be restored to its natural state so as to duplicate the natural or undeveloped drainage characteristics in terms of runoff and velocity.

(3) Whenever the alteration or relocation of a watercourse is required, the applicant shall notify the Federal Insurance Administrator, New Jersey Department of Environmental Protection, County of Morris, and

adjacent communities. The applicant shall assure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained and conforms with the State Plan.

B. Performance standards. In reviewing any proposed construction or development, the Board shall be reasonably assured upon evidence submitted by the applicant that any structure, when built or altered, can be occupied without peril to the health or safety of the occupant and that the proposed land use:

- (1) Has an inherent low flood-damage potential.
- (2) Either acting alone or in combination with existing or future uses, does not obstruct flood flows.
- (3) Does not affect adversely the water-carrying or storage capacity of any channel floodway or flood fringe area.
- (4) Does not increase erosion or the rate of local runoff.
- (5) Does not unduly stress or degrade the natural environment of the floodplain or degrade the quality of surface water or the quality and quantity of groundwaters.
- (6) Does not require channel modification or relocation.
- (7) Is set forth in Article V as a permitted use for that portion of the floodplain where proposed and is not a prohibited use as set forth below.

C. Prohibited uses in channels, floodways and flood fringe areas.

- (1) Channel. Within any channel, structures shall not be erected, expanded or externally altered, and fill, excavation or other improvements or changes shall not permitted except in connection with stream improvement or stabilization, which improvements or changes shall have the specific approval of the New Jersey Department of Environmental Protection and the Board. The Morris County Planning Board shall receive copies of all exhibits for their review and approval as required.
- (2) Floodway.

- (a) Within any floodway, structures shall not be erected, enlarged, expanded or externally altered, and fill, excavation or other improvements or changes shall not be permitted, except in connection with stream improvement or stabilization, which improvement or changes shall have the specific approval of the New Jersey Department of Environmental Protection and the Board. The Morris County Planning Board shall receive copies of all exhibits for their review and approval as required.
 - (b) The accepted practices of soil husbandry and farming, as well as recreational uses in the nature of parks, playgrounds, picnic areas, golf courses and boat landings shall be permitted in accordance with the issuance of a permit as provided by § 195-38B of this article. No material, equipment or vehicles shall be parked or stored in the floodway, even in conjunction with a permitted use.
 - (c) In all areas of special flood hazard in which base flood elevation data has been provided and no floodway has been designated, the cumulative effect of any proposed development, when combined with all other existing and anticipated development, shall not increase the water surface elevation of the base flood more than two-tenths (0.2) of a foot at any point.
- (3) Flood fringe area. Within any flood fringe area, structures other than mobile homes may be constructed, erected, enlarged, expanded, externally altered or modified, and fill, excavation and other improvements may be permitted in the flood fringe area after receiving specific approval of the Board for a use allowed in Article V and further subject to the conditions set forth in this article.
- (4) Upon application for such a permit, the Board shall notify the Borough Environmental Commission and the governing bodies and environmental commissions of other municipalities which may be affected by the proposed use. Such notifications shall include the name and address of the applicant, the location of the proposed use and abbreviated description of the proposed use and announcement as to where and at what times the complete application may be reviewed and to whom and by what date

interested parties may communicate their positions concerning the application and any data that they may have developed in reference to the effects of the proposed use. The Board shall review the application and all information received under § 195-38.

- (5) In reviewing the application and arriving at findings, the Board shall consult with the Borough Engineer and other experts and consider the following criteria in addition to those set forth in § 195-38.
- (a) The danger to life and property due to increased flood heights or velocities caused by encroachments.
 - (b) The danger that materials may be swept onto other land or downstream to the injury of others.
 - (c) The proposed water supply and sanitation systems and the insulation of these systems from disease, contamination and unsanitary conditions resulting from flooding.
 - (d) The susceptibility of the proposed use to flood damage and the effects of such damage.
 - (e) The need for a waterfront location.
 - (f) The availability of alternate locations not subject to flooding.
 - (g) The duration, rate of rise and sediment transport of floodwaters expected at the site.
 - (h) The safety of access to the property in times of flood for ordinary and emergency vehicles.
 - (i) The extent to which the hydraulic capacity of the floodway will be disrupted.
 - (j) The degree to which the proposed use serves the general public's health, safety and welfare.
 - (k) The degree to which any aspect of food chain or plant, animal, fish or human life processes are affected adversely within or beyond the proposed use area.

- (l) The degree to which the proposed activity alters natural water flow or water temperature.
- (m) The degree to which the proposed use provides facilities for the proper handling of litter, trash, refuse and sanitary and industrial waste.
- (n) The degree to which irreplaceable land types will be destroyed.
- (o) The degree to which the natural, scenic and aesthetic values at the proposed development site can be retained.
- (p) The degree to which materials not subject to major damage by floods are firmly anchored to prevent flotation and/or are readily removable from the area within the time available after flood warning.

(6) If the Board finds that the proposed use would violate or tend to violate the purposes and intent of this article, the application shall be denied.

D. Conditions of approval for permitted uses. If the application will not violate the purposes and intent of this chapter, the Board may approve the application and impose such conditions as are necessary to promote the public safety, health and welfare, to protect public and private property, wildlife and to preserve, protect and enhance the natural environment of the floodplain.

(1) General conditions. These conditions may include, but are not limited to, the following:

- (d) Modification of waste disposal and water supply facilities.
- (e) Imposition of operational controls, sureties and deed restrictions.
- (f) Requirements for construction of stormwater detention facilities, channel modifications, dikes, levees and other

protective measures.

- (g) Installation of an adequate flood-warning system.
- (h) Postponement of development until such time as protective measures are installed or until the floodway and flood hazard areas have been delineated by the NJDEP or the applicant to the satisfaction of the Borough.

(2) Specific conditions. The following regulations shall apply to all numbered A Zones and, in addition, to all unnumbered A Zones where, in the absence of FIA base flood elevation data, the Planning Board shall obtain, review and utilize any base flood elevation data available from a federal, state or other source.

- (a) Where the lowest floor of any new structure is more than two feet above the existing grade at the perimeter of said structure, the site shall be filled. Such fill shall be subject to the following conditions:
 - [1] All fill material shall be well-compacted.
 - [2] The elevation of the fill shall be not more than two feet below the base flood elevation.
 - [3] The elevation of the fill at the perimeter of the structure shall be equal to the elevation of the fill beneath the structure.
 - [4] Fill at the perimeter of the structure shall be stabilized by a retaining wall or by slopes of not greater than four to one (4:1) and shall be protected from erosion.
 - [5] Where fill is stabilized by a retaining wall, said fill shall extend beyond the perimeter of the structure a distance equal to not less than twice the height of the retaining wall or five feet, whichever is the greater.
- (b) All new residential construction, residential additions and substantial improvements of residential structures within the floodplain shall have the lowest floor (including basement) elevated to not less than six inches above the

base flood elevation. For purposes of site plan review and approval, the requirement of six inches above the base flood elevation shall not include a detached garage; nor shall it include a patio, terrace, deck or an unheated and unenclosed porch, provided that any entrance from such a structure to a main structure shall be a minimum of six inches above the base flood elevation. The floor of an attached garage may be not more than two feet below the base flood elevation, provided that the portions of all walls and partitions below the base flood elevation are flood proofed and further provided that any entrance from an attached garage to a main structure shall be a minimum of six inches above the base flood elevation.

- (c) All new nonresidential construction within the floodplain shall have the lowest floor (including basement) elevated to not less than one foot above the base flood elevation or be flood proofed as set forth in Subsection D (2)(d) below. Flood proofing alone shall not be considered adequate for residences, hospitals, nursing homes, schools, day-care centers and similar uses.
- (d) Flood proofing measures shall be consistent with the base flood elevation for the particular area, flood velocities, durations, rates of rise, hydrostatic and hydrodynamic forces and other similar factors. The Board shall require the applicant to submit a plan or document certified by a registered professional engineer that the flood proofing measures are consistent with the base flood elevation and associated flood factors. Any or all of the following flood proofing measures may be required:
 - [1] Anchorage to resist flotation, collapse and lateral movement.
 - [2] Installation of watertight doors, bulkheads and shutters or similar devices.
 - [3] Reinforced walls to resist water pressures.
 - [4] Use of paints, membranes or mortars to reduce seepage of water through walls.

- [5] Addition of weight to structures to resist flotation.
- [6] Installation of pumps to lower water levels in structures.
- [7] Pumping facilities or comparable measures for the subsurface drainage systems of buildings to relieve external foundation wall and basement flood pressures.
- [8] Construction that resists rupture or collapse caused by water pressure or floating debris.
- [9] Installation of valves or controls on sanitary and storm drains which will permit the drains to be closed to prevent back up of sewage or stormwaters into the structure. Gravity drainage of basements may be eliminated by mechanical devices.
- [10] Electrical, heating, ventilation, plumbing and air-conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding [Amended 3-23-1987 by Ord. No. 7-87].
- [11] Storage facilities for chemicals, explosives, buoyant materials, flammable liquids or other toxic or hazardous materials shall be situated above the base flood elevation and shall be flood proofed to prevent flotation of storage containers or damage to storage containers which could result in the escape of toxic materials into the floodwaters.
- [12] Use of construction materials which are resistant to water damage.
- [13] [Added 3-23-1987 by Ord. No. 7-87] For all new construction and substantial improvements, fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry exit of floodwaters. Designs for meeting

this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

[a] Fully enclosed areas shall have a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding one foot above grade.

[b] Openings may be equipped with screens, louvers or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.

(e) All manufactured homes shall be anchored to resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces. All manufactured homes to be placed or substantially improved within an area of special flood hazard shall be elevated on a permanent foundation such that the top of the lowest floor is at or above the base flood elevation. [Added 3-23-1987 by Ord. No. 7-87]

E. Materials prohibited in channels, floodways and flood fringe areas. No person shall hereafter engage in, cause or permit other persons to engage in prohibited uses within a delineated floodplain. The following uses shall be prohibited:

(1) Placing, depositing or dumping any solid waste, garbage, refuse, trash, rubbish or debris.

(2) Dumping or discharging untreated domestic sewage or industrial wastes, either solid or liquid.

(3) The storage or disposal of pesticides.

(4) The storage or processing of materials that are, in time of flooding, buoyant, flammable or explosive.

- (5) The storage or processing of hazardous materials that could be injurious in time of flooding to human, animal or plant life.

F. Pre-existing nonconforming structures and uses.

- (1) Structures or land uses in any floodplain which existed on or before the effective date of this chapter may be permitted to continue, subject to the following conditions:

- (a) If any pre-existing structure is destroyed by any means, including floods, to an extent of 50% or more of its replacement cost at time of destruction, it shall not be reconstructed, except in conformity with the provisions of this chapter.
- (b) No pre-existing structure shall be moved, altered, expanded, changed or enlarged unless the provisions of this chapter are complied with. This provision does not apply to routine maintenance and repair, provided that such maintenance and repair does not increase the flood damage potential of the structure.
- (c) In any portion of the floodplain, an existing nonconforming use or structure may be altered or expanded, provided that such alteration or expansion does not increase its ground coverage or flood damage potential.

- (2) If actual construction of a structure is underway on or before the effective date of this chapter, then such construction may be completed. "Actual construction" is hereby defined to include the placing of construction materials in a permanent position and fastened in a permanent manner. The provisions of Subsection F(1) above shall apply to such structures upon completion of construction.

- (3) Structures in the floodway abandoned for six consecutive months or longer and structures abandoned for 12 consecutive months or longer in the flood fringe area after the effective date of this chapter shall not qualify as pre-existing uses.

G. Flood map. The Board, after proper investigation, survey and public hearing, may recommend amendments to the U.S. Department of Housing and Urban Development Flood Map.

§ 195-40. FLOOD INSURANCE.

- A. Flood insurance, in accordance with the National Flood Insurance Program of the United States Department of Housing and Urban Development, shall be required for all development in the floodplain. Insurance premium rates are determined by statute according to actuarial risk and will not be modified by the granting of a variance, except as defined in § 195-41 of this Article.
- B. The Federal Insurance Rate Map shall be used to determine applicable zones for flood insurance for a particular dwelling. The Applicant shall verify that the latest available flood elevations and the Federal Insurance Rate Maps are being utilized in the determination of the flood elevations.
- C. The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for the Borough of Madison", dated April 15, 2002, as subsequently amended with accompanying Flood Insurance Rate Maps or any approved subsequent revision is hereby adopted by reference and declared to be a part of this ordinance. The Flood Insurance Study is on file at the Engineer's Office in the Borough of Madison.

§ 195-41. VARIANCES

- A. The issuance of a variance is for floodplain management purposes only and is subject to applicable state and federal laws and regulations. The Board, after examining the applicant's hardships, shall approve or disapprove a variance request.
- B. While the granting of variances generally is limited to a lot size less than ½ acre as set forth in Subsection E(2) of this section, deviations from that limitation may occur. However, as the lot size increases beyond ½ acre, the technical justification required for issuing a variance increases.
- C. The Federal Insurance Administrator may review the Board's findings justifying the granting of variances, and if that review indicated a pattern inconsistent with the objectives of sound floodplain management, the Federal Insurance Administrator may take appropriate action as set forth in Section 1909.24, Paragraph (b) of Federal Register, Vol. 41, No. 207, dated Tuesday, October 26, 1976, and as subsequently amended.

- D. Variances may be issued by the Board for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or a State Inventory of Historic Places without regard to the procedures set forth in this section.
- E. Procedures for the granting of variances by the Board are as follows:
 - (1) Variances shall not be issued by the Board within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result.
 - (2) Variances may be issued by the Board only for the replacement or reconstruction of existing nonconforming structures and for additions of not more than 150 square feet to existing residential structures on lots of ½ acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood elevation, in conformance with the procedures of Subsection E(3) of this section.
 - (3) Variances shall only be issued by the Board upon:
 - (a) A showing of good and sufficient cause by the applicant, and
 - (b) A determination that failure to grant the variance would result in exceptional hardship to the applicant, and
 - (c) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.
 - (4) Variance shall only be issued after public hearing as required in Article II, § 195-10C, upon determination that the variance is the minimum necessary to afford relief, considering the flood hazard.
 - (5) The Board shall notify the applicant in writing that:
 - (a) The issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage.

(b) Such construction below the base flood elevation increases risks to life and property. Such notification shall be maintained with a record of all variance actions as required in Subsection E(6) of this section.

(6) The Board shall:

(a) Maintain a record of all variance actions, including justification for their issuance.

(b) Report such variances issued in its annual report submitted to the Federal Insurance Administrator.

(7) A burden of proof to establish all of the elements required for the issuance of a variance shall be upon the applicant, who shall prove these elements by expert testimony and documentation.

§ 195-42. APPEALS.

If any person shall be aggrieved by the action of the Board, Construction Code Official or Borough Engineer, an appeal in writing to the governing body may be taken within 10 days after the date of such action. The governing body shall fix and notify the appellant of a time and place for a public hearing on said appeal, and the appellant shall cause notice of such hearing to be published in the official newspaper of the Borough at least 10 days prior to the hearing. All parties in interest shall be afforded an opportunity to be heard there. After such hearing, the governing body shall affirm or reverse the action of the Board, Construction Code Official or Borough Engineer, stating its findings and reasons for its action, and a written copy of such action shall be given to the appellant.

§ 195-43. ADMINISTRATION AND ENFORCEMENT.

- A. The administration and enforcement of the provisions of this article relating to the construction, erection, maintenance and continued operation at design capacity of stormwater detention facilities and other facilities, structures, devices and techniques required to carry out the objectives of this article shall be the responsibility of the Borough Engineer.
- B. Failure to maintain any stormwater detention facility, structure or device at design capacity or to carry out required procedures or techniques shall be

considered a violation of this article.

- C. When base flood elevation and floodway data have not been provided by the Federal Insurance Administrator, the Borough Engineer shall obtain, maintain, review and reasonably utilize any base flood elevation data available from any federal, state or other source in order to administer this Article VI. [Amended 3-23-1987 by Ord. No. 7-87].
- D. The Borough Engineer shall maintain a permanent record of on-site water detention facilities in the Borough of Madison and shall make periodic inspections to determine that these facilities are being maintained at design capacities.
- E. The permanent record maintained by the Borough Engineer shall include the following information: elevation in feet above sea level of the lowest habitable floor and basement of all new construction and substantial improvements; and elevation to which a structure has been flood proofed. These records shall be made available for public inspection and be supplied upon request for the purpose of determining flood insurance premium rates.
- F. The Borough Engineer shall serve notice on the owner or occupant to correct any violation of Article VI within 30 days. Upon failure of said owner or occupant to correct such violation, the Borough shall prosecute a complaint to correct such violation before the Municipal Judge and owner or occupant shall be liable to pay fines in accordance with the not to exceed \$1,500.00 per violation.

ARTICLE VII, Soil Erosion and Sediment Control; Soil Moving

§ 195-44. Soil erosion and sediment control.

- A. Purpose. The purpose of this section is to control soil erosion and the resulting sedimentation from occurring by requiring proper provisions for water disposal and the protection of soil surfaces during and after construction in order to promote the safety, public health, convenience and general welfare of the community. These rules and regulations further adopt the purposes of P.L. 1975, Chapter 251, N.J.S.A.4:29-39 et seq. and N.J.A.C. Chapter 90 Title 2 entitled "Soil Erosion and Sediment Control Act".
- B. Control plan. No site plan or land subdivision involving more than two acres or containing more than three lots shall be approved by any board unless it

includes a soil erosion and sediment control plan in accordance with the “Standards for Soil Erosion and Sediment Control in New Jersey” as adopted by the State Soil Conservation Committee on April 12, 1999 or most recent revision (reference standards) and enforced by the Morris County Soil Conservation District and further in these regulations by the Borough of Madison. The Board may require a soil erosion and sediment control plan for any exempted project, if, in its judgment, the topography of the site requires consideration of soil erosion and sediment control plans. No certificate of occupancy for any building will be granted unless all needed soil erosion control measures have been completed or substantially provided for in accordance with this section. The applicant shall bear the responsibility for the installation and construction of all required soil erosion and sediment control measures according to the provisions of this chapter. The applicant may consult with the Morris County Soil Conservation District in the development of the plan and the selection of appropriate erosion and sediment control measures.

C. Data required. The applicant shall submit a soil erosion and sediment control plan for the entire tract of land. The soil erosion and sediment control plan shall contain:

- (1) Plans and specifications of soil erosion and sediment control measures in accordance with the reference standards.
- (2) A site specific timing schedule indicating the anticipated starting and completion dates of the development sequence in accordance with reference standards and also the time of exposure of each area prior to the completion of effective erosion and sediment control measures.

D. Permits. No land subject to this section shall be cleared, graded, transported or otherwise disturbed for any purpose, including but not limited to the construction of buildings, the mining of minerals or removal of other natural resources, the development of golf courses or other recreational facilities and the construction of roads and streets by any person, partnership or corporation within the Borough, unless:

- (1) There has been a plan approved by the Board that provides for minimizing soil erosion and sedimentation consistent with this chapter and there has been a valid grading permit issued by the Borough Engineer; or
- (2) There has been a determination by the Board that a plan for minimizing soil erosion and sedimentation is not necessary.

E. Preparation of plans. The plans shall be prepared and duly signed and sealed by a professional engineer, architect or land surveyor.

F. Implementation. Since considerable soil erosion can take place during land disturbance, development plans shall contain proposed soil erosion and

sediment control measures. These measures shall be incorporated into the final plat and final construction drawings. Soil erosion and sediment control measures shall conform to the reference standards. The measures shall apply to all features of the construction site, including street and utility installations, as well as to the protection of individual lots. Measures shall also be instituted to prevent or control soil erosion and sedimentation during the various stages of development.

G. General design principles. The following principles are effective in minimizing soil erosion and sedimentation and shall be included, where applicable, in the soil erosion and sediment control plan:

- (1) Stripping of vegetation, regrading or other development shall be done in such a way that will minimize soil erosion.
- (2) Whenever feasible, natural vegetation shall be retained, protected and supplemented.
- (3) The disturbed area and the duration of exposure shall be kept to a practical minimum.
- (4) Temporary seedings and/or mulching shall be used to protect exposed critical areas during development.
- (5) Provisions shall be made to accommodate the increased runoff caused by changed soil and surface conditions during and after development.
- (6) Sediment in the runoff water shall be trapped until the disturbed area is stabilized by the use of sediment basins or other acceptable methods.
- (7) Diversions, sediment basins and so forth shall be constructed prior to any other on-site grading or disturbance of existing surface material.

H. Detailed design standards. Standards and specifications for measures used in the soil erosion and sediment control plan shall be in accordance with the reference standards. Copies of "Standards for Soil Erosion and Sediment Control in New Jersey" of the Morris County Soil Conservation District shall be on file in the offices of the Morris County Soil Conservation District and the Borough Clerk.

I. Maintenance of control measures. Applicants or developers or subsequent owners of property carrying out soil erosion and sediment control measures under this article shall adequately maintain all permanent soil erosion control measures, devices and plantings in effective working condition.

J. Maintenance bond. Upon the certification of the Borough Engineer that any permanent soil erosion and sediment control measures installed by individuals or developers pursuant to this chapter have a direct effect on public improvements in the vicinity of the proposed development, the Board shall require the individual or developer to post a surety maintenance bond with the Borough Clerk for an amount equal to 10% of the improvements constructed. A

direct effect on public improvements shall mean that should the soil erosion and sediment control measures constructed by a developer or applicant be destroyed, fail to operate properly, be removed or any other such happenstance, such occurrence would prevent or hinder the proper operation of a public improvement in that vicinity. The value of the improvements constructed shall be determined by the Borough Engineer, and the surety maintenance bond shall be in a form acceptable to the Borough Attorney. The maintenance bond shall be for a term of two years.

K. Fees. A fee of \$20 per acre (with a minimum fee of \$100) shall be paid to the Board for each soil erosion and sediment control plan filed with the Board to cover the cost of reviewing said plan and any on-site inspections by the Borough Engineer.

L. Enforcement. The requirements of this section shall be enforced by the Borough Engineer, who shall inspect or require adequate inspection of the work. If the Borough Engineer finds any existing conditions not as stated in any application, he may refuse to approve further work or notify the district of non-compliance. The Morris County Soil Conservation District or Borough of Madison may issue a stop-work order if the applicant/owner takes no action to comply with the approved plan.

M. Violations and penalties. Any person, firm or corporation who or which shall violate any provision of this section shall be liable to a fine not exceeding \$500 or to imprisonment for a term not exceeding 90 days, or both. Each day such violation continues shall constitute a separate violation or offense.

N. Appeal. If any person against whom a stop-work order is issued by the district or local authority is aggrieved by such action, said person may within ten days, appeal to the State Soil Conservation Committee which shall schedule a hearing and make a determination in the case.

§ 195-45. Soil moving.

A. Permit required. No person shall remove or deposit soil on any premises in the Borough of Madison other than on the premises from which the soil shall be moved, unless a permit therefore is first secured from the Borough Council as hereinafter set forth; provided, however, that no permit shall be required for the following:

- (1) The moving of excess soil resulting from foundation or cellar excavations up to 100 cubic yards total.
- (2) The moving of soil upon any lot containing less than 20,000 square feet on which there is an existing one- or two-family dwelling.

(3) The moving of soil for gardening primarily for home consumption or landscaping for aesthetic purposes, not to exceed 20 percent of the lot area and 100 cubic yards.

(4) The moving of soil which does not result in either substantial changes in grade and/or elevation or does not significantly alter drainage runoff patterns from said lot.

B. Information required for permit application.

(1) Application for a soil-moving permit shall be filed with the Borough Engineer, in triplicate, accompanied by the fee set forth in Subsection D hereof, setting forth the following:

(a) The name and address of the applicant.

(b) The name and address of the owner if other than the applicant.

(c) The description and location of the land in question, including the tax map lot and block numbers.

(d) The purpose or reason for moving the soil.

(e) The kind and quantity, in cubic yards, of soil to be moved.

(f) The origin and destination of soil to be moved.

(g) The quality of origin and destination soils with reference to the state soil cleanup criteria.

(h) The proposed date of commencement and completion of the soil moving.

(i) The name, address and telephone number of the person having direct charge over the soil-moving operation.

(2) The application shall be accompanied by a topographical map, in triplicate, of the lands in question. Said map shall be prepared and certified by a licensed professional engineer or a licensed land surveyor on a scale of not less than 50 feet to the inch, showing the following:

(a) The present grades on a fifty-foot grid layout.

(b) The proposed finished grades.

(c) The quantity, in cubic yards, of the soil to be moved.

(d) The grades of all streets and lots within 100 feet of the property in question.

(e) Proposed slopes and lateral supports.

(f) Present and proposed surface water drainage.

C. Notice to neighboring property owners. After receipt of an application for a permit as set forth in Subsection A hereof, the Council shall advise the applicant that the matter will be considered at a meeting to be held not less than 15 nor more than 30 days thereafter. Upon being advised of the date of the meeting for consideration of the application, the applicant shall serve written notice, either by personal service or by certified mail, return receipt requested, upon all property owners within 200 feet of the extreme limits of the property as their names appear on the Borough tax records. Said notice shall be served as aforesaid, not

later than seven days prior to the date of the meeting scheduled for consideration of the application. The applicant shall deliver an affidavit of service to the Borough Clerk at least two days prior to the date of said meeting.

D. Fees.

(1) [Amended 3-9-1992 by Ord. No. 9-92] Along with the application, there shall be deposited with the Borough Clerk a permit fee calculated in accordance with the following schedule:

Cubic Yards of

Soil to be Moved Fee

Up to 500 \$100.00

Above 500 \$250.00 plus a sum computed at

\$0.15 per cubic yard multiplied by the number of yards

(2) The charge in accordance with the schedule hereinbefore set forth shall include all engineering and other services the Borough may deem desirable or necessary to assure an orderly soil operation in full compliance with provisions of this section.

E. Considerations governing grant of permit.

(1) In considering and reviewing applications for soil moving permits, the Borough Council shall be guided and take into consideration the public health, safety and general welfare, and particular consideration shall be given to the following factors:

(a) Soil erosion by water and wind.

(b) Drainage.

(c) Soil fertility.

(d) Lateral support, slope and grades of abutting streets and lands.

(e) Land values and uses.

(f) Such other factors as may bear upon or relate to the coordinated, adjusted and harmonious physical development of the Borough.

(2) If, following the hearing during which all persons shall be given an opportunity to be heard, the Borough Council shall be of the opinion that the proposed soil moving will not create conditions detrimental to the public health, welfare and safety; will not result in the creation of any sharp declivities, pits or depressions, soil erosion or fertility problems or depressed land values; or create any drainage or sewerage problem or hazardous conditions, permission to move soil shall be granted.

F. Regulation of soil moving operations. If a permit to move soil is issued in accordance with the provisions of this section, the operation conducted thereunder shall be subject to the following conditions:

- (1) The person or persons receiving the permit shall agree, in writing, to properly level off, remove debris and grade the premises to conform to the contour lines established by the Borough Council.
- (2) Operations shall be conducted only during the hours of 7:30 a.m. to 4:30 p.m. on normal weekdays. It shall be unlawful to conduct moving, grading or excavating operations Saturdays, Sundays, legal holidays or off-hours except by specific written permission of the Engineer, with specific concern for machinery producing excessive noise or requiring additional monitoring.
- (3) Soil-moving operations shall be restricted to street routes established by the Borough Council. Determination by the Council of the street routes to be used shall be based on factors which contribute to the best interests of the health, safety and welfare of the residents of the Borough.
- (4) All reasonable means shall be employed by the person or persons conducting a soil-moving or grading or excavating operation to prevent air pollution by large quantities of dust and dirt. Such means may include, but are not necessarily limited to, spraying water, oil or other dampening agents on the surface of the ground.
- (5) Permits for the moving of soil issued in accordance with the provisions of this section shall not be transferable.
- (6) The person or persons receiving the permit shall not take away the top layer of arable soil for a depth of 12 inches, but such layer of topsoil shall be set aside and shall be respread over the premises when the rest of the soil has been removed, in conformity with the contour lines approved by the Borough Council.

G. Deposit of removed soil. Where soil moving is permitted, no person, owner, developer or excavator shall deposit soil upon, fill in or raise the grade of any lot without first making provisions for:

- (1) The use in said work of soil or such other materials as will not result in deviation from the proposed final grades or the uniformity thereof by reason of shrinkage or settlement.
- (2) The collection and storage upon the lot of original topsoil not being buried beneath soil or other material of inferior quality and the uniform replacement of the topsoil so stored over the entire area or surface of the fill soil or other material, so that the final grade or grades of said replaced topsoil shall be in accordance with the proposed final grades shown on the topographical map. In the event that this requirement is not practicable, provision shall be made for the uniform placement over the entire area or surface of the fill soil or other material, except only such portions thereof as shall be or shall have become permanently covered by a building or structure, street, pavement, curb, sidewalk, driveway or other paved area; by any body of water or waterway; or by a layer of topsoil not inferior in quality to that of the original topsoil to a depth of not less than six inches, measured from the proposed final grades as shown on the topographical map. The determination of quality which shall be the same as or better than

originally existed, as referred to hereinabove, shall be by competent authority in case of dispute between the permit holder and the Borough.

(3) The preservation of existing watercourses, in accordance with the plans on file.

(4) The planting of shrubbery and trees as may be directed by the Shade Tree Management Board.

(5) At no time will excavations be permitted to go below the final grade as established by the plans approved.

(6) The seeding of the entire area upon completion of the restoration of the topsoil in accordance with the requirements hereof. The seed spread shall germinate to the extent that soil erosion by wind and water will be limited. The seed shall be of rye grass or comparable quality.

H. Certification of soil moved. The permittee shall, within 10 days after the end of each month, furnish the Borough Engineer with certification by a licensed engineer or land surveyor as to the soil moved during the preceding month.

I. Performance bond. Prior to the issuance of a soil moving permit, the applicant shall have posted with the Borough a performance guaranty conditioned upon full compliance with all the terms and conditions of approval. The amount of the bond shall be in accordance with the recommendation of the Borough Engineer, which amount shall be sufficient to ensure the faithful performance of the work to be undertaken as approved. The form of the bond shall be approved by the Borough Attorney.

J. Enforcement officer; inspections. The Borough Engineer is hereby designated as the officer whose duty it shall be to enforce the provisions of this section. He shall, from time to time, upon his initiative, and whenever directed by the Borough Council, inspect the premises for which permits have been granted to ensure compliance with the terms of the permit and of this section.

K. Abandonment or delay of project; extension of permit.

(1) In the event that, in the opinion of the Borough Engineer, the soil-moving project or any part thereof has been abandoned or unnecessarily delayed and completion cannot be within the time set forth in the soil moving permit, the Borough Engineer may so certify to the Borough Council, in writing, and after hearing on seven days' notice to the permittee, in writing, by certified mail at the address on the permit application, the Borough Council may revoke the permit or call upon any surety on the performance guaranty to complete the project. In the event that a cash deposit guaranty is posted, the Borough may complete the project and deduct the cost thereof from the deposit.

(2) A permit hereunder shall be in force for one year. Applications for the extension of the permit shall be made upon the submission of the data required

in Subsection B. As of the date of the application for renewal, a renewal permit may be issued by the Borough Council once, but for a period of no longer than one year.

L. Violations and penalties. Any person, firm or corporation violating any of the provisions of this section shall be subject to a fine not exceeding \$500 or imprisonment in the county jail for a term not exceeding 90 days, or both, in the discretion of the Judge before whom such convictions shall be had. Each and every violation of this section, or each day that any provision of this section shall have been violated, shall be constructed as a separate and distinct violation thereof.

SECTION 2: This Ordinance shall take effect as provided by law.

ADOPTED AND APPROVED
July 22, 2002

Attest:

JOHN J. DUNNE, Mayor

MARILYN SCHAEFER, Borough Clerk

Introduced and passed: July 8, 2002; Published, Madison Eagle: July 11, 2002
Hearing and final adoption: July 22, 2002; Published, Madison Eagle: July 25, 2002