

AN ORDINANCE ESTABLISHING STANDARDS AND PROCEDURES
FOR DRAINAGE AND SEDIMENT CONTROL,
ESTABLISHING A FEE FOR DRAINAGE PERMITS,
AND IMPOSING A PENALTY FOR VIOLATION OF THE ORDINANCE

WHEREAS, the Department of Storm Water Management has been created in the Town of Newburgh, and

WHEREAS, control of drainage and sediment from land alteration is necessary for the protection of the health, welfare and safety of the citizens of Newburgh.

NOW, THEREFORE, BE IT ORDAINED:

SECTION 1: LAND ALTERATIONS TO BE ACCOMPLISHED IN ACCORDANCE WITH DRAINAGE REQUIREMENT

Any land alteration must be accomplished in conformity with drainage requirements. Where any apparent conflict exists between drainage requirements of this ordinance and similar requirements of any state or federal agency which has jurisdiction of the work involved, the most stringent requirements shall be applicable. Except for the foregoing, compliance with any other applicable provision of law, ordinance or regulation shall not excuse noncompliance with this ordinance.

SECTION 2: DEFINITIONS

A. BOARD shall mean the Board of Directors of the Department of Storm Water Management of the Town of Newburgh.

B. DRAINAGE FACILITIES

As used herein, "drainage facilities" shall mean all ditches, channels, conduits, retention-detention systems, tiles, swales, sewers, and other natural or artificial means of draining storm water from land.

C. DRAINAGE REQUIREMENTS

As used herein, "drainage requirements" shall mean:

- (1) Minimum drainage standards stated in this ordinance.
- (2) Regulations promulgated by the Board.
- (3) Obligations and requirements relating to drainage established under the Subdivision Control Ordinance.
- (4) Requirements stated under the Flood Hazard Ordinance.
- (5) Commitments relating to drainage made pursuant to agreement.
- (6) Conditions relating to drainage attached to a grant of a variance by the board of zoning appeals.

D. IMPACTED DRAINAGE AREAS

As used herein, "impacted drainage areas" shall be those areas defined and identified by the Board, which are unlikely to be easily drained because of one or more factors such as

topography, soil type or distance from adequate drainage facilities.

E. LAND ALTERATION

As used herein, "land alteration" shall mean any action taken relative to land which, either on a temporary or permanent basis:

- (1) Changes the contour; or
- (2) Increases the runoff rate; or
- (3) Changes the elevation; or
- (4) Decreases the rate at which water is absorbed; or
- (5) Changes the drainage pattern; or
- (6) Creates or changes a drainage facility; or
- (7) Involves construction, enlargement or location of any building on a permanent foundation; or
- (8) Creates an impoundment.

Land alteration includes (by way of example and not of limitation) terracing, grading, excavating, building construction, earthwork, draining, installing drainage tile, filling and paving.

F. MAINTENANCE

As used herein, "maintenance" shall mean cleaning out of, spraying, removing obstructions from and making minor repairs in a drainage facility so that it will perform the function for which it was designed and constructed.

SECTION 3: DRAINAGE PERMITS REQUIRED; EXCEPTIONS;
WHEN TO BE OBTAINED

(a) No person, partnership or corporation shall undertake or accomplish any land alteration without having in force a written drainage permit obtained from the Board; provided, however, that a drainage permit shall not be required for:

- (1) Excavation of cemetery graves;
- (2) Refuse disposal sites where storm drainage is controlled by other regulations;
- (3) Excavation for wells, excavation and backfills for poles, conduits and wires of utility companies;
- (4) Exploratory excavation or soil testing under the direction and control of professional engineers, soil engineers, geologists, civil engineers, architects or land surveyors, which are backfilled to the original contours;
- (5) Ordinary cultivation of agricultural land including tilling, terracing, construction of minor open ditches and crop irrigation;
- (6) The planting and tilling of gardens, flower beds, shrubs, trees and other common uses and minor landscaping of land appurtenant to residences;

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- (7) Fill and grading of former basement site after the demolition of a structure, to conform to adjacent terrain;
 - (8) Fill of small holes caused by erosion, settling of earth or the removal of such materials as dead trees, posts or concrete;
 - (9) A fill less than one (1) foot in depth, and placed on natural terrain with a slope flatter than ten (10) percent, not intended to support structures, which does not exceed fifty (50) cubic yards per acre and does not obstruct drainage;
 - (10) Maintenance of drainage facilities;
 - (11) Construction of a driveway, when a proper permit which includes culvert requirements has been obtained;
 - (12) Installation of building sanitary sewers and water service lines, when a proper permit has been obtained for the installation of that service.

(b) The drainage permit must be obtained before any work is initiated with the exception of testing to determine procedures or materials.

SECTION 4: ELIGIBILITY TO OBTAIN PERMIT

In order to obtain a drainage permit a person, partnership or corporation must be the person, partnership or corporation that will be responsible for accomplishing the land alteration for which the drainage permit was issued.

SECTION 5: APPLICATION; ISSUANCE

(a) Application for a drainage permit shall be made to the Board. The application shall be in writing on a form prescribed by the Board.

(b) A drainage permit shall be issued if:

- (1) The person, partnership or corporation is eligible to apply for and obtain a drainage permit;
- (2) The application required by this section and supporting information required by other sections or regulations have been properly prepared and submitted;
- (3) The drainage plan, together with supplemental information required by other sections or regulations reflect compliance with drainage requirements;
- (4) A certification of "sufficiency of plan" and a certificate of "obligation to observe" have been filed by a registered professional engineer, land surveyor or architect, engaged in storm drainage design;
- (5) If required by the Board, a bond has been posted pursuant to this ordinance;
- (6) If required by the Board, an easement has been dedicated pursuant to this ordinance; and

(7) The applicable fee has been paid.

SECTION 6: PROFESSIONALLY PREPARED AND CERTIFIED DRAINAGE PLANS

A drainage plan fulfilling the requirements of this Ordinance and Board regulations shall be submitted to the Board for approval before a drainage permit can be obtained to accomplish a land alteration, unless the land alteration is such that a drainage permit can be obtained in accordance with section 7. The drainage plan must be submitted in triplicate, and shall indicate in a precise way the work to be accomplished pursuant to the drainage permit. One (1) copy of the drainage plan will remain on file with the Board. The following information must be submitted for approval:

(a) Construction Features. The drainage plan shall demonstrate and describe surface and subsurface drainage and include the following:

- (1) Scale; arrow; contours and USGS bench marks: The drainage plan shall be drawn to scale, preferably one (1) inch per fifty (50) feet, and an arrow indicating North shall appear on each page. Existing land contours shall be shown, with one-foot contours for land with a slope flatter than ten (10) percent, two-foot contours for slopes equal to or greater than ten (10) percent but flatter than twenty (20) percent, and five-foot contours for slopes equal to or greater than twenty (20) percent. A bench mark, which is easily accessible and relocatable, shall be shown. The bench mark may be assumed at the discretion of the Board if the area contains less than three (3) acres, but otherwise shall be determined by USGS datum.
- (2) Location and vicinity map: A map which indicates the location and vicinity of the proposed land alteration shall be included in the drainage plan.
- (3) Existing and proposed drainage facilities: The drainage plan shall show the locations of all existing and proposed drainage facilities. Storm drains and manholes and other structures shall be located in the plans by dimensions from property markers or road center lines. If applicable, the drainage plan should show the direction of flow, elevation of inverts, gradient, size and capacity of existing and proposed storm drains. When using existing storm drains, the capacity shall be indicated.
- (4) Plan and profile: The plan shall be shown at the upper portion of the drawing. The plan, generally, shall be drawn on a scale of one (1) inch equals fifty (50) feet. The plan shall show appropriate right-of-way and easement limits. The profile shall be shown under the plan and shall extend a sufficient distance downstream of the outlet to allow any pertinent information concerning the

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outfall channel to be shown. The storm drain and inlet profile shall generally be drawn on a scale of one (1) inch equals fifty (50) feet horizontal, one (1) inch equals five (5) feet vertical. Where a storm drain is located in an existing or proposed pavement or shoulder, the center line grade of the road shall be shown. Where a storm drain is located outside pavement or shoulder, the existing ground over the storm drain with proposed grading shall be shown with the centerline grade of the road. If the storm drain is to be constructed on fill, the profile of the undisturbed earth, at drain location, shall be shown.

(b) Design Calculations. Design calculations are required as part of the drainage plan and shall specifically include:

(1) Estimation of storm water runoff:

- (a) Drainage area map (scale one (1) inch equals two hundred (200) feet) indicating contours at two-foot intervals and limits of 100-year floodplain, where applicable;
- (b) Weighted runoff coefficient computations;
- (c) Time of concentration computation indicating overland flow time and flow time in the swale, gutter, pipe or channel.
- (d) All drainage facilities shall be designed for a 25-year design storm. All runoffs shall be calculated using the rational method, using the rainfall intensity frequency duration curve for Evansville, Indiana, as promulgated by the U. S. Department of Commerce - Weather Bureau - Cooperative Studies Section.
- (e) Starting time duration shall be ten (10) minutes.

(2) Closed conduit and open channel design computations:

- (a) Size of pipe or channel cross section;
- (b) Pipe or channel invert's slope in percent;
- (c) Roughness coefficient;
- (d) Flow velocities in feet per second;
- (e) Design capacity in cubic feet per second.

(3) Head loss computations in manholes and junction chambers;

(4) Hydraulic gradient computations, wherever applicable;

(5) Erosion control methods.

Such design calculations shall conform with the standards of the Board and all regulations promulgated thereunder.

(c) Additional Information. The Board shall be empowered to require such additional information to be included in a drainage plan that is necessary to evaluate and determine the adequacy of the proposed drainage facility.

(d) Certification Required. All drainage plans submitted under this section to the Board for approval must be certified by a registered professional engineer, land surveyor or architect engaged in storm drainage design under whose supervision the plans were prepared. The certificate shall be in the following form:

CERTIFICATE OF SUFFICIENCY OF PLAN

Permit Number _____

Address where land alteration is occurring _____

Plan Date _____

I hereby certify that to the best of my knowledge and belief:

(1) The drainage plan for this project is in compliance with the drainage requirements of the Town of Newburgh pertaining to this class of work.

(2) The calculations, designs, reproducible drawings, masters and original ideas reproduced in this drainage plan are under my dominion and control and they were prepared by me and my employees.

Signature _____ Date _____

Typed or Printed Name _____ Phone _____

(SEAL)

Business Address _____

Surv. _____ Eng. _____ Arch. _____
Indiana Registration No. _____

(E) Obligation To Observe. All drainage plans submitted under this section to the Board must include a certificate of obligation to observe by a registered professional engineer, land surveyor or architect engaged in storm drainage design. The certificate shall be in the following form:

CERTIFICATE OF OBLIGATION TO OBSERVE

Permit Number _____

Address where land alteration is occurring _____

Plan Date _____

I will perform periodic observations of this project during construction to determine that such land alteration is in accordance with both the applicable drainage requirements and the drainage plan for this project submitted for a drainage permit to the Department of Storm Water Management.

Signature _____ Date _____

Typed or Printed Name _____ Phone _____

(SEAL)

Business Address _____

Surv. _____ Eng. _____ Arch. _____
Indiana Registration No. _____

SECTION 7: WHEN PROFESSIONALLY PREPARED AND CERTIFIED DRAINAGE PLAN ARE NOT REQUIRED.

(a) A drainage plan that does not contain as much information as drainage plans prepared to fulfill the requirements of section 6 and that is not prepared or certified by a registered professional engineer, land surveyor or architect engaged in storm drainage design, may be submitted when:

- (1) No part of the parcel or property for which the drainage permit is requested is in an impacted drainage area; and
- (2) The primary basis on which a drainage permit is required is the construction, enlargement or location, on a permanent foundation, of a one-family dwelling, two-family dwelling or accessory structure appurtenant to either a one- or two-family dwelling.

(b) The drainage plan must be submitted in triplicate and shall indicate the nature and location of all work to be accomplished pursuant to a drainage permit. The drainage plan must be neat, accurate and readable. One (1) copy of the drainage plan will remain on file with the Board. The following information must be submitted for approval under this section:

- (1) The legal description and the street address for the property;
- (2) The dimensions and borders of the parcel;
- (3) The name and address of the owner;
- (4) An arrow indicating North;
- (5) Location and measurements of all existing and proposed improvements, structures and paved areas on the site;
- (6) Existing and proposed grading showing positive drainage by contouring or sufficient spot elevations;
- (7) Location of all existing or proposed swales, ditches, culverts, drainage channels, surface and subsurface drainage devised and the direction of the flow.

The drainage plan shall include information necessary to demonstrate conformity with all drainage requirements of this ordinance. The plot map shall illustrate the surface drainage pattern of the site away from structures and the final distribution of surface water off site, either preventing or planning for surface ponding.

(c) Notwithstanding other provisions of this section, submission of a drainage plan shall not be required as a precondition for obtaining a drainage permit in the instance of a one- or two-family dwelling constructed in a subdivision for which a plat has been approved in accordance with the Newburgh Subdivision Control Ordinance, and for which a drainage plan meeting the requirements of this ordinance has been approved and a permit issued, so long as the permit applicant certifies that the land alteration shall be accomplished

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in compliance with the specifications and information found on the approved plat and on such drainage plan. Any deviations from the drainage provisions as approved in the plat and drainage plan for the subject plot must be submitted to the Board for approval and the Board may require the submission of plans or other information relative to the deviation which may be required as a precondition to approval.

SECTION 8: DURATION OF PERMIT

If the land alteration for which a permit has been issued has not commenced within two (2) years from the date of its issuance, the permit shall expire and no longer be of any force or effect; provided, however, the President of the Board, for good cause, shown in writing, may extend the validity of the permit for an additional period of time not to exceed one (1) year. If the drainage activity is only partially completed and no substantial land alteration has occurred on the site for a period of one (1) year, the permit shall expire and no longer be of any force or effect; provided, however, the President of the Board may, for good cause, shown in writing, extend the validity of such permit to allow completion of the work.

SECTION 9: DEVIATION FROM THE APPROVED PLAN

Any significant deviation or change in the detailed plans and specifications after granting of the drainage permit shall be filed in triplicate with and approved by the Board prior to the time land alteration involving the change occurs. A copy thereof, if approved, shall be attached to the original plans and specification.

SECTION 10: DETERMINATION OF IMPACTED DRAINAGE AREAS

(a) The Board is authorized, but is not required, to classify certain geographical areas as impacted drainage areas and to enact and promulgate regulations for land alteration in impacted drainage areas, in addition to regulations which are applicable generally. Such classifications and regulations may be later modified or rescinded by the Board.

(b) Action of the Board to classify or declassify any area as an impacted drainage area, or to promulgate, repeal or modify any regulation in regard thereto, shall be in compliance with the requirements of state statute, regarding promulgation, repeal and modification of regulations generally.

(c) In determining impacted drainage areas, the Board shall consider such factors as topography, soil type and distance from adequate drainage facilities. The following areas shall be designated as impacted drainage areas, unless good reason for not including them is presented to the Board:

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- (1) A floodway or floodplain designated by the Zoning Ordinance of Newburgh or the Flood Hazard Areas Ordinance.
 - (2) Land within seventy-five (75) feet of each bank of any legal drain;
 - (3) Land within fifty (50) feet of each bank of a natural drainageway, including a river, stream, gully, ditch or other definite natural watercourse;
 - (4) Land where there is not an adequate outlet, taking into consideration the capacity of depth of the outlet.

(d) A map identifying individual impacted drainage areas shall be retained in the office of the Board, and shall be made conveniently available to members of the public during regular business hours.

SECTION 11. POSTING OF BOND

(a) The Board may, as a prerequisite to the issuance of a drainage permit, require the posting of a performance bond from a company licensed by the State of Indiana to provide such surety, upon which the principal may be the owner of the affected land, the developer, or any other party or parties the Board believes necessary or helpful. Such bond shall name the Town of Newburgh as the party who can enforce the obligations thereunder, and shall be in an amount established by the Board as adequate to provide surety for the satisfactory completion of the improvements required by the drainage permit. In the instance of platting, such bond may be a part of the total bonding required by the Newburgh Plan Commission.

(b) In instances where the Board has required a performance bond pursuant to this section, it may, as an alternative to the posting of such bond, accept other appropriate security, such as a properly conditioned irrevocable letter of credit, which meets the same objectives as the performance bond described in this section, subject to approval of any other department or agency whose interest are protected by the same bonding requirement.

SECTION 12: DEDICATION OF EASEMENT

The Board may, as a prerequisite to issuance of a drainage permit, require the dedication of easements to the Town of Newburgh and to owners of other affected lands, by the owner of the parcel of land, relative to which application for a drainage permit has been made, where such is necessary to achieve satisfactory present and future drainage of the parcel and the area surrounding the parcel.

As a minimum, the following covenant shall be executed by the owner or owners of such land which will be included in a recorded plat, or in the recorded restrictions:

"It shall be the responsibility of the owner of any lot or parcel of land within the area of this plat to comply at all times with the provisions of the drainage plan as approved for this plat by the Department of Storm Water Management of the Town of Newburgh and the

requirements of all drainage permits for this plat issued by said Department."

SECTION 13: CERTIFICATE OF COMPLETION AND COMPLIANCE

Within ten (10) days after completion of a land alteration for which a drainage permit was required and relative to which a certified plan was required to be filed pursuant to Section 6, a registered professional engineer, land surveyor or architect, engaged in storm drainage design, shall execute and file with the Board a certificate of completion and compliance. Such certified shall be in the following form:

CERTIFICATE OF COMPLETION AND COMPLIANCE

Address of premises on which land alteration was accomplished _____

Inspection Date(s): _____ Permit No. _____

Relative to plans prepared by: _____ on _____, 19__

I hereby certify that:

- (1) I am familiar with drainage requirements applicable to such land alteration; and
- (2) I have personally observed the land alteration accomplished pursuant to the above-referenced drainage permit; and
- (3) To the best of my knowledge, information and belief such land alteration has been performed and completed in conformity with all such drainage requirements, except _____

Signature _____ Date _____

Typed or Printed Name _____

Phone _____

(SEAL)

Business Address _____

Surv. _____ Engr. _____ Arch. _____

Indiana Registration No. _____

SECTION 14: GENERAL AUTHORITY FOR INVESTIGATIONS AND INSPECTIONS

(a) The power to make investigations and inspections of land alterations shall be vested in both the Board and its authorized representatives.

(b) Investigation and inspection of land alteration may be made at any time by going upon, around or about the premises on which the land alteration has occurred.

(c) Such investigation and inspection may be made either before, during or after the land alteration is completed and it may

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be made for the purposes, among others, of determining whether the land alteration meets drainage requirements and ascertaining whether the land alteration has been accomplished in a manner consistent with plans and specifications or a certificate filed pursuant to this ordinance.

(d) Efforts to afford an opportunity for investigation and inspection of the land alteration shall be made by persons working on or having control of the land alteration, including making available a copy of plans and specifications submitted to obtain a drainage permit.

SECTION 15: FEES FOR PERMITS OBTAINED AFTER COMMENCEMENT OF WORK

(a) If work for which a drainage permit is required by this ordinance is commenced by the permit applicant without compliance with the provisions of section 3, the permit fee shall be double the applicable amount stated in section 20, and if work for which a permit is required is completed by the permit applicant without compliance with the provisions of section 3, the permit fee shall be ten (10) times the applicable amount stated in section 20; provided, however, that the maximum fee incurred under this section shall be three hundred dollars (\$300) plus the amount of the normal fee for the permit.

(b) This fee shall in no way limit the operation of penalties provided elsewhere in this ordinance.

SECTION 16: REVOCATION OF PERMITS

(a) The Board may revoke a drainage permit where the application, plans or other supporting documents required by this ordinance reflect either:

- (1) A false statement or misrepresentation as to material fact; or
- (2) Lack of compliance with drainage requirements; or
- (3) Failure to comply with the requirements of this ordinance.

SECTION 17: STOP-WORK ORDER

(a) Whenever a member of the Board, the Building Commissioner, or that officer's authorized representative or the Land Use Commissioner discovers the existence of any of the circumstances listed below, such official is empowered to issue an order requiring the suspension of the land alteration. The stop-work order shall be in writing and shall state to what land alteration it is applicable and the reason for its issuance. One (1) copy of the stop-work order shall be posted on the property in a conspicuous place and one (1) copy shall be delivered to the permit applicant, and if conveniently possible to the person doing the land alteration and to the owner of the property or his agent. The stop-work order shall state the conditions under which land alteration may be resumed. A stop-work order may be issued if:

- (1) Land alteration is proceeding in a manner reasonably likely to cause harm to persons or property; or
- (2) Land alteration is occurring in violation of a drainage requirement and in such manner that if land alteration is allowed to proceed, there is a probability that it will be substantially difficult to correct the violation; or
- (3) Land alteration has been accomplished in violation of a drainage requirement and a period of time which

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is one-half the time period in which land alteration could be completed, but no longer than fifteen (15) calendar days has elapsed since written notice of the violation or noncompliance was either posted on the property in a conspicuous place or given to the person doing the land alteration, without the violation of noncompliance being corrected; or

- (4) Land alteration for which a drainage permit is required is proceeding without a drainage permit being in force. In such an instance the stop-work order shall indicate that the effect of the order terminates when the required drainage permit is obtained.

(b) This sanction shall in no way limit the operation of penalties provided elsewhere in this ordinance.

SECTION 18: GENERAL PENALTY

Any person, partnership or corporation violating the substantive or procedural provisions of this ordinance or any regulation promulgated by the Board shall be subject to a fine in any sum not exceeding Two Thousand Five Hundred Dollars (\$2,500).

SECTION 19: VARIANCE PROCEDURE

(a) The Board shall have the power to modify or waive any minimum drainage standard found in this ordinance or any regulations promulgated by it. The Board may, but is not required to, grant such a modification or waiver if an applicant for a drainage permit makes a substantial showing:

- (1) That a minimum drainage standard regulation is infeasible or unreasonably burdensome; and
- (2) That an alternate plan submitted by the applicant will achieve the same objective and purpose as compliance with minimum drainage standards and regulations.

(b) The request for a variance together with supporting information shall be made in writing to the Board who shall make a decision within thirty (30) days.

SECTION 20: APPLICATION FEE

Each application for a drainage permit shall be accompanied by an application fee of Fifty Dollars (\$50), except, applications made pursuant to Section 7, in which case the fee shall be Thirty Dollars (\$30).

SECTION 21: EXEMPTION FOR CERTAIN GOVERNMENTAL UNITS

Drainage permits shall be obtained for land alteration activity accomplished by or for a governmental unit and inspections as specified in this section shall be allowed. Fees shall be required as specified in Section 20, except for the following:

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- (1) Land alteration activity for which a fee cannot be charged by the municipality because of federal or state law, or
 - (2) Land alteration activity accomplished by an employee or contractor of the Civil Town of Newburgh in the course of governmental, as opposed to proprietary, duties.

SECTION 22: DRAINAGE TO ADEQUATE RECEIVING PLACE

A drainage facility shall be provided which allows drainage of water runoff from each upper watershed area and from each portion of the parcel to a place or places adequate to receive it.

SECTION 23: CHARACTERISTICS OF DRAINAGE FACILITY

The drainage facility shall:

- (1) Be capable of accommodating a 25-year rainfall intensity without endangering the public safety and health, or causing significant damage to property;
- (2) Be durable;
- (3) Be easily maintained;
- (4) Be safe to persons and vehicles;
- (5) Retard sedimentation;
- (6) Retard erosion.
- (7) Where necessary, or required by the Board, provide retention/detention storage volume sufficient to accommodate a 25-year storm.
- (8) Where necessary, or required by the Board, provide retention/detention outlets designed to allow for no increase in runoff rate.

SECTION 24: ACCOMMODATION OF RUNOFF WITHIN PARCEL

The part of the drainage facility situated within the parcel, in addition to complying with the requirements stated under section 23:

- (a) Shall drain each and every part of the parcel;
- (b) Shall be sufficient to accept:
 - (1) The water runoff from the parcel after development; and
 - (2) The present water runoff from developed areas upstream; and
 - (3) The present water runoff from undeveloped areas upstream; and
 - (4) That part of the water runoff attributable to future development in undeveloped areas upstream, which is not reasonably likely to be accommodated in such upstream areas. The nature of the future development shall be that projected by applicant, subject to the Board's agreement. The amount of

water runoff not accommodated in connection with such future development shall be determined by good engineering practice, and may assume use of retention-detention systems except for:

- a. Land alteration for which a permit is not required by this section; and
 - b. Parcels too small to effectively use a retention-detention system; and
 - c. Parcels relative to which it is technically infeasible to use a retention-detention system; and
 - d. Parcels relative to which the cost of providing a retention-detention system is substantially more than providing for increased runoff capacity through the parcel and through other downstream areas to a place adequate to receive the runoff.
- (c) May include improvements such as retention-detention systems in the instance where the condition of the land makes use of such improvements feasible and appropriate.

SECTION 25: ACCOMMODATION OF RUNOFF DOWNSTREAM FROM PARCEL

As to drainage facilities located downstream and beyond the boundary of the parcel, the drainage system within the parcel shall be designed such that there will be no increase in peak discharge or runoff rates as a result of the development unless said downstream facilities located beyond the limits of the parcel are sufficient to accept:

- (1) The water runoff from the parcel after development; plus
- (2) The present water runoff from developed areas upstream; plus
- (3) The present water runoff from undeveloped areas upstream; plus
- (4) The present water runoff of those areas through which the drainage facility passes.

SECTION 26: ACCEPTANCE OF UPSTREAM DRAINAGE

At least one adequate opening shall be provided for each watershed at the upstream edge of the parcel to accept upstream drainage.

SECTION 27: HABITABLE STRUCTURES TO BE FREE FROM 100-YEAR FLOODS

The drainage facility shall be such that all habitable structures are free from a 100-year flood as defined by the Firm Map Flood Area.

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SECTION 28: DRAINAGE AWAY FROM STRUCTURES

The drainage facility shall direct storm water away from structures.

SECTION 29: DAMAGE TO ADJOINING PROPERTY

Land alterations shall be accomplished so as to prevent damage to adjoining property.

SECTION 30: MAXIMUM SLOPE

The maximum vertical fall of earth on the parcel shall be six (6) inches per foot (two (2) horizontal to one (1) vertical), for rip-rapped areas and four (4) inches per foot (three (3) horizontal to one (1) vertical) for vegetation cover, unless otherwise approved by the Board. Slopes of other materials other than earth shall be at the safe angle of repose for the materials encountered.

SECTION 31: PERMANENCY OF GRADES

Land alteration shall be accomplished in such a way that the grades left at the time that the work is completed will be permanent and stable. Vegetable materials may be buried in the ground only if placement will clearly not interfere with the stability of fill areas and not cause settlement or erosion.

SECTION 32: SUBSURFACE DRAINAGE

Subsurface drainage sufficient to intercept seepage that would:

- (1) Affect earth slope stability or stability of the building foundation; or
- (2) Create undesirable wetness;

shall be provided in areas having a high water table.

SECTION 33: BLOCKING DRAINAGEWAYS

No excavations or fills, structures, fences, trees, shrubs, or other like impediments, shall block or otherwise impede the free drainage of surface water in a drainage swale or channel.

**SECTION 34: EXPOSED AREAS TO BE PROTECTED;
POTENTIAL EROSION MINIMIZED**

Land alteration which strips the land of vegetation, including regrading, shall be done in a way that will minimize erosion.

Whenever feasible, natural vegetation shall be retained, protected and supplemented. Cut and fill operations shall be kept to a minimum to ensure conformity with existing topography so as to create the least potential erosion.

SECTION 35: PROTECTION DURING DEVELOPMENT

Temporary vegetation or mulching shall be used to protect exposed areas during development.

SECTION 36: PERMANENT VEGETATION; STRUCTURAL METHODS

Permanent and final vegetation or structural erosion-control devices shall be installed as soon as practical under the circumstances

SECTION 37: SEDIMENT CONTROL

Sediment in runoff water shall be trapped by the use of such methods as debris basins, sediment basins and silt traps until the disturbed area is stabilized.

ADOPTED this 11th day of July, 1990.

TOWN COUNCIL OF THE
TOWN OF NEWBURGH, INDIANA

Stephen E. Borkowski
Stephen E. Borkowski, President

W. F. Karaman
Council Member

R. J. Edwards
Council Member

Paul A. Cannon
Council Member

James Wells
Council Member

ATTEST: Sally K. Diaz
Sally K. Diaz
Clerk-Treasurer

Published in
The NEWBURGH REGISTER
July 25, 1990
AUG. 1, 1990

FILED

JUN 25 1990
Docket No. 1990-16
SALLY K. DIAZ
Clerk-Treasurer Town of Newburgh