

## ARTICLE V

### ENVIRONMENTAL PROTECTION

#### 501. GENERAL PERFORMANCE STANDARDS.

501.A. Information. If the Zoning Officer has reason to believe that the proposed use may have difficulty complying with the standards of this Article, then the Zoning Officer may require an applicant to provide written descriptions of proposed machinery, hazardous and toxic substances, operations and safeguards.

501.B. Federal and State Permits. City permits under this Ordinance are issued conditioned upon compliance with applicable Federal and State permits. Failure to comply with such Federal and State permits on a substantive matter shall be sufficient reason for suspension or withdrawal of a City permit under this Ordinance.

#### 502. NUISANCES AND HAZARDS TO PUBLIC SAFETY.

502.A. No land owner, tenant nor leasee shall use or allow to be used land or structures in a way that seriously threatens to or creates any of the following conditions:

1. Communicable disease or other public health hazards, including activities that would be attractive to or encourage the breeding of disease-prone insects or rodents.
2. Significant physical hazards to the public, especially hazards that would be easily accessible by small children.
3. Activity that creates a significant hazard to public health and safety because of serious explosive, fire, biological, biogenetic or toxic hazards. (See the City Fire Prevention Code.)
4. Activity that causes serious pollution to groundwaters or surface waters.

502.B. It is the responsibility of every property owner to ensure that their property does not threaten public health or safety, and to remove or alter any structure or situation that threatens the public health and safety. This includes, but is not limited to structurally unsound structures, including those damaged by fire.

#### 503. WETLANDS.

503.A. If the Zoning Officer or the City Engineer have reason to believe that a portion of a site proposed to be altered or drained may possibly meet the State or Federal definitions of a "wetland", the Zoning Officer may require the applicant to provide a study by a qualified professional delineating the locations of wetlands. However, the City accepts no responsibility to identify all wetlands or to warn parties of such possibilities.

503.B. All permits of the City are issued on the condition that the applicant comply with Federal and State wetlands regulations, and such permits may be revoked by the Zoning Officer for non-compliance with such regulations.

#### 504. SETBACK FROM RIVERS AND CREEKS.

504.A. Purposes. To protect the water quality of surface waters, preserve physical access to surface waters in case of future public acquisition, minimize erosion and sedimentation, preserve the natural stormwater drainage system of the area, conserve sensitive wildlife and aquatic habitats, preserve vegetation along waterways that will help screen out eroded soil and other pollutants and provide for setbacks that can be used as required yard areas for a use, and to preserve adequate flow capacity for floodwaters and to encourage groundwater recharge.

504.B. Setback From Creeks and Rivers.

1. No new principal building or paved area (except as exempted in part C. below) shall be located within:
  - a. 75 feet of the top edge of the primary bank of the Lackawanna River and the Roaring Brook creek;
  - b. 75 feet of the center of the following creeks for land in the R-1, R-1C or C-R district: Stafford Meadow Brook, Keyser Creek, Leggett Creek, Lindly Creek and Meadowbrook Creek; and
  - b. 30 feet of the center of the following creeks in any zoning district other than the R-1, R-1C or C-R district: Stafford Meadow Brook, Keyser Creek, Leggett Creek, Lindly Creek and Meadowbrook Creek.
2. These setbacks shall only apply to portions of these creeks that are above ground as of the adoption of this Ordinance. See the City floodplain map in case a wider area is regulated under the Floodplain Ordinance.

504.C. Setback Exemptions. The setbacks of this Section shall not apply to:

1. public utility facilities,
2. stormwater control or flood control structures authorized by the City or a State or Federal agency,
3. publicly-owned recreational facilities or
4. approved and necessary street and driveway crossings that are approximately perpendicular to the waterway.

504.D. Setback Areas and Construction. During any filling, grading or construction activity, all reasonable efforts shall be made to leave the setback areas of this section undisturbed, except at approved waterway crossings. See the Grading and Erosion Control requirements of Section 512.

505. **STEEP SLOPES.**

505.A. Site Plan. If an area of a lot including slopes of 25% or greater is proposed for construction of buildings, streets or driveways or non-agricultural grading, then the applicant shall submit a steep slope site plan to the Zoning Officer. These submittal requirements may be met by including the required information on subdivision/ land development plans.

505.B. Submission Requirements. A steep slope site plan shall meet the following requirements:

1. show detailed slope contours for all areas that potentially may be disturbed and/or constructed upon,
2. identify all areas of greater than 25% slope,
3. be to scale (such as 1 inch = 50 ft.),

4. show substantial areas of trees and dense vegetation proposed to be removed or preserved prior to or during the development of the use,
5. be stamped by a professional surveyor, professional engineer, engineer-in-training, registered landscape architect or registered architect,
6. show proposed locations of principal buildings, streets, driveways, on-lot septic fields and other areas of soil disturbance,\*
7. state the maximum slope of proposed driveways and streets and
8. show an area of 20 feet around the proposed principal building locations.

\* If the exact location of these features is not definitely determined at the time of plan submittal, then the plan shall designate the outer limits of areas where such features may potentially be located. If different locations outside of the approved location would be proposed after approval of the site plan, then the applicant shall prove to the Zoning Officer that the revised location would still meet the requirements of this Section.

505.C. Greater than 25% in R-1 - If, within the R-1 district, a proposed principal building location and any areas within 20 feet of such location on the lot include more than 1,500 square feet with slopes greater than 25.0%, then the following regulations shall apply, unless more restrictive regulations are stated elsewhere in this Ordinance:

1. minimum lot area of 30,000 square feet per dwelling unit or per principal non-residential use and
2. maximum impervious coverage of 15% on the lot.

505.D. Streets, Driveways and Septic Systems. See applicable street and driveway slope standards in the City Subdivision and Land Development Ordinance. See also DER regulations on slopes of on-lot septic systems.

505.F. Erosion. See Section 512.

505.G. Grading. No grading shall occur in such a way that would circumvent the requirements of this Ordinance, such as prior to submittal for a zoning or building permit or subdivision or land development approval. The steep slope requirements shall apply based on the slope of land at the time of the adoption of this Ordinance.

505.H. Man-Made Slopes. This section shall not apply to man-made slopes that naturally were not 15% or greater slope.

## 506. STORAGE OF EXPLOSIVE AND HAZARDOUS SUBSTANCES.

506.A. Storage. See the City Fire Protection Code. See fencing requirement in Section 513.

506.B. Water Quality Hazards.

1. No substance shall be stored in such a way that it could be washed into the groundwater or surface water, if such substance could seriously contaminate groundwater or surface water or serious harm aquatic life of a waterway.
2. If a substance threatens groundwater or surface water contamination, it shall be stored within an impermeable containment. Such storage shall be surrounded if needed by a berm that would drain any spilled substance to a engineered collection area, or other method that the applicant proves to the satisfaction of the City Engineer is safe.

**507. SEWAGE DISPOSAL.**

- 507.A. All methods of wastewater disposal shall meet requirements of DER, the City, the Sewer Authority and the Official City Sewage Facilities Plan, as amended, as applicable.
- 507.B. Recertification of On-Lot Systems. Any septic system is required to be reviewed and/or tested by the Sewage Enforcement Officer for adequacy if a change of use or expansion of use would cause an increase in sewage flows, or if there would be an increase in the number of dwelling units.
- 507.C. Alternate Septic Location. Any lot using an on-lot septic system that is to be granted final subdivision approval after the adoption of this section shall include a second open unpaved land area suitable for an alternate septic system location. Such site shall be tested by the City Sewage Enforcement Officer and found to meet State and City requirements. This requirement for the alternate system location shall not apply if the applicant proves to the satisfaction of the Zoning Officer that public sewage service can reasonably be expected to serve the lot within 5 years from the date of occupancy.
- 507.D. On-Lot Systems and Lot Area. A more restrictive minimum lot area may be established by the Sewage Enforcement Officer based upon DER regulations.

**508. NOISE.**

- 508.A. No land use or its operations shall generate a sound level exceeding the limits established in the table below, when measured at the specified locations:

Sound Level Limits by Receiving Land Use/ District

LAND USE OR ZONING DISTRICT RECEIVING THE NOISE	HOURS/ DAYS	MAXIMUM SOUND LEVEL
10 feet inside a Lot in a Residential District	1) 7 a.m. to 9 p.m. other than Sundays, Christmas Day, Thanksgiving Day, New Years Day, 4th of July, Labor Day and Memorial Day	1) 69 dBA
	2) 9 p.m. to 7 a.m. plus all day Sundays, Christmas Day, Thanksgiving Day, New Years Day, 4th of July, Labor Day and Memorial Day	2) 64 dBA
10 feet inside a Lot in a I-G or I-L District	All times and days	78 dBA
10 feet inside any Lot Line Not Listed Above	All times and days	70 dBA

Note- dBA means "A" weighted decibel.

- 508.B. The maximum permissible sound level limits set forth in the above table shall not apply to any of the following noise sources:

1. Sound needed to alert people about an emergency.

2. Repair or installation of utilities or construction of structures, sidewalks or streets between the hours of 7 a.m. and 10 p.m., except for clearly emergency repairs which are not restricted by time.
3. Household power tools and lawnmowers between the hours of 7 a.m. and 10 p.m.
4. Agricultural activities, including permitted raising of livestock, but not exempting a commercial kennel.
5. Railroads and aircraft; motor vehicles operating on public streets and highways. See vehicle noise restrictions in the State Motor Vehicle Code.
6. Public celebrations specifically authorized by City Council or a County, State or Federal Government agency or body.
7. Unamplified human voices or the barking of a single dog.
8. Routine ringing of bells and chimes by a place of worship or municipal clock.

508.C. Professional Studies and Costs. If a District Magistrate determines that professional analysis is needed to enforce this Section regarding a particular situation, the Zoning Officer may require that the applicant reimburse the City for such reasonable costs of such analysis. In addition, the Zoning Officer may base a determination under this Ordinance upon a written study accomplished by and signed by a qualified professional and submitted by an affected party. Any such study provided by an affected party shall state the methods used and the credentials of the person(s) who accomplished the study.

509. **VIBRATION.** No use shall generate vibration that is perceptible to an average person through his/her senses, without the use of measuring instruments, on private property beyond the exterior lot line of the use generating the vibration. This requirement shall not apply to occasional non-routine blasting that may be necessary during construction of streets, structures and utilities.

510. **ODORS, DUST AND AIR AND WATER POLLUTION.** No use shall generate odors or dust that are significantly offensive to persons of average sensitivities beyond the boundaries of the subject lot. All uses shall comply with Federal and State air and water pollution regulations as a condition of any City permit.

511. **LIGHT AND GLARE CONTROL.**

511.A. Street Lighting Exempted. This Section 511 shall not apply to street lighting that is owned, financed or maintained by the City or the State.

511.B. Height of Lights. No luminaire, spotlight or other light source that is within 200 feet of a dwelling or residential district shall be placed at a height exceeding 35 feet above the average surrounding ground level. This limitation shall not apply to lights needed for air safety nor lights intended solely to illuminate an architectural feature of a building.

511.C. Diffused. All light sources, including signs, shall be properly diffused as needed with a translucent or similar cover to prevent the lighting element from being directly visible from streets, public sidewalks, dwellings or adjacent lots. Two or more bare incandescent light bulbs of 40 watts or greater shall not be hung along a public street or an abutting property.

511.D. Shielding. All light sources, including signs, shall be shielded around the light source and carefully directed and placed to prevent the lighting from creating a nuisance to reasonable persons in adjacent dwellings or undeveloped residentially-zoned areas, and to prevent the lighting from shining into the eyes of passing motorists. Light sources shall also be shielded to avoid excessive fugitive emissions into the sky in such a way as could harm astronomical visibility from an observatory.

511.E. Flickering. Flashing, flickering or strobe lighting are prohibited, except for non-advertising seasonal lights between October 25th and January 10th.

## 512. **GRADING AND EROSION CONTROL.**

### 512.A. Permit Required.

1. A zoning permit shall be required for:
  - a. the deposit of more than 15 cubic yards of soil, stone, rock, clean fill or similar material on a site in a calendar year,
  - b. grading activities involving more than 1/2 acre of land, and/or
  - c. any grading, dumping or fill activities within the 100 Year Floodplain. All such activities may be subject to review by the City Engineer.
2. A separate City permit is not required for fill or grading specifically approved under another zoning permit, under a subdivision or land development approval or as part of a City-approved flood control project.
3. See the City Stormwater Management Ordinance.

512.B. Erosion Control. All City permits are granted on the condition that State erosion and sedimentation regulations and any officially submitted erosion and sedimentation plan are fully complied with. The Zoning Officer may require the submittal of an erosion and sedimentation control plan with review by the County Conservation District wherever soil will be disturbed. Failure to comply with such regulations or plan shall be cause for suspension of City permits.

512.C. Unstable Slopes. Slopes that would have the serious threat of instability, in the determination of the City Engineer, shall not be created. The Zoning Officer may require applicants to provide certification from a Professional Engineer that finished slopes greater than 4:1 will be stable.

512.D. Drainage. The ground adjacent to a building shall be graded so that surface water will be drained away from such building. Any fill or grading shall only occur in such a way that it does not increase the flow of stormwater onto public streets, without approval by the City Engineer or PennDOT as applicable. Any fill or grading shall not increase flooding hazards for neighboring properties.

512.E. Grading, fill, dumping of clean fill, excavation or movement of materials shall be completed to avoid an unsightly appearance and to prevent interference with drainage, streets or utilities. Any fill placed on a site shall be levelled off and properly sloped within 3 months of placement, except for soil stockpile areas shown on an approved erosion and sedimentation control plan.

## 513. **PLACEMENT AND SCREENING OF WASTE CONTAINERS AND OUTDOOR MACHINERY AND FENCING OF STORAGE.**

513.A. Placement. Whenever reasonable, commercial, industrial and institutional outdoor machinery that could create a noise nuisance shall be placed towards a side of a building that does not face an abutting existing dwelling, residential district, school or other noise sensitive use.

513.B. Safety. General types of toxic, biological, electrical and other significant hazards involving stationary outdoor machinery and storage shall be marked with signs.

513.C. Solid Waste Containers.

1. Screening. All trash dumpsters shall be screened on 3 of 4 sides (not including the side it is to be emptied from) as needed to screen the dumpster from view from public streets or dwellings on abutting lots. A solid wooden fence, brick wall, evergreen plants or structure designed to be architecturally compatible with the principal building shall be used for such screening.
  2. Setback from Dwellings. If physically possible, any solid waste container with a capacity of over 15 cubic feet shall be kept a minimum of 15 feet from any window or door of a dwelling unit on an abutting lot.
  3. Food Sales. Any use that involves the sale of ready-to-eat food for consumption outside of a building shall provide at least 1 outdoor solid waste receptacle at a convenient location outside of the main exit door of the property for customer use. The operator of such use shall be responsible for regular emptying and maintenance of such receptacle.
  4. Enclosed Containers. Solid waste receptacles stored outdoors shall be adequately enclosed and covered to control the attraction of rodents and insects.
- 513.D. Fencing of Outdoor Storage and Machinery. The following shall be secured by fencing or walls that are reasonably adequate to make it extremely difficult for small children to enter:
1. outdoor industrial storage areas involving storage covering more than 5,000 square feet of land,
  2. stationary hazardous machinery and equipment that are outdoors and
  3. outdoor bulk aboveground or surface storage of potentially explosive or hazardous liquids, gases or substances.

514. **RADIOACTIVITY AND ELECTRICAL DISTURBANCES.** No use shall routinely cause electrical, radio or electromagnetic disturbances to equipment on other lots. No radioactive wastes shall be disposed of in any district, and no radioactive wastes shall be stored on a lot for longer than 90 days after their active use is completed. See also PA. DER regulations.

515. **TREE PRESERVATION.**

515.A. Intent. To protect wildlife and bird habitats, encourage groundwater recharge, avoid pollution of creeks by high temperature runoff, maintain the attractive character of areas and conserve energy.

515.B. Tree Removal.

1. The provisions of this Section shall not apply to:
  - a. a permitted commercial forestry use (which is a special exception use within standards in Section 402), or
  - b. routine selective cutting of up to 15 percent of the trees throughout a lot to thin woods that does not involve clearcutting of any areas other than areas approved for the development of a new use.
2. Except as permitted in part 1. above, a maximum of 10 trees per lot, or on any combination of adjoining lots in common ownership, with a trunk diameter of 8 inches or more (measured at a height 4 feet above original grade) shall be removed in any calendar year unless each such additional tree meets or will meet one or more of the following conditions:

- a. is located within 10 feet of an uncurbed vehicular cartway,
- b. is within a proposed or existing vehicular cartway, shoulder or sidewalk,
- c. is within 10 feet of an approved storm water detention basin, paved area, driveway or on-lot sewage system,
- d. is within 25 feet of the foundation of an approved structure,
- e. is within an approved utility corridor,
- f. is diseased, dead or poses a clear danger to a structure, utility or public improvement,
- g. is a hazard to vehicular sight distance,
- h. is clearly of old age and unhealthy and cannot reasonably be expected to live for more than an additional 5 years,
- i. is within an area of an approved principal or accessory use that clearly requires the removal of the tree,
- j. is within an area that must be cleared to develop an approved golf course, or
- k. is necessary to allow longer rows for crop farming.

515.C. Protection of Trees During Construction. Adequate measures shall be used to prevent the damage and destruction of trees during construction. This should typically include the erection of temporary wooded barriers around the dripline of trees, to prevent compaction of root systems and damage to trunks from machinery.

515.D. Applicability. This section shall not apply to an owner of a residential lot of less than 1 acre after occupancy.

## 516. FLOOD-PRONE AREAS.

516.A. Purposes. To prevent loss of life and destruction and damage of property; to avoid government expenditure for flood protection, rescues and reconstruction; to avoid public health and safety hazards; to avoid increases in flood levels and velocities; and to reduce the numbers of persons unknowingly investing in land or new structures that are prone to flooding.

### 516.B. Floodplain Applicability.

1. The regulations of this Section shall apply throughout the entire City as "overlay" zoning regulations that supplement the zoning district regulations. Where the regulations of this Section differ from the regulations of any other section of this Ordinance, the provision that is more restrictive on development shall apply. If any portion of this Section shall be voided by judicial action, such action shall not affect the applicability of the underlying zoning district regulations.
2. No structure shall be erected or enlarged or land used or graded except in full compliance with the regulations of this Section, the City Subdivision and Land Development Ordinance, the City Building Code and the Federal Water Pollution Control Act, as amended.
3. See the "Liability" section in Article I. The City makes no guarantee that any area or structure is free from vulnerability to flooding.
4. See the 1980 amendment to the City Building Code regarding construction in floodplains.

516.C. Description of Floodplain Areas. For the purposes of this Article, the "100 Year Floodplain" shall be those areas identified as such on the latest version of the official Flood Insurance Study for the City as issued by the U.S. Department of Housing and Urban Development - which shall hereafter be referred to as the "Federal Floodplain Study." As of 1992, the latest official version was dated May 27, 1979. The 100 Year Floodplain shall consist of the following three components: the 100 Year Floodway, the 100 Year Flood-Fringe and the General Floodplain Area.

1. Floodway ("FW") - shall mean the channel of a stream plus any adjacent portions of the 100 Year Floodplain that must be kept free of encroachment in order to prevent the increase of floodlevels by more than 1 foot.
2. Flood-Fringe ("FF") - shall mean portions of the 100 Year Floodplain that are not within the 100 Year Floodway.
3. General Floodplain Area ("FA") - shall mean areas identified as such in the Federal Floodplain Study, for which no detailed 100 year flood elevations or profiles have been provided. In such areas, information shall be used from any available Federal, State or other qualified studies that are found to be acceptable by the City Engineer. If no such reliable information is available, then the 100 year flood elevations shall be determined by using a point on the boundary of the identified floodplain area which is nearest the construction site in question if determined to be acceptable to the City Engineer. Otherwise, an applicant shall be required to provide a detailed floodplain study of the site as specified in this Section.
4. Floodplain Amendments. The City Council may by resolution officially amend the 100 Year Floodplain to account for man-made or natural changes, or to incorporate an updated Federal or State study or to accept an appropriate professional study that provides a detailed analysis of a specific segment of a waterway. However, any such official amendment of the official Floodplain Map requires prior approval of the Federal Insurance Administration or its successor agency.
5. Interpretation.
  - a. The Zoning Officer shall initially determine the location of the 100 Year Floodplain areas based upon the Federal Floodplain Study.
  - b. Where exact measurements do not exist, the boundaries of the 100 Year Floodplain areas shall be determined by scaling distances from the official Floodplain Map, unless the City Engineer determines that a detailed floodplain study needs to be submitted by the applicant. The Zoning Officer may request the advice of the City Engineer.
  - c. The applicant may appeal such determination to the Zoning Hearing Board as a variance. In such case, the full burden of proof shall be on the applicant to prove that the determination of the Zoning Officer or the study being used is not accurate. See the standards for a professional floodplain study in part "516.D.4" below.

516.D. Permitted and Prohibited Uses in the 100 Year Floodplain.

1. Prohibited Uses in the Floodway. Within the 100 Year Floodway and portions of the General Floodplain Area determined to be within the 100 Year Floodway, each of the following is prohibited:
  - a. construction, development, placement or extension of a structure that could inhibit the passage of 100 Year floodwaters or that could reduce the water capacity of a 100 Year Floodplain or of any watercourse,
  - b. filling in or grading within the 100 year floodway, other than minor finished grading or excavation that the applicant proves to the written satisfaction of the City Engineer will not result in a net reduction in the water carrying capacity of the floodplain,

- c. redirections of a perennial waterway, other than stream improvements authorized by the PA. Fish and Boat Commission that are intended solely to improve aquatic habitats,
2. Prohibited Uses Within the Entire 100 Year Floodplain. The following uses are prohibited anywhere within the 100 Year Floodplain:
- a. the development or expansion of any of the following buildings or uses:
    - 1) manufactured/ mobile homes or manufactured/ mobile home parks,
    - 2) jails or prisons,
    - 3) nursing homes or hospitals,
    - 4) junkyards or solid waste disposal facilities,
    - 5) bulk manure storage,
    - 6) cemeteries or
    - 7) commercial forestry.
  - b. storage of any of the following materials or items that would be:
    - 1) buoyant and not anchored or tied down or easily moved within the time available after a flood warning,
    - 2) toxic,
    - 3) highly hazardous,
    - 4) explosive or
    - 5) radioactive.
  - c. any new or substantially improved structure that will be used for the production or storage of any of the following substances or substances involving a similar degree of hazards or any use involving the maintenance of more than 550 gallons of any of the following substances:
    - 1) Acetone
    - 2) Ammonia
    - 3) Benzene
    - 4) Calcium Carbide
    - 5) Carbon disulfide
    - 6) Celluloid
    - 7) Chlorine
    - 8) Hydrochloric acid
    - 9) Hydrocyanic acid
    - 10) Magnesium
    - 11) Nitric acid and oxides of nitrogen
    - 12) Petroleum products (such as gasoline and fuel oil)
    - 13) Phosphorus
    - 14) Potassium
    - 15) Sodium
    - 16) Sulphur and sulphur products
    - 17) Pesticides (including insecticides, fungicides and rodenticides)
    - 18) Radioactive substances, insofar as such substances are not otherwise regulated.
4. Standards. Before any action affecting the 100 Year Floodplain occurs, the applicant shall prove to the written satisfaction of the City Engineer that:
- a. all applicable City, State and Federal requirements have been met and applicable permits have been granted,

- b. compensating improvements will be made to prevent any net increase in flood levels or adverse affects on flood velocities and drainage patterns and
  - c. any municipalities that will be affected by a change in a alteration or relocation of a waterway have been given prior notice of such proposal.
5. Permitted Uses. Permitted uses in the 100 year floodplain (except areas that an applicant proves are not within the 100 year floodway) shall be limited to the following uses and uses that the Zoning Officer are closely similar:
- a. nature preserves,
  - b. plant nurseries,
  - c. outdoor recreation uses,
  - d. golf courses,
  - e. parking areas,
  - f. yard/ setback areas,
  - g. parking areas (see setback from Johnston's Run in Section 504) and
  - h. crop farming.
  - i. bridges, culverts and similar structures that the applicant proves to the satisfaction of the City Engineer will:
    - 1) pass over the 100 Year Floodplain or
    - 2) carry stormwater within a City-approved stormwater improvement or
    - 3) float over floodwaters or
    - 4) allow 100 Year floodwaters to easily pass through the structure without causing debris to block the flood channel.
6. General Floodplain Areas and Studies. To avoid the application of the prohibition on construction of structures within the General Floodplain Area, an applicant may prove to the satisfaction of the Zoning Hearing Board as a special exception, based upon review by the City Engineer, that a particular portion of such area is not within the 100 Year Floodway. Such proof shall be based upon a professional hydrological study. Such study shall:
- a) only be conducted by a professional engineer, licensed surveyor, registered landscape architect or hydrologist,
  - b) follow current accepted hydraulic technical methods and Federal standards,
  - c) provide sufficient analysis and computation information for the City Engineer to determine that such study is accurate.
7. Flood-Fringe. Within the 100 Flood-fringe, the following provisions shall apply:
- a. all new buildings and all existing buildings that are "substantially improved" as specified in the following sub-section below shall be fully floodproofed in compliance with this Ordinance and all City Building Codes. This shall include the following:
    - 1) The elevation of the lowest floor (including the basement) of any new or substantially improved residential structure shall be a minimum of 1.5 feet above the 100 year flood elevation. Enclosed areas below this lowest floor are prohibited.
    - 2) The elevation of the lowest floor (including the basement) of any new or substantially improved non-residential structure shall a) be a minimum of 1.5 feet above the 100 year flood elevation or b) be floodproofed up to that height.

- a) Enclosed areas below this lowest floor (including the basement) are prohibited.
- b) Such required floodproofing shall follow the standards stated in the Army Corps of Engineers' "Flood-Proofing Regulations" publication or some equivalent standard acceptable to the City Engineer. The applicant shall ensure that plans for such floodproofing shall be certified by a professional engineer or architect - certifying that a building has been adequately designed to withstand the 100 Year Flood elevations, pressures, velocities, impact and uplift forces associated with a 100 Year Flood and that utility extensions have been designed to take the 100 year flood levels fully into account.

8. Existing Structures in Floodplains.

- a. Structures that existed prior to the adoption of this Section within the 100 Year Floodplain shall not be expanded or enlarged, except:
  - 1) if such structures are determined to not be within the 100 Year Floodway and the expansion meets the requirements for the 100 Year Flood-fringe or
  - 2) for upper story additions that do not decrease the water carrying capacity of the 100 Year Floodplain or
  - 3) if any negative effects on flood heights are fully offset by accompanying improvements.
- b. Any modification, alteration, reconstruction or improvement to a structure that existed prior to the adoption of this Section within the 100 Year Floodplain (or the 100 Year Floodway where such has been officially defined) that is equal in value to less than 50 percent of the structure's market value \*\* shall to the greatest extent possible be elevated and/or floodproofed.
- c. Any modification, alteration, reconstruction or improvement to a structure that existed prior to the adoption of this Section within the 100 Year Floodplain (or the 100 Year Floodway where such has been officially defined) that is equal in value to 50 percent or more of the structure's market value \*\* (which shall be considered to be "substantially improved") shall only occur in full compliance with the provisions of this Article.
  - \*\* Based upon the value of the structure before the improvement or repair started and before any flood damage that may be being repaired.
- d. Historic and Safety Exception. Parts "b" and "c" above shall not apply to improvements that are necessary to comply with a City, County or State health, safety or sanitary regulation or to historically rehabilitate and restore a structure listed on the National or State Registry of Historic Places or that is a clearly a contributing structure to a State-certified Historic District.
- e. The applicant shall provide written information to the Zoning Officer on the lowest floor elevation of each structure approved within the 100 Year floodplain.
- f. Basement shall be defined for the purposes of this Section as any area of a building having its floor below ground level on all sides.

9. Floodplain Variances.

- a. A variance shall not be granted to the provisions of this Article if such variance would result in unacceptable increased flood heights or to increased threats to the public safety. Any variances to this Article shall be annually reported to the Federal Insurance Administration.
- b. If a variance is granted to allow construction of a structure below the 100 Year Floodplain elevation, the applicant should be notified in writing by the Zoning Officer that such construction will likely result in increased premium rates for flood insurance, and that the applicant may be creating a risk to life and property, and that the applicant is completing such work at their own risk.

517. **REMOVAL OF TOPSOIL.** The permanent stripping and removal of more than 50 percent of the topsoil from any lot is prohibited, except on portions of a lot for which approval has been received from the City to construct a building, street or paving. This section shall not restrict approved mineral extraction uses, the temporary stockpiling and regrading of soil during construction or routine crop farming practices. See Section 512 "Grading and Erosion Control."