

# MILFORD TOWNSHIP

## SUBDIVISION AND LAND DEVELOPMENT ORDINANCE

Prepared in consultation with:

Quakertown Area Planning Committee

Quakertown Borough

Richlandtown Borough

Trumbauersville Borough

Quakertown Community School District

Haycock Township

Milford Township

Richland Township

Bucks County Planning Commission

Natural Lands Trust

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**ARTICLE I. AUTHORITY AND PURPOSE**

Section 100     Adoption

- a.     The Board of Supervisors of Milford Township of the Commonwealth of Pennsylvania adopted, pursuant to the Pennsylvania Municipalities Planning Code, regulations governing the subdivision and development of land within Milford Township.
- b.     These regulations shall become effective five (5) days after adoption, and shall remain in effect until modified, amended, or rescinded by the Board of Supervisors.
- c.     All previous municipal subdivision and land development regulations and subsequent amendments thereto are hereby repealed.

Section 101     Title

An ordinance establishing rules, regulations, and standards governing the subdivision and development of land within Milford Township, setting forth the procedures to be followed by the Board of Supervisors and Planning Commission in administering these rules, regulations and standards, and setting forth the penalties for the violation thereof.

Section 102     Short Title

These regulations shall be known and may be cited as "Milford Township Subdivision and Land Development Ordinance."

Section 103     Purpose

The regulations are adopted for the following purposes:

- a.     To assist orderly, efficient, and integrated development of land.
- b.     To provide for the coordination of existing streets and public utilities with new facilities.
- c.     To provide for efficient and orderly extension of community services and facilities at minimum cost and maximum convenience.
- d.     To ensure conformance of land utilization with the Comprehensive Plan and the Zoning Ordinance.
- e.     To promote thereby the health, safety, and general welfare of the residents of Milford Township.
- f.     To secure equitable handling of all subdivision and land development plans by providing uniform procedures and standards for observance by subdividers, developers, the Planning Commission and Board of Supervisors.
- g.     To provide for adequate open space, recreation, light, air and traffic management.
- h.     To ensure that proper provision shall be made for drainage, water, sewage and other needed improvements.
- i.     To encourage and promote flexibility, economy and ingenuity in the layout and design of subdivisions and land developments, including authority for the Board of Supervisors to alter site requirements in order to encourage other practices

that are in accordance with modern and evolving principles of site planning and development.

Section 104 Interpretation

The provisions of this ordinance shall be held to be minimum requirements to meet the above stated purposes. Where the provisions of this ordinance impose greater restrictions than those of any statute, other ordinance, or regulation, the provisions of this ordinance shall prevail. Where the provisions of any statute, other ordinance or regulation impose greater restrictions than those of this ordinance, the provisions of such statute, ordinance, or regulation shall prevail.

Section 105 Severability

It is hereby declared to be the legislative intent that:

- a. If a court of competent jurisdiction declares any provisions of this ordinance to be invalid or ineffective in whole or in part, the effect of such decision shall be limited to those provisions which are expressly stated in the decision to be invalid or ineffective, and all other provisions of this ordinance shall continue to be separately and fully effective.
- b. If a court of competent jurisdiction finds the application of any provision or provisions of this ordinance to any lot, building or other structure, or tract of land, to be invalid or ineffective in whole or in part, the effect of such decision shall be limited to the person, property, or situation immediately involved in the controversy, and the application of any such provision to other persons, property, or situations shall not be affected.

**ARTICLE II. JURISDICTION AND SANCTION**

Section 200 Jurisdiction

- a. Subdivision and Land Development Control—It shall be unlawful for the owner or any other person, firm, or corporation owning or controlling any land in Milford Township, to subdivide any lot, tract, parcel of land, or interior or exterior space by leasehold or other means, including the creation of condominium units, or to lay out, construct, open or dedicate for public use or travel, any street, sanitary or storm sewer drainage facility or other facility in connection therewith, for the common use of occupants of buildings located within the subdivision or land development, unless final plans of such subdivision or land development shall: (a) have been prepared and signed by and sealed by a professional engineer or land surveyor or landscape architect, as permitted by the "Landscape Architects' Registration Law," duly and currently registered in the State of Pennsylvania; (b) submitted to and approved in writing thereon by the Board of Supervisors subsequent to meeting the requirements of sketch and preliminary submissions; (c) recorded in the Bucks County Recorder of Deeds office in Doylestown, Pennsylvania; and (d) the improvements required by the Board of Supervisors for plan approval have either been constructed or proper completion of those improvements has by deposit of funds or financial security sufficient to cover the cost of improvements, inspections and legal fees.
- b. Before the approval of a plat, the Board of Supervisors shall transmit a copy of the proposed plat to the county Planning Commission, and give the commission thirty (30) days in which to make a recommendation. Pending the receipt and consideration of such report, the Board of Supervisors shall defer action thereon, but if such report is not received by the Board of Supervisors within thirty (30) days from the submission of the plat to the county Planning Commission, or within such further time as may be agreed upon by the Board of Supervisors, the Board of Supervisors may proceed to final action thereon.

Section 201     Sanctions and Penalties

- a.     It shall be unlawful to record any subdivision plan in any public office, unless the same shall bear thereon by endorsement or otherwise the approval of the Board of Supervisors.
- b.     The Township shall have all of the remedies provided in the Pennsylvania Municipalities Planning Code to enforce compliance with the provisions of this Ordinance including those remedies provided in Sections 511, 515.1 and 515.3 of the Pennsylvania Municipalities Planning Code as same may, from time to time, be revised.
- c.     Any owner, or agent of the owner, of any land located within a subdivision, who sells, transfers or agrees to sell, any land by reference to, or exhibition of, or by other use of a plan of a subdivision, before the same has been finally approved by the Board of Supervisors shall be subject to the sanctions and penalties hereafter set forth. The Board of Supervisors may also enjoin such transfer or sale or agreement by injunction in addition to the penalties herein provided.
- d.     In addition to other remedies, the Township may institute and maintain appropriate actions by law or in equity to restrain, correct or abate violations, to prevent unlawful construction, to recover damages and to prevent illegal occupancy of a building, structure or premises. The description by metes and bounds in the instrument of transfer or other documents used in the process of selling or transferring shall not exempt the seller or transferor from such penalties or from the remedies herein provided.
- e.     The Township may refuse to issue any permit or grant any approval necessary to further improve or develop any real property which has been developed or which has resulted from a subdivision of real property in violation of this ordinance. This authority to deny such a permit or approval shall apply to any of the following applicants:
  - (1)     The owner of record at the time of such violation.
  - (2)     The vendee (buyer) or lessee (renter) of the owner of record at the time of such violation without regard as to whether such vendee (buyer) or lessee (renter) had actual or constructive knowledge of the violation.
  - (3)     The current owner of record who acquired the property subsequent to the time of violation without regard as to whether such current owner had actual or constructive knowledge of the violation.
  - (4)     The vendee (buyer) or lessee (renter) of the current owner of record who acquired the property subsequent to the time of violation without regard as to whether such vendee (buyer) or lessee (renter) had actual or constructive knowledge of the violation.

As an additional condition for issuance of a permit or the granting of an approval to any such owner, current owner, vendee (buyer) or lessee (renter) for the development of any such real property, the Township may require compliance with the conditions that would have been applicable to the property at the time the applicant acquired an interest in such real property.

- f.     District justices, or the Court of Common Pleas exercising jurisdiction of District Justices, shall have initial jurisdiction in proceedings brought hereunder.
- g.     Any person, partnership or corporation who or which has violated the provisions of this Ordinance shall, upon being found liable therefor in a civil enforcement proceeding commenced by a municipality, pay a judgment of not more than \$500 plus all court costs, including reasonable attorney fees incurred by Milford

Township as a result thereof. No judgment shall commence or be imposed, levied or payable until the date of the determination of a violation by the district justice or other appropriate tribunal. If the defendant neither pays nor timely appeals the judgment, Milford Township may enforce the judgment pursuant to the applicable rules of civil procedure. Each day that a violation continues shall constitute a separate violation, unless the district justice determining that there has been a violation further determines that there was a good faith basis for the person, partnership, or corporation violating the ordinance to have believed that there was no such violation, in which event there shall be deemed to have been only one such violation until the fifth day following the date of the determination of a violation by the district justice and thereafter each day that a violation continues shall constitute a separate violation.

- h. The Court of Common Pleas, upon petition, may grant an order of stay, upon cause shown, tolling the per diem judgment pending a final adjudication of the violation and judgment.
- i. Nothing contained in this Section shall be construed or interpreted to grant to any person or entity other than Milford Township the right to commence any action for enforcement pursuant to this Section.

### ARTICLE III. DEFINITIONS

Section 300     General

- a. Unless a contrary intention clearly appears, the following words and phrases shall have for the purpose of this ordinance the meanings given in the following clauses.
- b. For the purpose of this ordinance, words and terms used herein shall be interpreted as follows:
  - (1) Words used in the present tense include the future.
  - (2) The singular includes the plural.
  - (3) The word “person” includes an individual, firm, corporation, partnership, company, association, or government entities including a trustee, a receiver, an assignee, or a similar representative.
  - (4) The word “lot” includes the word “plot” or “parcel.”
  - (5) The word “may” is permissive; the words “shall” and “will” are mandatory.
  - (6) The word “used” or “occupied” as applied to any land or building shall be construed to include the words “intended, arranged, or designed to be occupied.”
  - (7) The word municipal, municipality, or township shall mean Milford Township.
  - (8) The words “Governing Body” or “Board of Supervisors” refer to the Milford Township Board of Supervisors.
  - (9) The word “Commission” and the words “Planning Commission” always mean the Milford Township Planning Commission.
  - (10) The words “Area Planning Committee,” “Planning Committee,” or “Committee” mean the Quakertown Area Planning Committee.
  - (11) The words “Quakertown Area” refer to the area comprising the boroughs of Quakertown, Richlandtown and Trumbauersville and the townships of Haycock, Milford and Richland.
  - (12) The words “Zoning Ordinance” always refer to the Milford Township Portion of the Quakertown Area Zoning Ordinance of 1995, as amended.
  - (13) The words “municipal plan” and “comprehensive plan” refer to the Milford Township Portion of the Quakertown Area Comprehensive Plan.
  - (14) “DEP” and “PADEP” shall refer to the Pennsylvania Department of Environmental Protection.
- c. Any word or term not defined herein shall be used with a meaning of standard usage.

Section 301     Definitions

The following specific definitions apply in this ordinance.

Accessway

The portion of a common parking area that provides for ingress and egress to a common parking area from a street or to another common parking area.

Agent

Any person, other than the developer, who, acting for the developer, submits to Milford Township subdivision or land development plans for the purpose of obtaining approval thereof.

Agricultural activities

The work of producing crops and raising livestock including tillage, plowing, disking, harrowing, pasturing and installation of conservation measures. Construction of new buildings or impervious area is not considered an agricultural activity.

Alley

A right-of-way which provides secondary access for vehicles to the side or rear of abutting properties.

Alteration

As applied to land, a change in topography as a result of the moving of soil and rock from one location or position to another; also the changing of surface conditions by causing the surface to be more or less impervious; land disturbance.

Applicant

A landowner, developer, or agent, as hereinafter defined, who has filed an application for subdivision or land development including his or her heirs, successors, and assigns.

Application for development

Every application, for subdivision or land development, whether sketch, feasibility, preliminary, tentative, or final, required to be filed and approved prior to the start of construction or development, including but not limited to an application for a building permit, for the approval of a subdivision plat or plan, or for approval of a development plan.

Area

- a.     Lot Area: The area contained within the property lines of the individual parcels of land shown on a subdivision plan or required by this ordinance, excluding any area within an existing or designated future street right-of-way, or the area of any easement which would interfere with the proposed use. In addition, the minimum lot area does not include any area designated as open space under the requirements of the Site Capacity Calculations and the Table of Performance Standards of the zoning ordinance.

For all proposed residential uses having a lot area greater than one (1) acre there shall be an area within the overall lot of at least one (1) acre for primary building, accessory buildings, driveways, parking areas, and on-site sewer and water systems. This area shall not contain flood plains, flood plain soils, lakes, ponds,

water courses or wetlands. For all proposed residential uses having a lot area of one (1) acre or less, the lot area shall not contain any of these noted natural features. For all proposed non-residential uses, the proposed lot area shall contain an area of at least the minimum lot size, as specified in the zoning ordinance, which shall not contain any of these noted natural features.

- b. Floor Area: The sum of the areas of the floors of the building or structure, including areas used for human occupancy or required for the conduct of the business or use, and basements, attics, and penthouses, as measured from the exterior faces of the walls. It does not include cellars, unenclosed or screened porches, attics not used for human occupancy, nor any floor space in an accessory building nor in the main building intended or designed for the parking of motor vehicles in order to meet the parking requirements of this ordinance, nor any such floor space intended and designed for accessory heating and ventilating equipment.

#### Authority

A body politic and corporate created pursuant to the Municipal Authorities Act of 1945, as amended.

#### Basement

A story partly underground, but having one-half or more of its height (measured from floor to ceiling) above the average finished grade level of the adjoining ground. A basement shall be counted as a story for the purposes of height measurement or for the determination of square footage or floor area only if the vertical distance between the ceiling and the average level of the adjoining ground is more than four (4) feet, or if it is used for business or dwelling purposes.

#### Best Management Practices (BMPs)

Management practices or methods for controlling stormwater runoff which provide either a hydrological (i.e., reduction of runoff volumes) or a water quality (i.e., reduction of pollutants) benefit.

#### Bicycle Lanes

Lanes located on the paved surface or shoulder of a street.

#### Bicycle Paths

Off-street bikeways.

#### Bicycle Route

The area of a public street specifically designated and marked as a bicycle route.

#### Block

An area divided into lots, and usually bounded by streets.

#### Board

Any body granted jurisdiction under this ordinance or under the Pennsylvania Municipalities Planning Code, as amended, to render final adjudications.

## Building

- a. Building: A structure under roof, used for the shelter or enclosure of persons, animals, or property. The word "building" shall include any part thereof.
- b. Building, Accessory: A subordinate building located on the same lot as a principal building and clearly incidental and subordinate to the principal building. Any portion of a principal building devoted or intended to be devoted to an accessory use is not an accessory building.
- c. Building, Principal: A building in which is conducted, or is intended to be conducted, the principal use of the lot on which it is located.

## Building Setback Line

The line parallel to the ultimate right of way at a distance there from equal to the depth of the minimum front yard required for the district in which the lot is located.

## Cartway

The portion of a street or alley intended for vehicular use.

## Cation exchange capacity (CEC) - see section 512 i. 5. a 1

A measure of the soil's ability to adsorb exchangeable cations (positively charged ions) and expressed in centimoles per kilogram (cmol/kg) of soil. Centimoles per kilogram is defined as the moles (molecular weight) of positive charge adsorbed per unit mass (kilogram) of soil. Cations in solution may be attracted to the regions close to a negatively charged clay-mineral surface and held there by electrostatic forces. These bonded ions are resistant to movement by water once adsorbed, but can be exchanged by other cations entering the soil. Soils with high clay and organic material content normally have good CECs.

## Cellar

A story partly underground and having more than one-half of its height (measured from floor to ceiling) below the average finished grade level of the adjoining ground. A cellar shall not be counted as a story for the purposes of height measurement or for the determination of square footage or floor area, nor shall it be used for dwelling, office or business purposes.

## Cistern

An underground reservoir or tank for storing rainwater.

## Clear-Sight Triangle

An area of unobstructed vision at a street intersection defined by the ultimate right-of-way lines of the streets and by a line of sight between points on their right-of-way lines at a given distance from the intersection of the right-of-way lines. See Section 508.c.

## Condominium

Real estate, portions of which are designated for separate ownership and the remainder of which is designated for common ownership solely by the owners of those portions. Real estate is not a condominium unless the undivided interests in the common elements are vested in the unit owners.

A condominium is a unit with all of the following characteristics:

- a. The unit may be any permitted land use. A condominium is an ownership arrangement, not a land use.
- b. All or a portion of the exterior open space and any community interior spaces are owned and maintained in accordance with the PA Uniform Condominium Act 68 PA. C.S.A. Section 3101 et seq., and in accordance with the provisions for open space, roads, or other development features in this ordinance and the municipal zoning ordinance.
- c. The division of real property to create condominium units intended for separate ownership constitutes a subdivision.

#### Conservation Area, Primary

The most severely constrained lands, where development is typically restricted under current codes and laws (such as wetlands and floodplains).

#### Conservation Areas, Secondary

Locally noteworthy or significant features of the natural or cultural landscape - such as mature woodlands, hedgerows, wildlife habitats and travel corridors, prime farmland, groundwater recharge areas, greenways and trails, historic sites and buildings, and scenic viewsheds.

#### Conservation District

The Bucks County Conservation District.

#### Control Point

The location in a public garage where vehicles are stopped by a gate or attendant.

#### Crosswalk or Interior Walk

A right-of-way or easement for pedestrian travel across or within a block.

#### Cul-de-sac

A street intersecting another street at one end and terminating at the other in a vehicular turn-around. A street that has only a single means of egress to a through street regardless of internal configuration (e.g., a street designed in the shape of a "P") shall be considered a cul-de-sac.

#### Culvert

A pipe, conduit, or similar structure including appurtenant works which carries surface water stream under or through an embankment or fill.

#### Dam

An artificial barrier, together with its appurtenant works, constructed for the purpose of impounding or storing water or another fluid or semifluid, or a refuse bank, fill or structure for highway, railroad, or other purposes which does or may impound water or another fluid or semifluid.

#### Decision

Final adjudication of any board or other body granted jurisdiction under this ordinance or the Pennsylvania Municipalities Planning Code (Act 247, as amended) to do so, either by reason of the grant of exclusive jurisdiction or by reason of appeals from determinations. All decisions shall be appealable to the court of common pleas of the county and judicial district wherein Milford Township lies.

#### Density

Density is a measure of the number of dwelling units per unit of area. It shall be expressed in dwelling units per acre. The measure is arrived at by dividing the number of dwelling units by the net buildable site area.

#### Design Storm

The magnitude and temporal distribution of precipitation from a storm event measured in probability of occurrence (e.g., 50-year storm) and duration (e.g., 24-hour), and used in the design and evaluation of stormwater management systems.

#### Detention Basin

An impoundment structure designed to manage stormwater runoff by temporarily storing the runoff and releasing it at a predetermined rate.

#### Determination

Final action by an officer, body or agency charged with the administration of any land use ordinance or applications thereunder, except the following:

- a. The Board of Supervisors;
- b. The Zoning Hearing Board; or
- c. The planning agency, only in and to the extent the planning agency is charged with final decision on preliminary or final plans under the subdivision and land development ordinance or planned residential development provisions.

Determinations shall be appealable only to the board designated as having jurisdiction for such appeal.

#### Developer

Any landowner, agent of such landowner, or tenant with the permission of such landowner, who makes or causes to be made a subdivision or a land development.

#### Development

Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation, or drilling operations.

#### Development Plan

The provisions for development including a planned residential development, a plat of subdivision, all covenants relating to use, location, and bulk of buildings and other structures, intensity of use or density of development, streets, ways, and parking facilities, common open space and public facilities. The phrase "provisions of the development plan" shall mean the written and graphic materials referred to in this definition.

### Downslope property line

That portion of the property line of the lot, tract, or parcels of land being developed located such that all overland or pipe flow from the site would be directed towards it.

### Drainage Easement

A right granted by a landowner to a grantee, allowing the use of private land for stormwater management purposes.

### Drainage Facility

Any ditch, gutter, pipe, culvert, storm sewer, retention basin, detention basin, or other structure designed, intended, or constructed for the purpose of controlling or diverting surface waters or carrying surface waters off streets, public rights-of-way, parks, recreational areas, or any part of any subdivision, land development, or contiguous land areas.

### Driveway

A minor vehicular way providing access between a street and parking area or garage within a lot or property.

### Dual Purpose Detention

Detention practices for stormwater runoff that provide two (2) types of control: hydrologically addressing peak flow release rates and extending the detention of the first flush volume of runoff for water quality improvements.

### Dwelling

- a. Dwelling: A building containing one or more dwelling units.
- b. Dwelling Unit: Any room or group of rooms located within a building and forming a single, habitable unit with facilities used or intended to be used for living, sleeping, cooking, and eating, by one family.

### Earth disturbance

Any activity including, but not limited to, construction, mining, timber harvesting, grubbing, tilling, digging, or filling of ground or stripping of vegetation which alters, disturbs, and exposes the existing condition of the land surface.

### Easement

A grant of the specified use of a parcel of land by the property owner to the public, a corporation, or a person.

### Engineer

A registered professional engineer licensed as such in the Commonwealth of Pennsylvania.

### Engineering Considerations

All engineering responsibilities as herein defined shall be those of the engineer for Milford Township, hereafter referred to as the Engineer. The Engineer will review the plan and any accompanying material for the proposed subdivision or land development and make his findings

known in a report to the Municipal Planning Commission and the Board of Supervisors. The report will be considered by the commission when reviewing the proposal.

The engineer's responsibility in the review of the subdivision and land development proposals, shall include but not be limited to the following engineering considerations. The engineer shall make recommendations concerning approval or disapproval of the application based upon these considerations as they are reflected in the plans submitted.

- a. Dimensions and areas of lots or parcels.
- b. Existing and proposed contours in relation to the proposed use and that of adjacent properties.
- c. Soil conditions; proposed erosion controls.
- d. Surface and sub-surface drainage conditions and proposed storm water management plan.
- e. Lighting plans.
- f. Utility plan; easement requirements.
- g. Road specifications, widths, cross-sections, alignment, profiles, and intersections.
- h. Location and design of entrance and existing accessways.
- i. Sewage disposal.
- j. Conformance to the Zoning Ordinance.
- k. Conformance to the provisions of the Ordinance.
- l. Acceptability of materials, construction indicated in final plans and specifications.
- m. Anticipated traffic generated by the proposal.
- n. Water supplies for the proposed use or uses.
- o. Fire protection.

#### Erosion

The removal of surface materials by the action of natural elements.

#### Erosion, accelerated

The removal of the surface of the land through the combined action of man's activity and the natural processes of a rate greater than would occur because of the natural process alone.

#### Erosion, channel

The widening and deepening waterways due to erosion.

#### Existing conditions

The initial condition of a project site prior to the proposed construction.

#### Family

One or more persons occupying a dwelling unit and living as a single, nonprofit housekeeping unit, providing that a group of more than eight (8) persons who are not within the second degree of kinship shall not be deemed to constitute a family.

Notwithstanding, the definition in the previous paragraph, a family shall be deemed to include a group of no more than eight (8) unrelated persons, sponsored and operated by a nonprofit group, organization or corporation for a group of persons to live together in a single communal living arrangement where the residents permanently live together as the functional equivalent of a traditional family in a nonprofit dwelling unit maintaining a non-transient common household with single cooking and dining facilities and sharing a permanent unity of social life. Groups contemplated by this definition of family shall include, but not be limited to, the handicapped, the elderly, and the disabled, but excludes halfway houses for ex-convicts and for drug or alcohol rehabilitation, or for licensed personal care homes or any other use specifically provided for in this Ordinance. Such a family may have no more than two residential managers

living at the home in addition to the residents. Residential managers are agents or employees of an agency or organization sponsoring and operating the family unit.

#### First Flush

The small design storm which is the equivalent to the one-year 24-hour-frequency design storm using the rainfall distribution recommended for Pennsylvania as defined by the U.S. Natural Resource Conservation Service (formerly known as the U.S. Soil Conservation Service).

#### Flood

A general but temporary condition of partial or complete inundation of normally dry land areas from the overflow of streams, rivers, and other waters of this commonwealth.

#### Flood Fringe

The portion of the flood plain which is outside the floodway.

#### Flood Plain

- a. Areas adjoining any streams, ponds, or lakes subject to a 100-year-recurrence-interval flood; or areas identified by the presence of flood plain soils as identified below under Flood Plain Soils. The following studies may be used to identify the flood plain; however, the study which indicates a flood plain of greater delineation shall be used.
  - (1) Flood Insurance Study prepared by the Federal Emergency Management Agency, Federal Insurance Administration.
  - (2) *Soil Survey of Bucks and Philadelphia Counties, Pennsylvania* prepared by the U.S. Department of Agriculture, Soil Conservation Service (currently known as the Natural Resource Conservation Service), including all updates and revisions. See definition of Flood Plain Soils.
- b. Studies conducted by a registered engineer expert in the preparation of hydrological studies may be substituted for the studies listed above subject to the review and approval of the Board of Supervisors on recommendation of the municipal engineer.

#### Flood Plain Soils (alluvial soils)

Areas subject to periodic flooding or listed in the *Soil Survey of Bucks and Philadelphia Counties, Pennsylvania*, U.S. Department of Agriculture, Soil Conservation Service, (currently known as the U.S. Natural Resources Conservation Service), July 1975, including all updates and revisions, as being "on the flood plain" or subject to "flooding."

The following soil types are flood plain soils:

*Alluvial land*  
*Alton gravelly loam, flooded*  
*Bowmansville silt loam*  
*Hatboro silt loam*  
*Marsh*  
*Pope loam*  
*Rowland silt loam*

#### Floodway

The channel of the watercourse and those portions of the adjoining floodplains that are reasonably required to carry and discharge the 100-year frequency flood. Unless otherwise specified, the boundary of the floodway is as indicated on maps and flood insurance studies provided by FEMA. In an area where no FEMA maps or studies have defined the boundary of the 100-year frequency floodway, it is assumed—absent evidence to the contrary—that the floodway extends from the stream to 50 feet from the top of the bank of the stream.

#### Floor Area

See definition under Area.

#### Floor Area Ratio

The ratio of the floor area to the lot area, as determined by dividing the floor area by the lot area.

#### Freeboard

A vertical distance between the elevation of the design high-water and the top of a dam, levee, tank, basin, or diversion ridge. The space is required as a safety margin in a pond or basin.

#### Forest

A forest is any area meeting the definition of Woodlands herein.

#### Grade

A slope, usually of a road, channel or natural ground specified in percent and shown on plans as specified herein. (To) Grade - to finish the surface of a roadbed, top of embankment or bottom of excavation.

#### Grassed waterway

A natural or constructed waterway, usually broad and shallow, covered with erosion-resistant grasses, used to conduct surface water from cropland.

#### Groundwater Recharge

Replenishment of existing natural underground water supplies.

#### Half or Partial Street

A street, parallel and adjacent to a property line, having a lesser right-of-way width than required for satisfactory improvement and use of the street.

#### Hydric Soils

A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of wetlands vegetation. Wetlands vegetation are those plant species that have adapted to the saturated soils and periodic inundations occurring in wetlands. The following soils, classified in the *Soil Survey of Bucks and Philadelphia Counties, Pennsylvania*, prepared by the U.S. Department of Agriculture (currently known as the U. S. Natural Resources Conservation Service), July 1975, including all updates and revisions, are hydric soils:

*Bowmansville silt loam*  
*Doylestown silt loam*  
*Fallsington silt loam*  
*Hatboro silt loam*

*Towhee silt loam*  
*Towhee extremely stony silt loam*

#### Hydrologic soil group

A classification of soils by the Soil Conservation Service into four runoff potential groups. The groups range from A soils, which are very permeable and produce little runoff, to D soils, which are not very permeable and produce much more runoff.

#### Hydrologic Study

An analysis of the volume and velocity of water flow through a watershed consistent with standardized modeling practices such as Soil Conservation Service TR-20 Model.

#### Impervious Surface

Impervious surfaces are those surfaces which do not absorb precipitation and surface water. All buildings, parking areas, driveways, roads, sidewalks, swimming pools and any areas in concrete, asphalt, and packed stone shall be considered impervious surfaces within the meaning of this definition. In addition, other areas determined by the Municipal Engineer to be impervious within the meaning of this definition shall also be classed as impervious surfaces.

#### Impervious Surface Ratio

The impervious surface ratio is a measure of the intensity of use of a piece of land. It is measured by dividing the total area of all impervious surfaces within the site by the net buildable site area.

#### Impoundment

A retention or detention basin designed to retain stormwater runoff and release it at a controlled rate.

#### Improvements

Those physical additions, installations and changes required such as streets, curbs, sidewalks, water mains, sewers, drainage facilities, public utilities, and any other appropriate items required to render land suitable for the use proposed.

#### Infiltration Structure

A structure designed to direct runoff into the ground, (e.g., french drains, seepage pits, seepage trench, biofiltration swale).

#### Inlet

A surface connection to a closed drain. A structure at the diversion end of a conduit. The upstream end of any structure through which water may flow.

#### Lake

A permanent body of water, naturally occurring or man-made, covering an area of two (2) or more acres. The shoreline of such waterbodies shall be measured from the maximum condition rather than permanent pool, if there is any difference.

#### Land Development

Any of the following activities:

- a. The improvement of one lot or two or more contiguous lots, tracts or parcels of land for any purpose involving:
  - (1) A group of two or more residential or nonresidential buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot or lots regardless of the number of occupants or length of tenure; or
  - (2) The division or allocation of land or space, whether initially or cumulatively, between or among two or more existing or prospective occupants by means of, or for the purpose of streets, common areas, leaseholds, condominiums, building groups, or other features.
- b. A subdivision of land.
- c. The following shall not be considered a land development:
  - (1) The conversion of an existing single-family detached dwelling or single-family semidetached dwelling into not more than two residential units, unless such units are intended to be condominiums.
  - (2) The addition of a residential accessory building and farm buildings, on a lot or lots subordinate to an existing building; or
  - (3) The addition or conversion of buildings or rides within the confines of an enterprise that would be considered an amusement park. An amusement park is defined as a tract or area used principally as a location for permanent amusement structure or rides. This exclusion shall not apply to newly acquired acreage by an amusement park until the initial plans for the expanded area have been approved by Milford Township.

Landowner

The legal or equitable owner or owners of land including the holder of an option or contract to purchase (whether or not such option or contract is subject to any condition), a lessee (renter) if he is authorized under the lease to exercise the rights of the landowner, or other person having a proprietary interest in land.

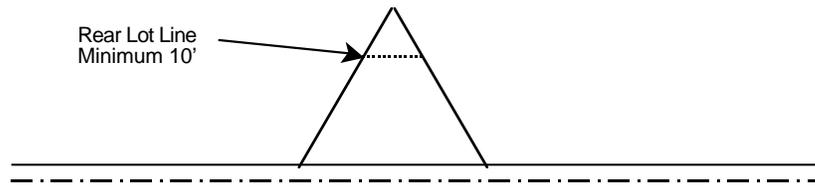
Lot

- a. Lot: A parcel of land, used or set aside and available for use as the site of one or more buildings and any buildings accessory thereto or for any other purpose, in one ownership and not divided by a street, nor including any land within the right-of-way of a public or private street upon which said lot abuts, even if the ownership to such right-of-way is in the owner of the lot. The lot shall not include any easement which would interfere with the proposed use. A lot for the purpose of this ordinance may or may not coincide with a lot of record. The minimum lot area does not include any area designated as open space under the requirements of the Site Capacity Calculations and the Table of Performance Standards of the Zoning Ordinance.
- b. Lot Area: See definition under Area.
- c. Average Lot Area per Dwelling Unit: The average lot area for all dwelling units of a single type. Individual lots may be smaller or larger than the average provided that the average size is maintained and that all other standards of this ordinance are met.

- d. Corner Lot: A lot which has an interior angle of less than one hundred and thirty-five (135) degrees at the intersection of two (2) street lines. A lot abutting upon a curved street or streets shall be considered a corner lot if the tangents to the curve at the points of intersection of the side lot lines intersect with the street lines at an angle of less than one hundred and thirty-five (135) degrees.
- e. Lane Lot: A parcel of land that does not have the required minimum lot width at the minimum front yard line but has direct access to a public street through a narrow strip of land which is part of the same lot. The lot lines of the narrow portion of the lot (the lane) are parallel or nearly parallel.
- f. Through Lot: An interior lot having frontage on two parallel or approximately parallel streets.
- g. Depth of Lot: The mean distance from the ultimate right of way of the lot to its opposite rear line, measured in the general direction of the side lines of the lot.
- h. Lot Width: The minimum distance between side lot lines at the required minimum building setback. The width shall be measured as required in the zoning ordinance.

Lot Lines

- a. Lot Lines: Any boundary line of a lot.
- b. Lot Line, Front: Ordinarily the street line except in the circumstance where a lot is bounded by streets on more than one side, in which case all street lines would be regarded as front lot lines.
- c. Lot Line, Rear: Any lot line which is parallel to or within forty-five (45) degrees of being parallel to the street line, except for a lot line that is itself a street line, and except that in the case of a corner lot, the lot line opposite the street line which the front of the principal building faces shall be considered the rear lot line. In the case of a lot having no street frontage or a lot of an odd shape, only the one lot line furthest from any street shall be considered a rear lot line. Where the side property lines of a lot meet in a point, the rear property line shall be assumed to be a line not less than ten (10) feet long, lying within the lot and parallel to the street line.



- d. Lot Line, Side: Any lot line which is not a street line or a rear lot line.
- e. Street Line: See definition under Street Line.

Main stem (Main channel)

Any stream segment or other runoff conveyance facility used as a reach in the Delaware River (North) hydrologic model.

Manning equation (Manning formula)

A method for calculation of velocity of flow (e.g., feet per second) and flow rate (e.g., cubic feet per second) in open channels based upon channel shape, roughness, depth of flow and slope. "Open channels" may include closed conduits so long as the flow is not under pressure.

#### Marginal Access Street

a secondary street parallel to and in close proximity to an expressway, arterial highway, or collector highway and which provides access to abutting properties, protection from through-traffic, and control of intersections with an expressway, arterial highway, or collector highway.

#### Mediation

A voluntary negotiating process in which parties in a dispute mutually select a neutral mediator to assist them in jointly exploring and settling their differences, culminating in a written agreement which the parties themselves create and consider acceptable.

#### Mobile Home / Manufactured Home

A transportable, single-family dwelling intended for permanent occupancy, contained in one unit, or in multiple units designed to be joined into one integral unit capable of again being separated for repeated towing, which arrives at a site complete and ready for occupancy except for minor and incidental unpacking and assembly operations, and constructed so that it may be used without a permanent foundation. Mobile Home includes a manufactured home.

#### Mobile Home Lot

A parcel of land in a mobile home park, improved with the necessary utility connections and other appurtenances necessary for the erection thereon of a single mobile home.

#### Modular Home

A dwelling unit erected on a foundation and made of one or more sections built in a factory. The completed unit must meet the building code which is in effect and is considered to be real property.

#### Monument

A tapered, permanent survey reference point of stone or concrete having a top of 4 inches on each side, a bottom of 6 inches on each side, and a length of at least 24 inches.

#### Multi-family Building

A building providing separate living quarters for two or more families.

#### Municipal Engineer

A professional engineer licensed as such in the Commonwealth of Pennsylvania, duly appointed as the engineer for Milford Township.

#### Municipal Waste

Any garbage, refuse, industrial, lunchroom or office waste, and other material, including solid, liquid, semisolid or contained gaseous material, resulting from operation of residential, municipal, commercial or institutional establishments and from community activities and any sludge not meeting the definition of residual or hazardous waste in the Solid Waste Management Act from a municipal, commercial or institutional water supply treatment plant, wastewater treatment plant or air pollution control facility. The term does not include source-separated recyclable materials.

### Non-point source pollution

Pollution that enters a watery body from diffuse origins in the watershed and does not result from discernible, confined, or discrete conveyances.

### Open channel

A drainage element in which stormwater flows with an open surface. Open channels include, but shall not be limited to, natural and man-made drainageways, swales, streams, ditches, canals, and pipes flowing partly full.

### Open Space

Open space is land used for recreation, resource protection, amenity, or buffers as permitted within the Zoning Ordinance; and is protected by the provisions of this Ordinance and the zoning ordinance to ensure that it remains in such uses. Open space shall not include land occupied by nonrecreational buildings or structures, road or road rights-of-way, parking areas for nonrecreational uses, land reserved for future parking areas for nonrecreational uses, stormwater detention or retention basins, sewage treatment and disposal facilities, or the yards or lots of dwelling units.

Open space shall be used in accordance with the Open Space Designation of the zoning ordinance; open space shall be owned and maintained in accordance with the Ownership of Open Space of the zoning ordinance. Open space recreation uses specified in the Zoning Ordinance may contain impervious surfaces. Such impervious surfaces shall be included in the calculation of the impervious surface ratio.

### Open Space Ratio

The open space ratio is a measure of intensity of land use. It is arrived at by dividing the total amount of open space within the site by the base site area.

### Outfall

The point, location or structure where drainage discharges from a sewer, drain, or other conduit; the conduit leading to the ultimate discharge point.

### Outlet Control Structure

A structure designed to control the volume of stormwater runoff that passes through it during a specified length of time.

### Owner

The owner of record of a parcel of land or equitable owner acting in behalf of the owner of record.

### Parking

Parking is the temporary storage of motor vehicles. For purposes of this ordinance, parking is provided for in the following forms:

- a. On-Street Parking: The parking of motor vehicles on a street, in a line parallel to the moving lanes of a street.

- b. Off-Street Parking: The parking of motor vehicles in an area which has direct access to a street via a driveway or accessway, but which is not located on a street.
- (1) Common Parking Area: An off-street parking lot or garage designed to serve three or more dwelling units or nonresidential uses.
    - (a) Common Parking Lot: An off-street ground level area for the temporary storage of motor vehicles.
    - (b) Common Parking Garage: A deck, building, or structure, or part thereof, used for the temporary storage of motor vehicles. When there is ground level parking, it is covered by a roof. Multiple tiers of parking shall be subject to the building height limitations of the zoning ordinance.
  - (2) Private Parking Area: An off-street parking lot or garage designed for the temporary storage of a small number of motor vehicles. It is for use by one or two dwelling units only and is located in close proximity to the dwelling unit(s) it serves. A private parking area is located on the fee-simple lot which contains the dwelling unit it serves, or is located on the minimum lot area required by the Zoning Ordinance, whether the lot is deeded or for planning purposes only.
    - (a) Private Parking Lot: An open, uncovered area for the temporary storage of motor vehicles, owned and operated by the residents of the nearby dwelling unit(s).
    - (b) Private Parking Garage or Carport: A structure that is accessory to, attached to, or part of a dwelling unit which is used for the temporary storage of motor vehicles and owned and operated by the residents thereof.
    - (c) Community Garage: A structure that is accessory to, attached to, or part of a group of attached dwelling units which is used for the temporary storage of motor vehicles and owned and operated by the residents of those units.
- c. Spillover Parking: An area that is intended to accommodate the occasional need for parking beyond the requirements of the residents of the dwelling unit.

#### Peak Discharge

The maximum rate of flow of storm runoff at a given point and time resulting from a specified storm event.

#### Penn State Runoff Model (calibrated)

The computer-based hydrologic modeling technique adapted to the Delaware River (North) watershed for the Act 167 Plan. The model has been "calibrated" to reflect actual recorded flow values by adjoining key model input parameters.

#### Pipe

A culvert, closed conduit, or similar structure (including appurtenances) that conveys stormwater.

#### Plan, Final

A complete and exact subdivision and/or land development plan, prepared as for official recording to define property rights, proposed streets and other improvements.

#### Plan, Preliminary

A subdivision and/or land development plan demonstrating compliance with zoning provisions showing existing features, proposed street and lot layout, stormwater management facilities and engineering detail sufficient to ensure proper functioning of proposed improvements.

#### Plan, Record

An exact copy of the approved final plan on mylar or linen of standard size, prepared for necessary signatures and recording with the Bucks County Recorder of Deeds.

#### Plan, Sketch

An informal plan, to scale, indicating salient existing features of a tract and its surroundings and the general layout of the proposed subdivision and/or land development for discussion purposes only and not to be presented for approval.

#### Planned Residential Development

Planned residential development shall be considered a special district which may be granted to a developer for the purpose of providing residential and nonresidential uses in a community setting.

#### Plat

The map or plan of a subdivision or land development, whether preliminary or final.

#### Pond

A permanent body of water, naturally occurring or manmade, covering an area of up to two (2) acres. The shoreline of such waterbodies shall be measured from the maximum condition rather than permanent pool, if there is any difference.

#### PMF Probable maximum flood

The flood that may be expected from the most severe combination of critical meteorologic and hydrologic conditions that are reasonably possible in any area. The PMF is derived from the probable maximum precipitation (PMP) as determined on the basis of data obtained from the National Oceanographic and Atmospheric Administration (NOAA).

#### Public Hearing

A formal meeting held pursuant to public notice by the Board of Supervisors or planning agency, intended to inform and obtain public comment prior to taking action in accordance with the Pennsylvania Municipalities Planning Code, as amended.

#### Public Meeting

A forum held pursuant to notice under the Act of July 3, 1986 (P.L. 388, No. 84), known as the "Sunshine Act."

#### Public Notice

Notice published once each week for two successive weeks in a newspaper of general circulation in Milford Township. Such notice shall state the time and place of the hearing and the particular nature of the matter to be considered at the hearing. The first publication shall not be more than thirty (30) days and the second publication shall not be less than seven (7) days from the date of the hearing.

#### Rational Formula

A rainfall-runoff relation used to estimate peak flow.

#### Regulated Activities

Actions or proposed actions which impact upon proper management of stormwater runoff and which are governed by this ordinance as specified in Section 512.

#### Release Rate

The percentage of the predevelopment peak discharge of runoff for a development site to which the postdevelopment peak discharge of runoff must be controlled to protect downstream areas.

#### Report

Any letter, review, memorandum, compilation or similar writing made by any body, board, officer or consultant other than a solicitor to any other body, board, officer or consultant for the purpose of assisting the recipient of such report in the rendering of any decision or determination.

#### Retention Basin

A pond or basin facility designed to retain stormwater runoff so that a permanent pool, wet pond, is established.

#### Return Period

The probable interval in years within which a storm event of a given magnitude can recur. For example, the 25-year return period rainfall would be expected to recur once every 25 years.

#### Reverse Frontage Lot

A lot extending between and having frontage on a major street and a minor street with vehicular access solely from the latter.

#### Review

An examination of a plan to determine compliance with this ordinance, the zoning ordinance, and other pertinent requirements.

#### Right-of-way

- a. Right-of-way: Land set aside for use as a street, alley, or other means of travel.
- b. Existing right-of-way: The legal right-of-way as established by the commonwealth or other appropriate governing authority and currently in existence.
- c. Future right-of-way: The right-of-way deemed necessary to provide adequate width for future street improvements. Future right-of-way widths are designated in the Zoning Ordinance.

### Riser

A vertical pipe extending from the bottom of a pond that is used to control the discharge rate from the pond for a specified design storm.

### Rooftop detention

Temporary ponding and gradual release of stormwater falling directly onto flat roof surfaces by incorporating controlled-flow roof drains into building designs.

### Runoff

The surface water discharge or rate of discharge of a given watershed after a fall of rain or snow that does not enter the soil but runs off the surface of the land.

### Sediment

Solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by wind, water, or gravity.

### Sedimentation

The process by which mineral or organic matter is accumulated or deposited by wind, water, or gravity.

### Sedimentation Basin

A barrier, dam, or retention or detention basin located and designed to retain rock, sand, gravel, silt, or other material transported by water.

### Sediment pollution

The placement, discharge or any other introduction of sediment into the waters of the commonwealth occurring from the failure to design, construct, implement or maintain control measures and control facilities in accordance with the requirement of this ordinance.

### Seepage pit/seepage trench

An area of excavated earth filled with loose stone or similar coarse material, into which surface water is directed for infiltration into the ground.

### Sewage Facility

Any sewer, sewage system, sewage treatment works, or part thereof designed, intended, or constructed for the collection, treatment, or disposal of liquid waste including industrial waste.

### Sewer

- a. Private Sewer: An on-lot sewage disposal system providing for disposal of effluent for one building and its accessory buildings on a single lot.
- b. Public Sewer: Any municipal or privately owned sewer system in which sewage is collected from more than one lot and piped to an approved sewage disposal facility. It may also be referred to as "off-lot" or "off-site" sewer. This shall include capped sewers when installed to municipal specifications.

### Sheet flow

Runoff that flows over the ground surface as a thin, even layer, not concentrated in a channel.

#### Sight Distance

The length of street, measured along the center line, that is continuously visible from any point 3 feet above the center line.

#### Site

A parcel or parcels of land intended to have one or more buildings or intended to be subdivided into two or more lots.

#### Site Area

Any land area within the site as defined in the deed. This area shall be from an actual site survey rather than from a deed description.

#### Site Area, Base

The area of a tract of land remaining after subtracting land which is not contiguous, land previously subdivided, future road rights-of-way and existing utility rights-of-way from the site area. See the zoning ordinance for the specific calculations.

#### Site Area, Net Buildable

A calculated area upon which the density and impervious surface ratio requirements for the applicable district are computed. It can be determined for a particular tract of land by completing the calculations found in the zoning ordinance.

#### Slope

The face of an embankment or cut section; any ground whose surface makes an angle with the plane of the horizon. Slopes are expressed in a percentage based upon vertical distance in feet per 100 feet of horizontal distance.

#### Soil-Cover Complex Method

A method of runoff computation developed by the Natural Resources Conservation Service (formerly known as the U.S. Soil Conservation Service) which is based upon relating soil type and land use/cover to a runoff parameter called a Curve Number.

#### Spillway

A depression in the embankment of a pond or basin which is used to pass peak discharge greater than the maximum design storm controlled by the pond.

#### Steep Slopes

Areas where the average slope exceeds eight (8) percent.

#### Storage indication method

A reservoir routing procedure based on solution of the continuity equation (inflow minus outflow equals the change in storage) with outflow defined as a function of storage volume and depth.

Storm frequency

See "Return Period."

Storm Sewer

A system of pipes or other conduits which carries intercepted surface runoff, street water and other waters, or drainage, but excludes domestic sewage and industrial wastes.

Stormwater

The total amount of precipitation reaching the ground surface.

Stormwater management facility

Any structure, natural or man-made, that, due to its condition, design, or construction, conveys, stores, or otherwise affects stormwater runoff. Typical stormwater management facilities include, but are not limited to, detention and retention basins, open channels, storm sewers, pipes, and infiltration structures.

Stormwater management site plan

The plan prepared by the developer or his representative indicating how stormwater runoff will be managed at the particular site of interest according to this ordinance.

Stream

A watercourse.

Street

A public or private way used, or intended to be used, for passage or travel by motor vehicles and to provide access to abutting properties. Private streets must meet public street standards. Private streets shall be indicated as such on the Record Plan and shall be subject to contract and guarantee requirements outlined in the SALDO. The contract shall indicate the corporation, association, condominium, or other legal entity responsible for the maintenance of the private streets. Streets are further classified by the functions they perform:

- a. Thoroughfares:
  - (1) Expressway—designed for large volumes of high-speed traffic with access limited to grade-separated intersections.
  - (2) Arterial Highways—designed for large volumes of high speed traffic with access to abutting properties restricted.
  - (3) Collector Highways—designed to carry a moderate volume of fast-moving traffic from primary and secondary streets to arterial highways, with access to abutting properties restricted.
- b. Local Streets
  - (1) Primary Streets—designed to carry a moderate volume of traffic, to intercept rural roads and secondary streets, to provide routes to collector highways, and to provide access to abutting properties.
  - (2) Rural Roads and Secondary Streets—designed to provide access to abutting properties and to primary streets.

- (3) Residential Street – designed to provide access to abutting residential properties within a subdivision and may include on-street parking.
- (4) Marginal Access Street— a secondary street parallel to and in close proximity to an expressway, arterial highway, or collector highway and which provides access to abutting properties, protection from through-traffic, and control of intersections with an expressway, arterial highway, or collector highway.

#### Street Line

The dividing line between the street and the lot. The street line shall be the same as a future right-of-way line for a road or street and its location shall be determined by the required right-of-way width.

#### Structure

Any man-made object having an ascertainable stationary location on or in land or water, whether or not affixed to the land. Any unlicensed or uninspected enclosed trailer, truck, or truck body shall be considered to be a structure.

#### Subarea

The smallest drainage unit of a watershed for which stormwater management criteria have been established in the stormwater management plan.

#### Subdivision

The division or redivision of a lot, tract, or parcel of land by any means into two or more lots, tracts, parcels or other divisions of land including changes in existing lot lines for the purpose, whether immediate or future, of lease, transfer of condominium units, partition by the court for distribution to heirs or devisee's transfer of ownership, or building or lot development, provided, however, that the subdivision by lease of land for agricultural purposes into parcels of more than ten acres, not including any new street or easement of access or any new residential dwelling, shall be exempted. For purpose of procedure, all applications for subdivision shall be classified as follows:

- a. Major Subdivision—Any subdivision other than a minor subdivision.
- b. Minor Subdivision—Any subdivision of not more than two lots meeting all of the following:
  - (a) All lots have frontage on an improved public street and no new streets are proposed.
  - (b) There is not created any need for required improvements or easements.

#### Subdivision, Performance Standard

A type of cluster development in which the developer may choose to develop a variety of housing types subject to the regulations of the zoning ordinance. Performance standard subdivisions allow the grouping or clustering of dwelling units, permitting a variety of housing types to encourage better, more flexible designs. The subdivision as a whole must meet prescribed standards for open space, density and impervious surfaces.

#### Swale

A low-lying stretch of land which gathers or carries surface water runoff.

### Time of concentration (Tc)

The time for surface runoff to travel from the hydraulically most distant point of the watershed to a point of interest within the watershed. This time is the combined total of overland flow time and flow time in pipes or channels, if any.

### Trailer

A nonmotorized licensed vehicle designed to be hauled, and used for such purposes as holding materials, goods or objects.

### Tree Dripline

The line marking the outer edges of the branches of the tree.

### Tree Protection Zone (TPZ)

An area that is radial to the trunk of a tree in which no construction activity shall occur. The tree protection zone shall be fifteen (15) feet from the trunk of the tree to be retained, or the distance from the trunk to the dripline, whichever is greater. Where there is a group of trees or woodlands, the tree protection zone shall be the aggregate of the protection zones for the individual trees.

### Utilities

Those services customarily rendered by public utility corporations, municipalities, or municipal authorities, in the nature of electricity, gas, telephone, water, and sewerage, including the appurtenances used in connection with the supplying of such services (buildings, wires, pipes, poles and the like).

### Vendee

Buyer.

### Water Facility

Any water works, water supply works, water distribution system or part thereof designed, intended or constructed to provide or distribute potable water.

a. On-Lot Water Distribution System

A system for supplying and distributing water to a single dwelling or other building from a source located on the same lot.

b. Centralized Water Supply and Distribution System

A system for supplying and distributing water from a common source to two or more dwellings and/or other buildings serving a single land development, subdivision or neighborhood.

c. Public Water Supply System

A public water system is any municipal water system or any private franchised system and service area.

### Water Survey

An inventory of the source, quantity, yield, and use of groundwater and surface water resources within Milford Township.

### Watercourse

Any channel of conveyance of surface water having defined bed and banks, whether natural or artificial, with perennial or intermittent flow.

### Wet Pond

See Retention Basin.

### Wetlands

Those areas that are inundated and saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs and similar areas.

### Wetland Margin

The transitional area between the wetland boundary and the upland environment measured from the outer limit of the wetland vegetation to an upland boundary.

### Woodlands

Areas composed of one-quarter (1/4) acres or more of wooded land where the largest trees measure at least six (6) inches dbh (diameter at breast height) or four and one-half feet above the ground. Woodlands are also a grove of trees forming one canopy where ten (10) or more trees measure at least ten (10) inches dbh. The woodland shall be measured from the dripline of the outer trees.

### Yard

- a. Yard: An open space unobstructed from the ground up except for permitted projections and plantings, on the same lot with a structure, extending along a lot line or ultimate right of way and inward to the structure. The size of a required yard shall be measured as the shortest distance between the structure and a lot line or ultimate right of way.
- b. Yard, Front: A yard between a structure and a ultimate right of way and extending the entire length of the ultimate right of way. In the case of a corner lot, the yards extending along all streets are front yards. In the case of a lot other than a corner lot that fronts on more than one street, the yards extending along all streets are front yards.
- c. Yard, Rear: A yard between a structure and a rear lot line and extending the entire length of the rear lot line.
- d. Yard, Side: A yard between a structure and a side lot line, extending from the front yard to the rear yard. In the case of a lot having no street frontage or a lot of odd shape, any yard that is not a front yard or a rear yard shall be considered a side yard.

**ARTICLE IV. PROCEDURE FOR SUBDIVISION AND LAND DEVELOPMENT**

Section 400      General

- a. In order to discharge the duties imposed by law, Milford Township has adopted the following procedures that shall be observed by all applicants, developers, and their agents. Items 1-4 and 6-10 below are required under this Ordinance. Item 5 (Sketch Plan Submission and Review) is optional but is very strongly encouraged as an important, valuable and highly recommended step that will speed the review process and may result in lower costs for the project. These steps shall be followed sequentially, and may be combined only at the discretion of Milford Township:
  - 1. Pre-Application Meeting
  - 2. Existing Resources and Site Analysis Plan, as described in Section 402.b of this Ordinance.
  - 3. Site Inspection by Planning Commission and Applicant
  - 4. Pre-Sketch Plan Conference
  - 5. Sketch Plan Submission and Review
  - 6. Preliminary Plan Submission, Determination of Completeness, Review, and Approval (In all zoning districts, the Four-Step Design Process described in Section 402.d of this Ordinance must be followed.)
  - 7. Final Plan Preparation: Incorporation of all preliminary Plan Approval Conditions, Documentation of all other agency approvals, as applicable.
  - 8. Final Plan Submission: Determination of Completeness, Review, and Approval
  - 9. Signatures of members of the Township Planning Commission, the Township Engineer, the designee of the Bucks County Planning Commission, and the Board of Supervisors
  - 10. Recording of approved final Plan with Bucks County Recorder of Deeds
- b. The review process for preliminary and final plans required by Milford Township shall take no more than ninety (90) days following the date of the regular meeting of the planning commission next following the date a completed application is filed, provided that should the said next regular meeting occur more than thirty (30) days following the filing of the application, the said ninety (90) day period shall be measured from the thirtieth day following the day the application has been filed. If the applicant agrees in writing to an extension of time, the ninety (90) day period may be extended.
- c. The presentation of a sketch plan, a preliminary plan, and final plan shall each be considered a separate submission and the maximum ninety-day review period may be required for each such plan.
- d. The submission of revised preliminary or final plans shall constitute a new and separate submission. The review process for revised plans by Milford Township shall take no more than ninety (90) days following the date of the regular meeting of the planning commission next following the date the application is filed,

provided that should said next regular meeting occur more than thirty (30) days following the filing of the application, the said ninety (90) day period shall be measured from the thirtieth day following the day the application has been filed. If the applicant agrees in writing to an extension of time, the ninety (90) day period may be extended. A revised plan must be accompanied by a complete application form, all required information and appropriate fees. With a revised plan, the applicant or their authorized representative (agent) must submit a written withdrawal of the previously submitted plan.

- e. The separate stages of approval may require the submission of preliminary plans and final plans. The tables below indicate the required plan for the different types of submission.

<b>Plan</b>	<b>See Section</b>	<b>Minor Subdivision</b>	<b>Major Subdivision</b>	<b>Land Development</b>	<b>Performance Standard Subdivision</b>
Sketch	401-402	Not required	Recommended	Recommended	Recommended
Preliminary	403-405	Not required	Required	Required	Required
Final	406-413	Required	Required	Required	Required

<b>Plan</b>	<b>See Section</b>	<b>Planned Residential Development</b>
Feasibility	416-417	Recommended
Tentative	418-419	Required
Final	420-421	Required

- f. The owner of the parcel of land to be subdivided or developed shall submit a written statement granting the Board of Supervisors, its authorized agents and representatives, the Planning Commission, and the representatives of the County and municipal departments and agencies having responsibility for review and/or approval under this ordinance the right to enter the parcel of land for the purpose of inspection and enforcement of the requirements, terms, and conditions imposed herein.
- g. All plans and applications shall be submitted to the Secretary of the Planning Commission at the regularly scheduled meeting of the Planning Commission. Milford Township shall have sole responsibility to forward the plans to other reviewing agencies. Plans are not to be delivered to any reviewing agency by the owner, developer or his agent unless specifically specified in this ordinance.

**SKETCH PLAN, MAJOR SUBDIVISION, LAND DEVELOPMENT, OR PERFORMANCE STANDARD SUBDIVISION**

Section 401 Purpose

The purpose of the Sketch Plan, which is an optional but strongly encouraged submission, is to afford the applicant the opportunity to consult early and informally with the Planning Commission and the Township before preparation of the preliminary plan and formal application. To encourage Sketch Plan submissions, the Township agrees to not apply a change of the Zoning Ordinance that would adversely affect the density allowed on a property that has submitted a sketch plan for review. This protection shall apply for a period of 180 days from the date of acceptance of the plan for review and shall not be available for a period of one year for the same property from the end of the 180 day protection period.

Section 402 Procedure

a. Pre-Application Meeting

A pre-application meeting is required between the applicant, the site designer, and the Planning Commission (and/or its planning consultant), to introduce the applicant to Milford Township's zoning and subdivision regulations and procedures, to discuss the applicant's objectives, and to schedule site inspections, meetings and plan submissions as described below. Applicants are also encouraged to present the Existing Resources and Site Analysis Plan at this meeting.

b. Existing Resources and Site Analysis Plan

Applicants shall submit an Existing Resources and Site Analysis Plan, prepared in accordance with the requirements contained in Section 701.e. The purpose of this key submission is to familiarize officials with existing conditions on the applicant's tract and within its immediate vicinity, and to provide a complete and factual reference for them in making a site inspection. This map shall be provided prior to or at the site inspection, and shall form the basis for the development design as shown on the Sketch Plan (or on the preliminary Plan, if the optional Sketch Plan is not submitted).

c. Site Inspection

After preparing the Existing Resources and Site Analysis Plan, applicants shall arrange for a site inspection of the property by the Planning Commission and/or other municipal officials, and shall distribute copies of said site analysis plan prior to that on-site meeting. Applicants, their site designers, and the landowner are encouraged to accompany the Planning Commission. The purpose of the visit is to familiarize local officials with the property's existing conditions and special features, to identify potential site design issues, and to provide an informal opportunity to discuss site design concepts, including the general layout of designated required open space (if applicable), and potential locations for proposed buildings and street alignments. Comments made by municipal officials or their staff and consultants shall be interpreted as being only advisory. It shall be understood by all parties that no formal recommendations can be offered, and no official decisions can be made, at the site inspection.

d. Pre-Sketch Conference

Following the site inspection and prior to the submission of a sketch plan, the applicant shall meet with the Planning Commission and/or other municipal officials to discuss the findings of the site inspection and to develop a mutual understanding on the general approach for subdividing and/or developing the tract in accordance with the four-step design procedure described in Sections 701.f and 522.b.2 of this ordinance, where applicable. At the discretion of Milford Township, this conference may be combined with the site inspection.

e. Sketch Plan Submission and Review

1. Applicant prepares sketch plan and the application is signed by the owner. If the owner is an equitable owner, evidence of authority to file must be supplied (e.g., agreement of sale, power of attorney).
2. Applicant submits copies of the sketch plan and application to the municipal Planning Commission. The number of copies to be submitted will be as stated by Resolution of the Board of Supervisors.

3. The Municipal Planning Commission Secretary or his/her designated representative checks submission against the plan requirements (Section 700) for completeness and, (1) if submission is incomplete, immediately returns submission and indicates deficiencies, or (2) if submission is complete, accepts sketch plan and application.
  
4. Copies of the sketch plan and application shall be distributed by Milford Township to:
  - Municipal Planning Commission
  - Bucks County Planning Commission
  - Quakertown Area Planning Committee, when appropriate
  - Municipal engineer, when appropriate
  - Other agencies, as appropriate
  
5. Within ninety (90) days following the starting date of the review process as set forth in Section 400(b) and (d), the Planning Commission shall:
  - (a) Review the applicant's submission.
  - (b) Listen to the applicant's presentation, if requested.
  - (c) Evaluate the applicant's submission, presentation, County Planning Commission's report, and other reports as received.
  - (d) The Planning Commission shall review the Sketch Plan in accordance with the criteria contained in this ordinance and with other applicable ordinances of Milford Township. Their review shall informally advise the applicant of the extent to which the proposed subdivision or land development conforms to the relevant standards of this Ordinance, and may suggest possible plan modifications that would increase its degree of conformance. Their review shall include but is not limited to:
    - i. the location of all areas proposed for land disturbance (streets, foundations, yards, septic disposal systems, storm water management areas, etc.) with respect to notable features of natural or cultural significance as identified on the applicant's Existing Resources and Site Analysis Plan and on the municipal Map of Primary and Secondary Conservation Lands;
    - ii. the potential for street connections with existing streets, other proposed streets, or potential developments on adjoining parcels;
    - iii. the location of proposed access points along the existing road network;
    - iv. the proposed building density and impervious coverage;

- v. the compatibility of the proposal with respect to the objectives and policy recommendations of the Comprehensive Plan, Sewage Facilities Plan (Act 537), Open Space Plan, Park and Recreation Plan, and other municipal and regional plans as applicable; and
  - vi. Consistency with the zoning ordinance.
- (e) The Planning Commission shall communicate its comments and recommendations to the Board of Supervisors and the applicant personally or by mail to applicant's last known address.
  - (f) The Board of Supervisors shall review the comments of the Planning Commission and may request that the applicant appear before the Board to discuss the merits of the plan. The Board shall communicate its comments and recommendations to the applicant personally or by mail to applicant's last known address.

**PRELIMINARY PLAN MAJOR SUBDIVISION, LAND DEVELOPMENT OR PERFORMANCE STANDARD SUBDIVISION**

Section 403 Purpose

The Preliminary Plan is an engineered scale drawing demonstrating compliance with zoning provisions, showing existing features, proposed street and lot layout, stormwater management facilities and engineering detail sufficient to ensure proper functioning of proposed improvements.

Section 404 General

A preliminary plan shall be submitted conforming to the changes recommended during the sketch plan procedure. The preliminary plan and all information and procedures relating thereto shall in all respects be in compliance with the provisions of these regulations.

If an applicant opts not to submit a sketch plan, the Preliminary Plan shall include all information required for sketch plans listed in sections 402 and 700, specifically including the pre-application meeting, Existing Resources and Site Analysis Plan, and Site Inspection.

NOTE: Applicants that choose not to submit a Sketch Plan and then decide to submit a preliminary plan with engineering detail, do so at their own risk of unnecessarily spending money on engineering work that might need to be re-done to meet the Open Space Delineation Standards contained herein in Article V and in the Performance Standards contained in the Zoning Ordinance, Sewage Facilities Plan (537), Open Space Plan, Park and Recreation Plan, and other municipal plans or ordinances as applicable.

Section 405 Procedure

- a. Applicant prepares preliminary plan and complete application. Applicants that choose not to submit a Sketch Plan shall complete the procedures in Section 402a. – d. above.
- b. Applicant submits copies of the preliminary plan and application to the municipal Planning Commission. The number of copies to be submitted will be as stated by Resolution of the Board of Supervisors.
- c. No preliminary plan shall be accepted unless the applicant includes required escrow (including MTWA and MTASA, when appropriate) and review fees in

accordance with the municipal fee schedule, and fees for the Bucks County Planning Commission and Bucks County Conservation District reviews. The Municipal Planning Commission Secretary or his/her designated representative shall render a proper receipt to the applicant for municipal fees.

- d. The Municipal Planning Commission Secretary or his/her designated representative shall have five (5) business days from the date the application and plans are received to determine whether the submission is complete. If the submission is incomplete, the submission shall be returned to applicant within the aforesaid five (5) day period together with a written statement detailing the deficiencies (the "Deficiency Report") and what must be submitted in order for the submission to be complete. An administrative fee of \$50.00 shall be deducted from the escrow funds submitted with the application. If the submission is complete, the ninety (90) day review period shall be calculated from the date of the regular meeting of the planning commission following the date the application is received, provided that should the next regular meeting occur more than 30 days following the receipt of the application the review period shall be calculated from the 30<sup>th</sup> day following the day the application is received. If the submission is incomplete, the plans shall be deemed denied for the reasons stated in the Deficiency Report. The review period shall be calculated from the date a complete submission is received.
- e. Copies of the preliminary plan and application shall be distributed to:
  - Municipal Planning Commission
  - Board of Supervisors
  - Bucks County Planning Commission
  - Municipal Engineer, where appropriate
  - Municipal Solicitor, where appropriate
  - Bucks County Conservation District
  - Quakertown Area Planning Committee, where appropriate
- f. Copies of the plans and application materials will be delivered by the Township to the Bucks County Conservation District and when applicable, the Milford Trumbauersville Area Sewer Authority and the Milford Township Water Authority, the Milford Township Fire Marshall and other agencies as required.
- g. Upon receipt of the plans, the Municipal Engineer shall:
  - 1. Review the applicant's submission; and
  - 2. Prepare a report to the Planning Commission and the Board of Supervisors.
  - 3. The township may undertake its own wetland delineation at the applicant's expense if any of the following site-specific criteria are applicable:
    - a. Greater than one acre of wetlands are on-site;
    - b. Wetlands on-site are associated with a wetland system of ten or more contiguous acres.
    - c. On-site wetlands are exceptional value as defined in 25 Pa Code 105.17; On-site wetlands are adjacent to park, wildlife refuge or

sanctuary, or other open space area managed for resource preservation purposes

- h. Within ninety (90) days following the starting date of the review process as set forth in Section 400(b) and (d), the Planning Commission shall:
  - 1. Review the applicant's submission;
  - 2. Listen to the applicant's presentation, if requested;
  - 3. Evaluate the applicant's submission and presentation, and reports by the County Planning Commission, the Municipal Engineer, the Bucks County Conservation District, the Bucks County Health Department, the Pennsylvania Department of Environmental Protection, the Quakertown Area Planning Committee, and other agencies, if any;
  - 4. Determine whether the preliminary plan meets the objectives of the Comprehensive Plan and requirements of this and other municipal ordinances;
  - 5. Render its recommendation to the Board of Supervisors and applicant in writing, which would specify any recommended conditions for approval, identify any defects found in the application, and describe any requirements which have not been met. The provisions of any statute or ordinance relied upon shall be cited.
  
- i. Within ninety (90) days following the starting date of the review process as set forth in Section 400(b) and (d), the Board of Supervisors shall:
  - 1. Review the applicant's submission;
  - 2. Listen to the applicant's presentation, if requested;
  - 3. Evaluate the applicant's submission and presentation, and reports by the Municipal Planning Commission, the County Planning Commission, the Municipal Engineer, the Bucks County Conservation District, the Bucks County Health Department, the Quakertown Area Planning Committee, and other agencies, if any;
  - 4. Decide whether the preliminary plan meets the objectives of the Comprehensive Plan and requirements of this and other ordinances;
  - 5. Render its decision in writing which shall be communicated to the applicant personally or mailed to him at his last known address not later than fifteen (15) days following the decision. When the application is not approved in terms as filed, the decision shall specify the defects found in the application, describe requirements which have not been met and shall, in each case, cite the provisions of the statute or ordinance relied upon. When the application is approved with conditions, failure to appeal the conditions imposed by the Board of Supervisors within thirty (30) days of the date of approval shall constitute acceptance of the conditions. Non-acceptance and/or non-compliance with the conditions set forth in the approval communication shall void the Plan approval, and any waivers or modifications approved by the Board of Supervisors as stated in the approval shall be deemed denied and the Plan is automatically denied for non-compliance with the provisions of this Ordinance as recited in the approval communication and in the Township Engineer's most recent review.

- j. Approval of the preliminary plan shall not constitute approval of the final plan or authorize the sale of lots or construction of buildings. If a final plan is not submitted within a one-year period from the date of the preliminary approval, the preliminary approval shall lapse and become void.

**FINAL PLAN MAJOR SUBDIVISION, LAND DEVELOPMENT OR PERFORMANCE STANDARD SUBDIVISION**

Section 406 Purpose

The purpose of the final plan is to require the applicant to demonstrate compliance with the conditions of preliminary plan approval before plans for all subdivisions and land developments are recorded as required by Section 414 of this ordinance.

Section 407 General

A final plan shall be submitted conforming with the conditions of preliminary plan approval granted during the preliminary plan procedure. The final plan and all information and procedures relating thereto shall in all respects be in compliance with the provisions of these regulations.

Section 408 Procedure

- a. Applicant prepares the final plan and application.
- b. Applicant submits copies of the final plan and application to the municipal Planning Commission and any required fees and escrow. The number of copies submitted shall be as stated by Resolution of the Board of Supervisors. No final plan shall be accepted unless the applicant includes any required review and escrow fees. The Municipal Planning Commission Secretary or his/her designated representative shall render a proper receipt to the applicant for municipal fees.
- c. The Municipal Planning Commission Secretary or his/her designated representative shall have five (5) business days from the date the application and plans are received to determine whether the submission is complete. If the submission is incomplete, the submission shall be returned to applicant within the aforesaid five (5) day period together with a written statement detailing the deficiencies (the "Deficiency Report") and what must be submitted in order for the submission to be complete. An administrative fee of \$50.00 shall be deducted from the escrow funds submitted with the application. If the submission is complete, the ninety (90) day review period shall be calculated from the date of the regular meeting of the planning commission following the date the application is received, provided that should the next regular meeting occur more than 30 days following the receipt of the application the review period shall be calculated from the 30<sup>th</sup> day following the day the application is received. If the submission is incomplete, the plans shall be deemed denied for the reasons stated in the Deficiency Report. The review period shall be calculated from the date a complete submission is received.
- d. Copies of the final plan and application shall be distributed immediately to:
  - Municipal Planning Commission
  - Board of Supervisors
  - Municipal Engineer

- Bucks County Planning Commission
- e. Copies of the plans and application materials will be delivered by the Township to the Bucks County Conservation District and when applicable, the Milford Township Water Authority and the Milford Trumbauersville Area Sewer Authority, the Milford Township Fire Marshall, and other agencies as required.
- f. Upon receipt of the plans the Planning Commission shall:
  1. Review all applicable reports.
  2. Re-evaluate the applicant's submission.
  3. Determine whether the final plan meets the conditions of preliminary plan approval and any applicable requirements of this ordinance.
  4. Recommend plan revision if the plan does not meet any of the conditions of preliminary plan approval and/or the requirements of this ordinance, Comprehensive Plan, Act 537 Plan and other municipal plans and ordinances.
  5. Render its recommendation to the Board of Supervisors and applicant in writing, which would specify any recommended conditions of approval, identify any defects found in the application, and describe any conditions of preliminary plan approval and/or any applicable requirement of this ordinance which have not been met. The provisions of any statute or ordinance relied upon shall be cited.
- g. The plan shall be forwarded to the Board of Supervisors for its final action. Following the receipt of all reports and all required contracts specified in Section 601 of this ordinance, and within ninety (90) days following the starting date of the review process as set forth in Section 400(b) and (d), the Board of Supervisors shall render a decision. The Board of Supervisors shall mail a report of its decision to the applicant at his last known address within fifteen (15) days of its action. When the application is not approved in terms as filed, the decision shall specify the defects found and describe the requirements which have not been met and shall in each case cite the provisions of the statute or ordinance that have been relied upon. The applicant shall be notified, where applicable, that approval of the application shall be automatically rescinded upon the applicant's failure to accept conditions of approval in writing within thirty (30) days of the approval.
- h. If approved by the Board of Supervisors, the number of copies as stated in the latest Township Resolution shall be submitted for the required signatures as specified in Section 704.

Section 409 Appeal

In any case where a final plan is disapproved, any person aggrieved thereby may appeal therefrom in accordance with the provisions of the Pennsylvania Municipalities Planning Code.

**MINOR SUBDIVISION PLAN**

Section 410 Purpose

In the case of minor subdivisions, as defined in Section 301, it is the purpose of this section to provide a simplified procedure for their review.

Section 411      General

In the event that the proposed subdivision shall involve a change in the location of any street, sanitary or storm sewer, water main, culvert, and other municipal improvement, then the provisions of this Section on minor subdivisions shall not be applicable and the owner shall be required to comply with the requirements of Sections 405 through 409.

Section 412      Procedure

- a. Applicant prepares minor subdivision plan and application.
- b. Applicant submits copies of the subdivision plan and application to the municipal planning commission. The number of copies to be submitted shall be as stated by Resolution of the Board of Supervisors.
- c. No plan shall be received unless the applicant includes required escrow and review fees in accordance with the municipal fee schedule, and a fee for the Bucks County Planning Commission review. Milford Township shall render a proper receipt to the applicant for said fees.
- d. The Municipal Planning Commission Secretary or his/her designated representative shall have five (5) business days from the date the application and plans are received to determine whether the submission is complete. If the submission is incomplete, the submission shall be returned to applicant within the aforesaid five (5) day period together with a written statement detailing the deficiencies (the "Deficiency Report") and what must be submitted in order for the submission to be complete. An administrative fee of \$50.00 shall be deducted from the escrow funds submitted with the application. If the submission is complete, the ninety (90) day review period shall be calculated from the date of the regular meeting of the planning commission following the date the application is received, provided that should the next regular meeting occur more than 30 days following the receipt of the application the review period shall be calculated from the 30<sup>th</sup> day following the day the application is received. If the submission is incomplete, the plans shall be deemed denied for the reasons stated in the Deficiency Report. The review period shall be calculated from the date a complete submission is received.
- e. Copies of the minor subdivision plan and application shall be distributed to:
  - Municipal Planning Commission
  - Board of Supervisors
  - Bucks County Planning Commission
  - Municipal Engineer
  - Quakertown Area Planning Committee, where appropriate
  - Other agencies, as required
- f. The applicant shall submit a Planning Module for Land Development to the Bucks County Department of Health and/or the Pennsylvania Department of Environmental Protection (PaDEP), as required by PaDEP.
- g. The Planning Commission shall:
  1. Review the applicant's submission.

2. Listen to the applicant's presentation, if requested.
  3. Evaluate the applicant's submission, presentation, discussion with the applicant, and reports by the county Planning Commission, the Municipal Engineer, the County Conservation District, and the Bucks County Health Department, the Quakertown Area Planning Committee, and other agencies, if any.
  4. Determine whether the plan meets the objectives of the Comprehensive Plan and requirements of this and other applicable ordinances.
  5. Render its recommendation to the Board of Supervisors in writing, specifying any recommended conditions for approval, identifying any defects found in the application, and describing any requirements that have not been met. The provisions of any statute or ordinance relied upon shall be cited.
- h. The plan shall be forwarded to the Board of Supervisors for its final action. Following the receipt of all reports and all required contracts specified in Section 601 of this ordinance, and within ninety (90) days following the starting date of the review process as set forth in Section 400(b) and (d), the Board of Supervisors shall render a decision and communicate it to the applicant at his last known address within fifteen (15) days of its action. When the application is not approved in terms as filed, the decision shall specify the defects found and describe the requirements which have not been met and shall in each case cite the provisions of the ordinance that have been relied upon.
- i. If approved by the Board of Supervisors, the number of copies as stated in the latest Township Resolution shall be submitted for the required signatures in Section 705.

Section 413 Appeal

See Section 409 for appeal process.

**RECORDING OF FINAL PLAN**

Section 414 Recording Final Plan

Within ninety (90) days of the date of final plan approval, or the date the approval of the Board of Supervisors is noted on the plan, whichever is later, the approved plan shall be recorded in the Bucks County Recorder of Deeds Office. The Township Solicitor shall notify the applicant and the Board of Supervisors in writing, of the date of such recording and the plan book and page wherein such subdivision or land development plan is recorded.

Section 415 Effect of Recording

- a. After a subdivision or land development plan has been duly recorded, the streets, parks, and other public improvements shown thereon shall be considered to be a part of any official map which is adopted by Milford Township in accordance with Article IV of the Pennsylvania Municipalities Planning Code.
- b. Streets, parks, and other public improvements shown on a subdivision or land development plan to be recorded, may be offered for dedication to Milford Township by formal notation thereof on the plan; or the owner may note on the plan that such improvements have not been offered for dedication to Milford Township.

- c. Every street, park, or other improvement shown on a subdivision or land development plan that is recorded, as provided herein, shall be deemed to be a private street, park, or improvement until such time as the same has been offered for dedication to Milford Township, and accepted by resolution, and filed in the office of the Bucks County Recorder of Deeds, or until it has been condemned for use as a public street, park, or other improvement.

## **PROCEDURE FOR PLANNED RESIDENTIAL DEVELOPMENT**

### **FEASIBILITY REVIEW**

#### Section 416 Purpose

The feasibility review is recommended to provide a means of evaluating potential development sites for planned residential developments (PRD) and to determine certain planning restraints, natural limitations, man-made capacities, or other factors which operate to limit the development potential of each particular site proposed for a PRD.

#### Section 417 Procedure

- a. Applicant submits the number of copies (as stated in Board of Supervisors resolution) of the maps and plans containing the Natural Site Determinants, Capacity Determinants and General Site Analysis.
- b. The Municipal Planning Commission Secretary or his/her designated representative shall have five (5) business days from the date the application and plans are received to determine whether the submission is complete. If the submission is incomplete, the submission shall be returned to applicant within the aforesaid five (5) day period together with a written statement detailing the deficiencies (the "Deficiency Report") and what must be submitted in order for the submission to be complete. An administrative fee of \$50.00 shall be deducted from the escrow funds submitted with the application. If the submission is complete, the ninety (90) day review period shall be calculated from the date of the regular meeting of the planning commission following the date the application is received, provided that should the next regular meeting occur more than 30 days following the receipt of the application the review period shall be calculated from the 30<sup>th</sup> day following the day the application is received. If the submission is incomplete, the plans shall be deemed denied for the reasons stated in the Deficiency Report. The review period shall be calculated from the date a complete submission is received.
- c. The following will be notified that an application has been made for a feasibility review and will be reviewed by the Municipal Planning Commission. Copies of all plans will be distributed to the following:
  - Municipal Planning Commission
  - Board of Supervisors
  - Municipal Engineer, where appropriate
  - Bucks County Planning Commission
  - Quakertown Area Planning Committee, where appropriate
  - Other agencies as directed by the municipal Planning Commission

- d. The Bucks County Planning Commission will forward recommendations to the municipal Planning Commission and the Board of Supervisors within thirty (30) days from their receipt.
- e. Upon receipt of the recommendations of the Bucks County Planning Commission, the Quakertown Area Planning Committee, Municipal Engineer, the Bucks County Conservation District, and the Bucks County Health Department, if any, the municipal planning commission will review the plan and forward its recommendations to the Board of Supervisors and applicant.
- f. Upon receipt of the recommendations from its Planning Commission, the Board of Supervisors shall respond in writing to the applicant, indicating general approval or disapproval of the proposal. The Board of Supervisors shall forward the written response within ninety (90) days of the date that the feasibility review application was received. The Board of Supervisors shall include in the response, recommendations for certain intensities in use, for improvements or dedications that the Board of Supervisors may require.
- g. General disapproval of a proposed PRD during a feasibility review shall not preempt a developer from applying for tentative approval as specified here and in the Zoning Ordinance.

#### **TENTATIVE APPROVAL**

##### Section 418 Purpose

The application for tentative approval is provided to allow for an expeditious method for processing a development plan for a planned residential development under the terms of the ordinance adopted herein, and to avoid the delay and uncertainty which would arise if it were necessary to secure approval of a municipality of local procedures of a plat of subdivision as well as a change in zoning regulations otherwise applicable to the property.

##### Section 419 Procedure

- a. The applicant submits the number of copies as stated in Board of Supervisors Resolution of all plans, drawings, documents and completed application forms to the municipal planning commission and fees according to the municipal and county fee schedules.
- b. No plan shall be received unless the applicant includes the required escrow (including MTASA and MTWA, when appropriate) and review fees in accordance with the municipal fee schedule, and fees for the Bucks County Planning Commission and Bucks County Conservation District reviews. Milford Township shall render a proper receipt to the applicant for said fees.
- c. The Municipal Planning Commission Secretary or his/her designated representative shall have five (5) business days from the date the application and plans are received to determine whether the submission is complete. If the submission is incomplete, the submission shall be returned to applicant within the aforesaid five (5) day period together with a written statement detailing the deficiencies (the "Deficiency Report") and what must be submitted in order for the submission to be complete. An administrative fee of \$50.00 shall be deducted from the escrow funds submitted with the application. If the submission is complete, the ninety (90) day review period shall be calculated from the date of the regular meeting of the planning commission following the date the application is received, provided that should the next regular meeting occur more than 30 days following the receipt of the application the review period shall be calculated from the 30<sup>th</sup> day following the day the application is received. If the

submission is incomplete, the plans shall be deemed denied for the reasons stated in the Deficiency Report. The review period shall be calculated from the date a complete submission is received.

- d. Copies of the tentative plan and application shall be immediately distributed to the following with a request for tentative plan review and comment to be received within thirty (30) days:
- Municipal Planning Commission
  - Board of Supervisors
  - Municipal Engineer, where appropriate
  - Bucks County Planning Commission
  - Quakertown Area Planning Committee, where appropriate
  - Bucks County Conservation District
  - Other agencies, as required
- e. The applicant shall submit a Planning Module for Land Development to the Bucks County Department of Health and/or the Pennsylvania Department of Environmental Protection (PaDEP), as required by the PaDEP.
- f. Upon receipt of the recommendations, if any, of the Bucks County Planning Commission, Quakertown Area Planning Committee, Department of Transportation, Bucks County Conservation District, Pennsylvania Department of Transportation, the Municipal Engineer, the Bucks County Health Department, and the Pennsylvania Department of Environmental Protection, and other agencies, if any, the Planning Commission shall review and comment on the plans and forward its recommendations to the Board of Supervisors.
- g. The Board of Supervisors shall hold a public hearing and render a decision in accordance with the Zoning Ordinance.

## **FINAL APPROVAL**

### Section 420 Purpose

The purpose of final review is to ensure that all requirements and conditions are satisfied before plans are recorded as required by Section 414 of this ordinance.

### Section 421 Procedure

- a. Applicant submits number of copies as stated in Board of Supervisors resolution of the final plans, documents and fees to the zoning officer or his/her designated representative.
- b. The Board of Supervisors shall receive and review the plans and render a decision in accordance with requirement of the Zoning Ordinance.

## ARTICLE V. DESIGN STANDARDS

### Section 500 Applications

- a. The following subdivision and land development principles, standards and requirements will be applied by the Planning Commission and Board of Supervisors in evaluating plans for proposed subdivisions and land developments.
- b. The standards and requirements outlined herein shall be considered minimum standards and requirements for the promotion of the public health, safety, morals, and general welfare.
- c. Whenever municipal or other applicable regulations impose more restrictive standards and requirements than those outlined herein, such other regulations shall control.

### Section 501 General Standards

- a. All portions of a tract being subdivided or developed shall be taken up in lots, streets, open spaces, or other proposed uses so that remnants and landlocked areas shall not be created.
- b. In general, lot lines shall follow municipal and county boundary lines rather than cross them.
- c. Wherever possible, developers shall preserve scenic points, historic spots and other community assets and landmarks. The Environmental Performance Standards of the Zoning Ordinance shall be met.
- d. Subdivisions and land developments shall be laid out so as to avoid the necessity for excessive cut or fill.
- e. Land subject to flooding or other hazards to life, health, or property, and land deemed to be topographically unsuitable, shall not be platted for any use that may increase danger to health, life, or property, nor aggravate erosion or flood hazard. All such hazards must be shown on the subdivision or land development plans.
- f. Where flooding is known to have occurred within the area shown on the plan, such area shall be clearly marked "subject to periodic flooding" and no building or streets shall be permitted in this area. Floodways and flood plains are subject to provisions of the Zoning Ordinance, and are defined in Section 301 of this ordinance.
- g. Where the sketch or preliminary plan includes a portion of a tract which could be further subdivided or developed under the standards of the zoning ordinance, the applicant shall submit a prospective street and lot layout for the entire tract. The environmental features listed in the "Environmental Performance Standards" of the zoning ordinance shall be identified and mapped for the entire tract.

### Section 502 Community Facilities

- a. Areas provided or reserved for such community facilities shall be adequate to provide for building sites, landscaping, and off-street parking as appropriate to the use proposed.

- b. The following standards shall apply to the provisions of recreation space and open space:
  - 1) Areas set aside for recreational purposes, such as playgrounds or playfields, shall be of adequate size and configuration to accommodate the intended use. They shall be located to serve all residents of the development, and in some instances, other residents from elsewhere in the township. Access shall be provided from a public street.
  - 2) Open space shall be provided as required by the Zoning Ordinance.
  - 3) Open space and recreation areas shall be usable open space rather than residual land remaining after the lot, structure and street layout in the subdivision or land development. See section 522.c.2.
  - 4) Open Space in residential developments shall conform to the standards in Section 522 of this ordinance.
- c. A minor subdivision shall be exempt from the Open Space requirements of this Ordinance and the Zoning Ordinance under the following circumstances:
  - (1) The tract of land proposed for minor subdivision exists as a single and separate tax parcel as of October 31, 2000.
  - (2) Only one minor subdivision of a tax parcel in existence as of October 31, 2000 shall be entitled to this exemption.
  - (3) Open Space shall be provided as part of any subsequent subdivision of either of the lots created by an exemption subdivision, based on open space calculations performed on the entire tract as it existed on October 31, 2000.
  - (4) With the approval of the Board of Supervisors, the Applicant for an exempt minor subdivision may place the obligation of providing open space in the event of further subdivision on only one of the lots created by the exempt minor subdivision.
  - (5) The Township shall maintain a record of exempt minor subdivisions.
  - (6) It shall be a requirement of approval of an exempt minor subdivision that the applicant provide notification, in a form acceptable to the Township Solicitor (e.g., deed restriction) to subsequent owners of the subdivided lots of the requirement to provide open space in accordance with the provisions of this Ordinance as to any subsequent subdivision of either of the subdivided lots. The means of notification shall be subject to approval by the Board of Supervisors.
- d. Cluster mailboxes are required at locations approved by the Board of Supervisors.

Section 503 Streets—General

- a. Proposed streets shall conform in all respects to the municipal plan, or to other street plans or parts thereof as have been officially prepared and adopted by Milford Township.
- b. Proposed streets shall further conform to such county and state street and highway plans as have been prepared, adopted and/or filed as prescribed by law and to the requirements of a comprehensive plan.

- c. Streets shall be logically related to topography so as to produce reasonable grades, satisfactory drainage, and suitable building sites.
- d. Residential streets should be so laid out as to discourage through traffic; however, the arrangement of streets should provide for continuation of existing or platted streets and for proper access to adjoining undeveloped tracts suitable for future subdivision or development.
- e. If lots resulting from original subdivision are large enough to permit resubdivision, or if a portion of the tract is not subdivided, adequate street rights-of way to permit further subdivision shall be provided as necessary.
- f. Dead-end streets shall be prohibited, except as stubs to permit future street extension into adjoining tracts, or when designed as cul-de-sacs.
- g. Stub streets greater in length than one lot depth, shall be provided with a temporary turnaround to the standards required for cul-de-sacs, or shall be paved to a width of at least fifty (50) feet for the last seventy-five (75) feet of their length. Financial security shall be provided to ensure the removal of excess paving at the time the stub street is continued.
- h. Streets that are extensions of or obviously in alignment with existing streets shall bear the names of the existing streets. Street names shall not be repeated within Milford Township or the ZIP Code area. All houses shall receive address numbers. All street names and address numbers shall be subject to the approval of the Board of Supervisors.
- i. Private streets may be approved only if they are designed to meet municipal street standards.

Section 504 Cul-de-sac Streets

- a. A permanent or temporary cul-de-sac in excess of four hundred (400) feet shall not be permitted unless recommended by the Planning Commission and permitted by the Board of Supervisors. Each cul-de-sac street shall have a minimum length of 250 feet, measured in accordance with PennDOT's standards for Liquid Fuel Tax reimbursement.
- b. Cul-de-sac streets shall have at the closed end a turnaround with a right-of-way having a minimum outside radius of not less than sixty (60) feet and shall be paved for a turning radius of not less than forty (40) feet.
- c. Drainage of cul-de-sacs shall preferably be toward the open end.
- d. A temporary cul-de-sac shall be designed so that the cartway is widened to a fifty (50) foot width for a distance of seventy-five (75) feet at the turnaround. It shall be the developer's responsibility to remove the temporary paving and treat it as determined by Milford Township.
- e. A planted island may be required at Milford Township's discretion in the center of the cul-de-sac. If provided, the planted island shall be twenty (20) feet in diameter. Ownership and maintenance of the planted island shall be designated on the approved final plan of the subdivision or land development.

Section 505 Street Standards

- a. Following are the standards for the various classifications of streets as defined in Section 301.

Street Classification	R/W (feet)	Cartway	
		Width (feet)	Design Speeds MPH
Expressway	250	*	*
Arterial	120	*	—
Collector	80	*	*35-50
Primary	60	34	30-40
Secondary	50	30	20-30
Residential	56	36	20-30
Marginal Access	50	24	20-30
Other	56	36	20-30

\* As required by the PA Department of Transportation or PA Turnpike Commission

- b. Additional rights-of-way and cartway widths may be required by the Board of Supervisors and shall be built to municipal specifications.
- 1) Additional rights-of-way and cartway widths may be required by Milford Township in order to lessen traffic congestion, to secure safety from fire, panic and other dangers, to facilitate the adequate provision for transportation and other public requirements, and to promote the general welfare.
  - 2) Short extensions of existing streets with lesser rights-of-way and/or cartway widths than prescribed above may be permitted; provided, however, that no section of new right-of-way be less than fifty six (56) feet in width.
  - 3) Where a subdivision or land development abuts or contains an existing street of inadequate right-of-way width, additional right-of-way width shall be dedicated to conform to the standards set by Milford Township. Where a subdivision or land development abuts or contains an existing street of inadequate cartway width, the developer may be required to widen and/or reconstruct the roadway to meet current municipal standards.
  - 4) New half or partial streets will not be permitted, except where essential to reasonable subdivision of a tract in conformance with the other requirements and standards of these regulations and where, in addition, satisfactory assurance for dedication of the remaining part of the street can be secured.
  - 5) Wherever a tract to be subdivided or developed borders an existing half or partial street, the other part of the street shall be plotted within such tract.

Section 506 Street Alignment

- a. Whenever street lines are deflected in excess of five (5) degrees, connection shall be made by horizontal curves.
- b. To ensure adequate sight distance, minimum center line radii for horizontal curves shall be as follows:
  - 1) Secondary and Residential Streets: one hundred fifty (150) feet.
  - 2) Primary Streets: two hundred (200) feet.

- 3) Collector Streets: three hundred (300) feet.
- c. Except on secondary and marginal access streets, a minimum tangent of one hundred (100) feet shall be required between curves.
- d. The approaches to an intersection shall follow a straight course for at least fifty (50) feet as measured from the street line.
- e. Any applicant who encroaches within the legal right-of-way of a state highway is required to obtain a highway occupancy permit from the Pennsylvania Department of Transportation, Permits Office, Doylestown, Pennsylvania. In addition to the above, Milford Township may require the applicant to obtain Township highway occupancy.

Section 507 Street Grades

- a. Center line grades shall not be less than one percent (1%).
- b. The maximum street grades shall be as follows:
  - 1) Secondary and marginal access streets: Ten percent (10%).
  - 2) Primary and collector streets: Six percent (6%).
- c. Vertical curves shall be used at changes of grade exceeding one percent (1%) and shall be designed in relation to the extent of the grade change and to provide the following minimum sight distances:
  - 1) For over crests (summits), each four percent (4%) difference in gradients shall use one hundred twenty-five (125) foot length of curve.
  - 2) For under crests (sags), each four percent (4%) difference in gradients shall use one hundred (100) foot length of curve.
- d. Where the grade of any street at the approach to an intersection exceeds seven percent (7%), a leveling area of at least fifty (50) feet measured from the street line shall be provided having not greater than four percent (4%) grades.

Section 508 Street Intersections

- a. Streets shall be laid out to intersect as nearly as possible at right angles and no street shall intersect any other street at an angle of less than eighty (80) degrees.
- b. Multiple intersections involving the junction of more than two streets shall not be permitted.
- c. Clear sight triangles of fifty (50) feet measured along street ultimate right-of-way lines from their points of junction shall be provided at all intersections; and no building, structure, grade, planting or other obstruction higher than two (2) feet nor lower than seven (7) feet above the center line of the street shall be permitted within such sight triangles.
- d. Primary and secondary residential streets shall not intersect on the same side of a major thoroughfare at an interval of less than eight hundred (800) feet between their center lines.

- e. Streets entering opposite sides of another street shall be laid out either directly opposite one another or with a minimum offset of one hundred twenty-five (125) feet between their center lines.
- f. Minimum curb radii at street intersections shall be thirty (30) feet; and at the street line, the minimum radius shall be twenty (20) feet.

Section 509 Street Access

- a. All tracts proposing streets must have a minimum of two access points to existing streets. All subdivision and land development proposals that abut an arterial street shall comply with the regulations of the Arterial Corridor (Overlay) District in the Zoning Ordinance.
- b. Where a subdivision abuts or contains an existing or proposed arterial or collector street, the applicant shall provide marginal access streets or reverse-frontage lots or such other treatment as will provide protection for abutting properties, reduction in the number of intersections with the major street, and separation of local and through-traffic.
- c. The intersection of a private accessway with a public street shall be laid out to intersect as nearly as possible at right angles and shall be not less than eighty (80) degrees.
- d. When two (2) adjacent lots proposed for new residential uses front on a collector road, shared access shall be provided unless it is determined to be unfeasible due to existing conditions such as site topography and location of natural resources.
- e. When two (2) adjacent lots proposed for nonresidential uses front on a collector or arterial road, the applicant shall be required to provide common ingress and egress. When three (3) or more adjacent lots proposed for nonresidential uses front on a collector or arterial road, the applicant shall be required to provide a marginal access street for common ingress and egress. Provisions shall be made for the eventual continuation of the street to adjacent properties.
  - 1) Access onto marginal access roads from commercial, industrial and other nonresidential uses shall be at intervals of not less than the following:
 

PC District	150 feet
PI District	150 feet
  - 2) Access onto arterial or collector highways from a marginal access road shall be at intervals of not less than the following:
 

PC District	600 feet
PI District	600 feet
  - 3) Access onto secondary streets from commercial, industrial and other nonresidential uses shall be at intervals of not less than the following:
 

PC District	150 feet
PI District	150 feet
- f. Within any tract where the proposed accessway onto a collector or arterial street meets criteria for signalization, the accessway must be located at a minimum of 1,600 feet from any signalized intersection or from an intersection which is presently unsignalized but meets criteria for signalization.

Section 510 Alleys

- a. Alleys are not permitted in residential developments.
- b. Alleys shall be provided in commercial and industrial districts, except that the Board of Supervisors may waive this requirement where other definite and assured provision is made for service access, such as off-street loading, unloading, and parking consistent with and adequate for the uses proposed.
- c. The width of an alley shall not be less than twenty-two (22) feet.
- d. Alley intersections and sharp changes in alignment shall be avoided, but where necessary, corners shall be cut off sufficiently to permit safe vehicular movement.
- e. Dead-end alleys shall be avoided where possible but if unavoidable, shall be provided with adequate turn-around facilities at the dead-end, as determined by the Planning Commission.

Section 511 Erosion and Sedimentation Control

a. General

- 1) No subdivision or land development plan shall be approved unless (1) there has been a control plan approved by the Bucks County Conservation District and the Board of Supervisors that provides for minimizing erosion and sedimentation consistent with this section, and financial security or other acceptable security in accordance with Section 802 is deposited with Milford Township in the form of an escrow guarantee that will ensure installation and completion of the required improvements, or (2) there has been a determination by the Planning Commission and the Bucks County Conservation District that a plan for minimizing erosion and sedimentation is not necessary for approval under this ordinance.
- 2) The developer shall construct and/or install such drainage systems as are determined necessary by the Municipal Engineer to prevent erosion damage and to satisfactorily manage surface waters.
- 3) Measures used to control erosion and reduce sedimentation shall, as a minimum meet the standards and specifications of the Pennsylvania Department of Environmental Protection as administered by the Bucks County Conservation District. The Municipal Engineer shall ensure compliance with the appropriate specifications, copies of which are available from the District.

b. Performance Principles

The following measures are effective in minimizing erosion and sedimentation and shall be included where applicable in the control plan:

- 1) Stripping of vegetation, regrading, or other development shall be done in a way that will minimize erosion.
- 2) Development plans shall preserve pertinent natural features, keep cut and fill operations to a minimum, and ensure conformity with topography so as to create the least erosion potential and adequately handle the volume and velocity of surface water runoff.
- 3) Whenever feasible, natural vegetation shall be retained, protected and supplemented. The natural vegetation which is to be preserved shall be protected during construction from changes in grade, damage by

construction equipment and/or storage of materials or fill (see Section 521).

- 4) All disturbed areas and stockpiles of topsoil or fill shall be temporarily seeded with rye seed or other suitable ground cover within 72 hours of disturbance or stockpiling.
- 5) All disturbed areas which are steeply sloped (25 percent or steeper) or where there is a potential for erosion shall be temporarily mulched and seeded with rye seed or other suitable ground cover within 72 hours of disturbance.
- 6) The permanent (final) vegetation and mechanical erosion control and drainage shall be installed within 7 days of completion of the project.
- 7) Provisions shall be made to effectively accommodate the increased runoff caused by changed soil and surface conditions during and after development.
- 8) Sediment in the runoff water shall be trapped until the disturbed area is stabilized by the use of debris basins, sediment basins, silt traps, or similar measures.

c. Site Grading for Erosion Control

In order to provide more suitable sites for building and other uses, improve surface drainage, and control erosion, the following requirements shall be met:

- 1) All lots, tracts or parcels shall be graded to provide proper drainage away from buildings and dispose of it without uncontrolled ponding. All land within a development shall be graded to drain and manage surface water without uncontrolled ponding, except as part of an on-site stormwater management system where approved by the Board of Supervisors upon advice of the Municipal Engineer.
- 2) Concentration of surface water runoff shall be permitted only in swales, watercourses, retention or detention basins. Subject to the approval of the Municipal Engineer, swales shall be sodded, utilize jute matting, or other similar measures to insure establishment of ground cover.
- 3) Grading shall in no case be done in such a way so as to divert water onto the property of another landowner.
- 4) During grading operations, necessary measures for dust control must be exercised.
- 5) Grading equipment will not be allowed to cross streams. Provisions shall be made for the installation of temporary culverts or bridges.
- 6) Tire cleaning areas shall be provided at each point of access to the development site.
- 7) Roads and parking areas, in residential developments, shall be completed (except for wearing course) before building construction is permitted. The binder course shall be repaired before installing the wearing course near the end of the project construction.

d. Excavations and Fill

- 1) No excavation shall be made with a cut face steeper than 3:1 (horizontal to vertical), except under one or more of the following conditions:
    - i. The material in which the excavation is made is sufficiently stable to sustain a slope steeper than three horizontal to one vertical. A written statement to that effect from an engineer, licensed by the Commonwealth of Pennsylvania and experienced in erosion control, shall be submitted to the Municipal Engineer for approval. The statement shall affirm that the site has been inspected and that the deviation from the slope will not result in injury to persons or damage to property.
    - iii. A concrete, masonry, or other approved retaining wall constructed in accordance with approved standards is provided to support the face of the excavation.
  - 2) No fill shall be made which creates any exposed surface steeper in slope than three horizontal to one vertical, except when the plan for subdivision or land development is accompanied by a written statement prepared by a civil engineer, architect, or landscape architect licensed by the commonwealth, certifying that he has inspected the site and that the proposed deviation from the slope specified above will not endanger any property or result in property damage. The plan and statement must be submitted to and approved by the Municipal Engineer.
  - 3) Fill shall be placed and compacted so as to minimize sliding or erosion of soil.
  - 4) Adequate provisions shall be made to prevent surface water from damaging the cut face of excavations and the sloping surfaces of fills.
  - 5) Fill shall not encroach on natural watercourses or constructed channels.
  - 6) Fill placed adjacent to natural watercourses or constructed channels shall have suitable protection against erosion during periods of flooding. Compliance with Zoning Ordinance regulations regarding placement of fill in the floodplain, shall be demonstrated.
  - 7) Cut and fill operations shall remain entirely inside the property lines of the property on which the excavation is proposed and shall not endanger adjoining property or streets.
  - 8) The top or bottom edge of slopes shall be a minimum of five (5) feet from property or right-of-way lines of streets or alleys in order to permit the normal rounding of the edge without encroaching on the abutting property.
- e. Responsibility
- 1) Whenever sedimentation is caused by stripping of vegetation, regrading or other development, it shall be the responsibility of the person, corporation or other entity causing such sedimentation to remove it immediately from all affected surfaces, drainage systems and water courses and to repair any damage at their expense as quickly as possible.
  - 2) Maintenance of all drainage facilities and watercourses, both existing and proposed, within any proposed subdivision or land development shall be

the responsibility of the developer until such time as one of the following is accomplished:

- i. An easement for these facilities is offered for dedication by the developer and is accepted by Milford Township; it shall then be the responsibility of Milford Township.
  - ii. An easement acceptable to Milford Township is established, but not dedicated to Milford Township. In the case of a subdivision, the maintenance shall then be the responsibility of the individual lot owners over whose property the easement passes. For land developments, the maintenance shall then be the responsibility of the owner.
  - iii. A homeowners association or other approved legal entity, approved by Milford Township, assumes responsibility for the maintenance of the development, including the maintenance of the watercourse and/or drainage facilities.
- 3) It is the responsibility of any person, corporation, or other entity doing any activity on or across a stream, watercourse or swale, or upon the flood plain or right-of-way during the period of the activity, to return it to its original or equal condition after such activity is completed.
  - 4) No person, corporation, or other entity shall block, impede the flow of, alter, construct any structure, or deposit any material or thing, or commit any act that will affect normal or flood flow in any communal stream or watercourse without having obtained prior approval from the DEP and/or the Bucks County Conservation District, whichever is applicable.
  - 5) Each person, corporation, or other entity which makes any surface changes shall be required to:
    - i. Collect on-site surface runoff and control it in a manner acceptable to Milford Township upon advice from the Municipal Engineer.
    - ii. Handle existing off-site runoff through their development in a manner acceptable to Milford Township upon advice from the Municipal Engineer.
    - iii. Pay a proportionate share of the total cost of off-site improvements to the common natural watercourse, based on a fully developed drainage area.
    - iv. Provide and install at their expense, in accordance with municipal requirements, all drainage and erosion control improvements (temporary and permanent) as required by the Erosion and Sediment Control Plan.

f. Compliance with Regulations and Procedures

- 1) The Board of Supervisors in its consideration of all preliminary plans of subdivision or land development shall condition its approval upon the execution of erosion and sediment control measures as contained in this Section.

- 2) The installation and design of the required erosion and sediment control measures, as listed in the "Erosion and Sedimentation Control Plan Development Checklists Standard Worksheets Details and Notes," shall be in accordance with standards and specifications found in the "Erosion and Sediment Pollution Control Handbook" of the Pennsylvania Department of Environmental Protection available through the Bucks County Conservation District.
- 3) Stream channel construction should be consistent with the requirements of the Dam Safety and Encroachments Act, Chapter 105.
- 4) Final plans for minimizing erosion and sedimentation as approved will be incorporated into the agreement and financial security requirements as required by Milford Township.
- 5) The approval of plans and specifications for the control of erosion and sedimentation shall be concurrent with the approval of the final plans of subdivision or land development, and become a part thereof.
- 6) At the time a building permit is applied for, a review shall be conducted by the Municipal Engineer to ensure conformance with the plan as approved. During the construction, further consultative technical assistance will be furnished, if necessary by the Municipal Engineer and the Bucks County Conservation District. During this development phase, the Municipal Engineer shall inspect the development site and enforce compliance with the approved erosion and sediment control plans.

Section 512

Stormwater Management

- a. Purpose. Inadequate management of accelerated stormwater runoff resulting from development throughout a watershed increases flood flows and velocities, contributes to erosion and sedimentation, overtaxes the carrying capacity of existing streams and storm sewers, greatly increases the cost of public facilities to convey and manage stormwater, undermines floodplain management and flood reduction efforts in upstream and downstream communities, reduces groundwater recharge, and threatens public health and safety. A comprehensive program of stormwater management, including reasonable regulation of development and activities causing accelerated erosion, is fundamental to the public health, safety, welfare, and the protection of the people of Milford Township and all the people of the commonwealth, their resources, and the environment.

The purpose of Section 512 is to promote health, safety, and welfare within Milford Township by minimizing the damages that may result from development by provisions designed to:

- 1) Manage accelerated runoff and erosion and sedimentation problems at their source by regulating activities that cause these problems.
- 2) Utilize and preserve the existing natural drainage systems.
- 3) Encourage recharge of groundwater and prevent degradation of groundwater quality.
- 4) Maintain existing flows and quality of streams and watercourses.
- 5) Preserve and restore the flood-carrying capacity of streams.

- 6) Provide proper maintenance of all permanent stormwater management facilities that are constructed.
  - 7) Provide performance standards and design criteria for watershed-wide stormwater management and planning.
- b. Applicability. This section shall apply to all areas of Milford Township, except that requirements specified in Milford Township Stormwater Management Ordinance consistent with criteria and standards established in the Delaware River (North) Watershed Act 167 Stormwater Management Plan, Tohickon Creek Watershed Act 167 Stormwater Management Plan, and any other Stormwater Water Management Plan adopted pursuant to the Act of October 4, 1978, P.L. 864, (Act 167), shall be in addition to, and not in lieu of, requirements set forth in Section 512 of this Ordinance. Where the requirements of this section differ from those of the Milford Township Stormwater Management Ordinance, the requirements of the Milford Township Stormwater Management Ordinance shall apply.
- c. Regulated Activities. For any of the regulated activities of this section, prior to the final approval of subdivision and/or land development plans, or the issuance of any permit, or the commencement of any land disturbance activity, the owner, subdivider, developer, or his agent shall submit a stormwater management plan for approval by the Board of Supervisors. The following activities are defined as regulated activities and shall be regulated by the stormwater management provisions:
- 1) Land development;
  - 2) Subdivision;
  - 3) Construction of new or additional impervious surfaces (driveways, parking lots, etc.) which exceed 1,000 square feet;
  - 4) Construction of new buildings or additions to existing buildings;
  - 5) Diversion or piping of any natural or man-made stream channel;
  - 6) Installation of stormwater systems or appurtenances thereto.
- d. Exemptions. Any Regulated Activity that meets the following exception criteria is exempt from the provisions of this section. This criteria shall apply to the total development even if development is to take place in phases. The date of the municipal ordinance adoption shall be the starting point from which to consider tracts as “parent tracts” in which future subdivisions and respective impervious area computations shall be cumulatively considered. Exemption shall not relieve the applicant from implementing such measures as are necessary to protect health, safety, and property.

Stormwater Management Exemption Criteria

Total Parcel Size	Minimum Distance* Exemption	Impervious Area
0 – 0.5 acre	10 ft.	300 sq. ft.
>0.5 – 1 acre	50 ft.	500 sq. ft.
>1–2 acres	100 ft.	1,000 sq. ft.
>2–5 acres	250 ft.	2,000 sq. ft.
> 5 acres	500 ft.	3,000 sq. ft.

\* The minimum distance between the proposed impervious area and/or stormwater control/structure discharge point to the downslope property boundary.

Due to the limited impact on stormwater runoff, the following activities are also exempt from stormwater plan preparation requirements. However, stormwater associated with any activity must be managed in a manner specified in this ordinance.

- 1) Agricultural Operations Exclusion. Any land disturbance associated with agricultural activities operated in accordance with a conservation plan or erosion and sedimentation control plan approved by the Bucks County Conservation District or the NRCS. Agricultural activities such as growing crops, rotating crops, tilling of soil and grazing animals and other such activities are specifically exempt from complying with the requirements of this ordinance.
  - 2) Woodlands Management Operations Exclusion. Any land disturbance associated with forest management operations which is following the DEP's management practices contained in its publication *Soil Erosion and Sedimentation Control Guidelines for Forestry* and is operating under an adequate erosion and sedimentation control plan approved by an applicable agency.
  - 3) Mining Operations Exclusion. Any land disturbance associated with mining operations approved and operated in accordance with all applicable rules and regulations of the PA DEP and operating under an erosion and sedimentation control plan approved by the applicable agency.
  - 4) Use of land for gardening for home consumption.
- e. Stormwater Management Plan. A stormwater management plan shall be submitted for all activity requiring either subdivision and/or land development approval unless such activity is specified as an exemption in Section 512.d of this ordinance. The stormwater management plan shall contain the information outlined in Section 701.h.18 of Article VII Plan Requirements of this ordinance.
- f. General Requirements. The standards contained in this section shall apply as minimum design standards; however, federal and state regulations may impose additional standards subject to their jurisdiction.
- 1) Retention of existing watercourses and natural drainage features.
    - (a) Whenever a watercourse, stream, or intermittent stream is located within a development site, it shall remain open in its natural state and location, and shall not be piped, unless piping is approved by Milford Township and DEP. Stormwater drainage systems shall be provided in order to permit unimpeded flow along natural watercourses.
    - (b) Existing points of concentrated drainage that discharge onto adjacent property shall not be altered without the written approval of the affected landowners and shall be subject to any applicable discharge criteria specified in this ordinance. The developer shall indemnify and/or hold harmless Milford Township against any claim of damage from any downstream property owners that may result from the proposed development.

- (c) No stormwater runoff or natural drainage shall be so diverted as to overload existing drainage systems (including existing stormwater management facilities) or create flooding or the need for additional drainage on other private properties or public lands.
  - (d) Where a development site is traversed by watercourses, drainage easements shall be provided conforming to the line of such watercourses. The terms of the easement shall prohibit excavation, the placing of fill or structures, and any alterations that may adversely affect the flow of stormwater within any portion of the easement. Maintenance, including mowing of vegetation within the easement shall be required, except as approved by the Board of Supervisors. These easements shall be of sufficient width to convey a 100-year design storm, but in no case shall such easement be less than fifty (50) feet in width. The developer will retain and maintain the easement until such time as one of the options listed in Section 512.m 2)(b) is agreed upon.
  - (e) When it can be shown that, due to topographic conditions, natural drainageways on the site cannot adequately provide for drainage, open channels may be constructed conforming substantially to the line and grade of such natural drainageways. Work within natural drainageways shall be subject to approval by PA DEP through the Joint Permit Application process, or, where deemed appropriate by PA DEP, through the General Permit process.
- 2) Areas of existing diffused drainage discharge shall be subject to any applicable discharge criteria in the general direction of existing discharge, whether proposed to be concentrated or maintained as diffused drainage areas, except as otherwise provided by this ordinance. If diffused flow is proposed to be concentrated and discharged onto adjacent property, the developer must document that adequate downstream conveyance facilities exist to safely transport the concentrated discharge, or otherwise prove that no erosion, sedimentation, flooding or other harm will result from the concentrated discharge.
- 3) Storm sewers, culverts, and related installations shall be provided to permit the flow of natural watercourses, to ensure the drainage of all low points (except in protected "wetlands") on the subdivided lots or developed land areas and along the line of streets, and to intercept stormwater runoff along the streets at intervals related to the extent and grade of the area drained. The stormwater management system shall also be designed to accommodate or receive and discharge all runoff from adjacent upstream properties. Where adequate existing storm sewers are readily accessible, the developer must connect new stormwater facilities to the existing system.
- 4) Scour and Erosion Prevention. In areas in which street curbs are not required by either this Ordinance or by the Township, drainage may be accomplished by natural or artificial swales and culverts. Special structures such as check dams, drop-outlets, concrete flow channels, or other energy dissipating structures, rip-rap or non-degradable geotextile linings, may be required to prevent scour and erosion in locations with large runoff quantities or steep slopes. Bituminous paved swales will not be permitted.

- 5) All proposed streets shall be designed so as to discharge surface water from their rights-of-way. Storm drainage improvements as deemed necessary by the Township shall be required along all existing streets on which a subdivision or land development abuts.
- 6) Minimization of impervious surfaces and infiltration of runoff through seepage beds, infiltration trenches, etc., are encouraged, where soil conditions permit and are considered practical in the judgement of the Municipal Engineer, to reduce the size or eliminate the need for detention facilities.
- 7) If in the course of preparing or reviewing the stormwater management plan Milford Township determines that off-site improvements are necessary to satisfactorily handle the stormwater from the proposed development, the developer shall be responsible for the cost of such study and/or construction of off-site improvements.
- 8) Where applicable, stormwater management facilities or programs shall comply with the requirements of Chapter 102 ("Erosion Control"), Chapter 105 ("Dam Safety and Waterway Management") and Chapter 106 ("Floodplain Management") of Title 25, Rules and Regulations of the PA DEP.
- 9) Stormwater management facilities that would be located on state highway rights-of-way, or discharge stormwater to facilities located within a state highway right-of-way, shall be subject to the approval of PennDOT.
- 10) Stormwater management facilities located within or affecting the floodplain of any watercourse shall also be subject to the requirements of the municipal ordinance which regulates construction and development within areas which are subject to flooding. Any stormwater management facilities regulated by this ordinance that would be located in or adjacent to waters of the commonwealth or wetlands shall be subject to approval by PA DEP through the Joint Permit Application process, or, where deemed appropriate by PA DEP, the General Permit process. When there is a question whether wetlands may be involved, it is the responsibility of the developer or his agent to show that the land in question cannot be classified as wetlands, otherwise approval to work in the area must be obtained from PA DEP.
- 11) Access to stormwater facilities shall be provided for maintenance and operation. This access shall be a cleared access that is at least twenty (20) feet wide. Proximity of facilities to public rights-of-way shall be encouraged in order to minimize the length of accessways. Multiple accesses shall be encouraged for major facilities.
- 12) Roof drains and sump pumps shall be discharged to sub-surface facilities. For lots under one acre in size, roof drains and sump pumps shall be connected to a storm sewer or street underdrain unless designed as part of a stormwater management plan. Infiltration methods are encouraged. In no case shall roof drains or sump pumps be connected to a sanitary sewer, nor discharge water directly onto a sidewalk or other type of walkway.
- 13) Drainage Easement. Drainage easements shall be provided to accommodate all storm drainage and management facility requirements and shall be a minimum of twenty (20) feet in width. Milford Township shall not maintain and/or repair any improvements within a privately held

easement as required by Section 512 m., unless stormwater runoff from public roads or public land crosses through the easement. If stormwater runoff from public roads or public lands cross through the easement, Milford Township shall, upon satisfactory installation of improvements as specified in a maintenance agreement as required by Section 512 m., maintain and repair only the structural stormwater management improvements within the easement such as:

- (a) Piping
  - (b) Inlets
  - (c) Outlet, Headwalls
  - (d) Energy Dissipation Structures or Facilities
  - (e) Stormwater Management Facility Control Structures
- g. Stormwater Design Standards and Criteria. The developer shall construct and/or install stormwater management facilities and drainage structures, on- and off-site and, as necessary to meet the following design standards and criteria:
- 1) Stormwater Runoff Peak Rate Requirement. Postdevelopment rates of runoff from any regulated activity on a site shall not exceed the runoff from the site that existed before development for the 1-, 2-, 5-, 10-, 25-, 50-, and 100-year return period runoff events (design storms) consistent with the calculation methodology specified in Section 512 h., unless different release rates are required by individual municipal stormwater management ordinances adopted pursuant to the Act of October 4, 1978, P.L. 864 (Act 167).
  - 2) Water Quality Requirements.

In addition to the design criteria of Section 512 g.1), the applicant SHALL comply with the following water quality requirements unless otherwise exempted by provisions of this ordinance.

- (a) Detain the 1-year, 24-hour design storm using the SCS Type II distribution. Provisions shall be made so that the 1-year storm takes a minimum of 24 hours to drain from the facility from a point where the maximum volume of water from the 1-year storm is captured (i.e., the maximum water surface elevation is achieved in the facility). Release of water can begin at the start of the storm (i.e., the invert of the water quality orifice is at the invert of the facility). The design of the facility shall consider and minimize the chances of clogging and sedimentation potential.
- (b) To accomplish the requirements in Section 512 g 2)(a) the applicant may submit original and innovative designs to the Municipal Engineer for review and approval. Such designs may achieve the water quality objectives through a combination of BMPs (best management practices). Guidelines established by the *Pennsylvania Handbook of Best Management Practices for Developing Areas* shall be utilized in determining stormwater management facility design.
- (c) In selecting the appropriate BMPs or combinations thereof, the applicant SHALL consider the following:

- (1) Total contributing area
  - (2) Permeability and infiltration rate of the site soils
  - (3) Slope and depth to bedrock
  - (4) Seasonal high water table
  - (5) Proximity to building foundations and wellheads
  - (6) Erodibility of soils
  - (7) Land availability and configuration of the topography
- (d) The following additional factors SHOULD be considered when evaluating the suitability of BMPs used to control water quality at a given development site:
- (1) Peak discharge and required volume control
  - (2) Streambank erosion
  - (3) Efficiency of the BMPs to mitigate potential water quality problems
  - (4) The volume of runoff that will be effectively treated
  - (5) The nature of the pollutant being removed
  - (6) Maintenance requirements
  - (7) Creation/protection of aquatic and wildlife habitat
  - (8) Recreational value
  - (9) Enhancement of aesthetic and property value
- 3) Groundwater recharge standards. The design of the stormwater management facilities is encouraged to give consideration to providing groundwater recharge to compensate for the reduction in the percolation that occurs when the ground surface is paved and roofed over. When groundwater recharge is considered, a detailed geologic evaluation of the project site shall be performed to determine the suitability of recharge facilities. The evaluation shall be performed by a qualified geologist and/or soil scientist, and at a minimum, address soil permeability, depth to bedrock, and subgrade stability. Where pervious pavement is permitted for parking lots, recreational facilities, nondedicated streets, or other areas, pavement construction specifications shall be noted on the stormwater management plan.
- 4) Any stormwater management facility (e.g., detention basin) designed to store runoff and requiring a berm or earthen embankment required or regulated by this ordinance shall be designed to provide an emergency spillway to handle flows up to and including the 100-year design storm postdevelopment conditions. The height of embankment must be set as to provide a minimum 1.0 foot of freeboard above the maximum pool elevation computed when the facility functions for the 100-year

postdevelopment inflow. Should any stormwater management facility require a dam safety permit under PA DEP Chapter 105, the facility shall be designed in accordance with Chapter 105 and meet the regulations of Chapter 105 concerning dam safety which may be required to pass storms larger than the 100-year event.

- 5) Any facilities that constitute water obstructions (e.g., culverts, bridges, outfalls, or stream enclosures), and any work involving wetlands as directed in PA DEP Chapter 105 regulations (as amended or replaced from time to time by PA DEP), shall be designed in accordance with Chapter 105 and will require a permit from PA DEP. Any other drainage conveyance facility that doesn't fall under Chapter 105 regulations must be able to convey, without damage to the drainage structure or roadway, runoff from the 25-year design storm with a minimum 1.0 foot of freeboard measured below the lowest point along the top of the roadway. Roadway crossings located within designated floodplain areas must be able to convey runoff from a 100-year design storm with a minimum 1.0-foot of freeboard measured below the lowest point along the top of roadway. Any facility that constitutes a dam as defined in PA DEP Chapter 105 Regulations may require a permit under dam safety regulations. Any facility located within a PennDOT right-of-way must meet PennDOT minimum design standards and permit submission requirements.
- 6) Any drainage conveyance facility and/or channel that doesn't fall under Chapter 105 Regulations, must be able to convey, without damage to the drainage structure or roadway, runoff from the 25-year design storm. Conveyance facilities to or exiting from stormwater management facilities (i.e. detention basins) shall be designed to convey the design flow to or from that structure. Roadway crossings located within designated floodplain areas must be able to convey runoff from a 100-year design storm. Any facility located within a PennDOT right-of-way must meet PennDOT minimum design standards and permit submission requirements.
- 7) Storm sewers must be able to convey postdevelopment runoff from a 25-year design storm without surcharging inlets.
- 8) Adequate erosion protection shall be provided along all open channels, and at all points of discharge.
- 9) In the design of storm sewerage systems, the future use of undeveloped areas upstream within the total drainage areas shall be taken into account in calculating pipe size.
- 10) Setback to Boundaries. No piped storm sewer system outlet, detention basin, or energy dissipation structure shall discharge closer than twenty (20') feet from the boundary of any drainage easement under the control of the developer or which may be utilized by the developer, so as to allow for adequate space for stormwater dissipation in vegetated land areas controlled by or available to the developer and/or to allow adequate space for equipment access for future maintenance.

h. Runoff Calculation Methodology.

- 1) To calculate the potential increase in total runoff and peak flow rate resulting from a proposed site development, the *Soil Cover Complex* method should be used, as outlined in *Urban Hydrology for Small Watersheds*, U.S. Department of Agriculture, Soil Conservation Service,

Technical Release 55 (NTIS PB87-101580). (Due to the technical nature regarding what computation model is most appropriate for drainage calculations, the municipal engineer should decide the best model for use in determining stormwater flow calculations.) Times of concentration for channel and pipe flow shall be computed using Manning's equation.

- 2) Farm field or disturbed earth predevelopment cover conditions (existing conditions) of a site or portions of a site used for modeling purposes shall be considered as "good meadow" when developing the necessary "Cover Complex" calculations.
- 3) The Soil Conservation Service Type II 24-hour rainfall distribution shall be used in the soil cover complex calculations. The 24-hour rainfall depths for the return periods used in the soil cover complex method shall be:

<u>Return Period</u>	<u>24-hour Rainfall Depth</u>
1 year	<u>2.40</u> inches
2 year	<u>3.10</u> inches
5 year	<u>3.70</u> inches
10 year	<u>4.50</u> inches
25 year	<u>5.50</u> inches
50 year	<u>7.00</u> inches
100 year	<u>7.50</u> inches

- 4) The design of any storm water management facility intended to meet the requirements of this section shall be verified by routing the design storm hydrographs through the proposed facility.

i. Runoff Control Measures or Best Management Practices (BMPs).

- 1) Increased stormwater runoff that may result from regulated activities shall be controlled by permanent stormwater runoff control measures that will provide the required standards and criteria. The methods of stormwater control or best management practices (BMPs) that may be used to meet the required standards and criteria are described below. The choice of BMPs is not limited to the ones appearing below, however, any selected BMP must meet the required water quality and runoff peak rate requirements.
- 2) As a minimum, first flush detention must be used to meet the water quality requirement and dual purpose detention must be used to meet the water quality requirement and the stormwater runoff peak rate requirements.
- 3) Developers are encouraged to use BMPs other than the minimum BMPs specified, if appropriate, to provide for additional water quality improvement and groundwater recharge. In evaluating potential stormwater BMPs, the order of preference is as follows:
  - (a) infiltration BMPs
  - (b) flow attenuation methods (e.g., vegetated open swales and natural depressions)
  - (c) artificial wetlands, wet ponds, or other bioretention structures
  - (d) minimum first flush detention or dual purpose detention.

The list provided should be considered the priority consideration for choosing a BMP as a stormwater facility. Infiltration BMPs shall be utilized wherever feasible. Vegetated swales, wet ponds or artificial wetlands can be utilized wherever feasible if infiltration BMPs are deemed unfeasible. BMP techniques can and should be used in conjunction with each other (e.g., vegetated swales with infiltration or retention facilities).

- 4) All BMPs shall be designed in accordance to the design criteria and specifications in the *Pennsylvania Handbook of Best Management Practices for Developing Areas* (1998). This design shall be in particular coordination with Section 8, Descriptions of Selected Best Management Practices.
- 5) Infiltration Best Management Practices (BMPs). If infiltration BMPs are used, they shall be designed in accordance with the design criteria and specifications in Section 5 of the *Pennsylvania Handbook of Best Management Practices for Developing Areas* (1998) and shall meet the following minimum requirements:
  - (a) Infiltration BMPs intended to receive runoff from impervious surface associated with residential land use and/or pervious surface runoff associated with both residential uses and nonresidential uses shall be constructed on soils which have the following characteristics:
    - (1) A minimum depth of 48 inches between the intended bottom of the facility and the seasonal high water table and/or bedrock (limiting zones). The 48-inch minimum depth to a limiting zone requirement may be reduced to 24 inches as long as the soil has a cation exchange capacity (CEC) of greater than ten and/or does not have a sandy loam or loamy sand texture.
    - (2) Infiltration rate and percolation rate of greater than 0.2 inches/hour.
  - (b) Infiltration BMPs intended to receive runoff from impervious surface associated with nonresidential uses shall be constructed on soils which have the following characteristics:
    - (1) A minimum depth of 48 inches between the intended bottom of the facility and the seasonal high water table and/or bedrock (limiting zones);
    - (2) Infiltration rate and percolation rate of greater than 0.2 inches/hour.
  - (c) Infiltration BMPs intended to receive rooftop runoff shall be constructed on soils that have a minimum depth of 24 inches between the intended bottom of the facility and the seasonal high water table and/or bedrock (limiting zones) and have an infiltration rate and percolation rate of greater than 0.2 inches/hour.
  - (d) If infiltration BMPs are intended to meet the Stormwater Runoff Peak Rate Requirement of Section 512 g 1), they shall be designed as a minimum, to:

- (1) Provide adequate storage to accommodate the volume of runoff calculated as the difference between the predevelopment runoff volume and the post-development runoff volume based on the largest required design storm;
  - (2) Control the post-development peak rate of runoff to the predevelopment peak rate of runoff for design storms greater than the 1-year, 24-hour storm; and
  - (3) Provide an overflow or spillway which safely permits the passing of runoff greater than that occurring during the largest design storm.
- (e) Additional erosion and sedimentation control design standards and criteria that must be or are recommended to be applied where infiltration BMPs are proposed and include the following:
  - (1) Areas proposed for infiltration BMPs shall be protected from sedimentation and compaction during the construction phase, so as to maintain their maximum infiltration capacity.
  - (2) Infiltration BMPs shall not be constructed nor receive runoff until the entire contributory drainage area to the infiltration BMP has received final stabilization.
- 6) If wet pond and artificial wetland BMPs are used, they shall be designed in accordance with the design criteria and specifications in the *Pennsylvania Handbook of Best Management Practices for Developing Areas* (1998) and shall meet the following minimum requirements:
 

Wet pond and artificial wetland BMPs shall be constructed on hydric or wet soils and/or on soils which have an infiltration rate and percolation rate of less than two-tenths inches/hour.
- 7) All stormwater control facility designs shall conform to the applicable standards and specifications of the following governmental and institutional agencies:
  - (a) American Society of Testing and Materials (ASTM)
  - (b) Asphalt Institute (AI)
  - (c) Bucks County Conservation District
  - (d) Federal Highway Administration (FHWA)
  - (e) National Crushed Stone Association (NCSA)
  - (f) National Sand and Gravel Association (NSGA)
  - (g) Pennsylvania Department of Environmental Protection (PA DEP)
  - (h) Pennsylvania Department of Transportation (PennDOT)
  - (i) U.S. Department of Agriculture, Natural Resources Conservation Service, Pennsylvania (USDA, NRCS, PA)

- 8) If special geological hazards or soil conditions are identified on the site, the developer's engineer shall consider the effect of proposed stormwater management measures on these conditions. In such cases, Milford Township may require an in-depth report by a competent soils engineer.
  - 9) The design of all stormwater management facilities shall incorporate sound engineering principles and practices, and shall be designed to protect the public health and safety. Milford Township shall reserve the right to disapprove any design that would result in the occupancy or continuation of an adverse hydrologic or hydraulic condition within the watershed.
- j. BMP Feasibility Analysis. A feasibility analysis which evaluates the potential application of infiltration, flow attenuation, wet pond, bio-retention, or wetland BMPs must be submitted with the stormwater management plans required in Article VII for those developments not intending the use of such facilities. This analysis shall provide:
- 1) A general assessment of the anticipated additional runoff based on the design storm and post-development condition utilizing the calculation procedures required in Section 512 h;
  - 2) Indication of drainage areas on the development site resulting in impervious, pervious, and rooftop runoff;
  - 3) Indication of type of land use (residential, nonresidential) generating the impervious runoff;
  - 4) Delineation of soils on the site from the SCS, *Soil Survey of Bucks and Philadelphia Counties*;
  - 5) Indication of soils generally suitable for infiltration and/or wet pond or artificial wetland BMPs, including specification of those soils requiring modifications;
  - 6) Calculated acreage of suitable soils for infiltration BMPs and wet pond or artificial wetland BMPs and percentage of suitable soils based on total site acreage;
  - 7) Calculated acreage of suitable soils for infiltration BMPs and wet pond or artificial wetland BMPs made unavailable due to proposed development layout, and justification that alternative development layout which would reduce impact on suitable soil availability is unfeasible;
  - 8) Analysis of potential infiltration or wet pond or artificial wetland BMPs which could be implemented to manage the projected post-development runoff with consideration of suitable soil availability, runoff point of origin and type of land use and the general design standards and maintenance issues presented in this Ordinance including an indication of how most post-development runoff can be managed by these BMPs (e.g., the entire post-development runoff or partial amount of runoff expressed as a percentage); and
  - 9) Rationale for the decision to not proceed with implementation of infiltration BMPs or wet pond or artificial wetland BMPs such as excessive cost of implementation, insufficient soil suitability, and development constraints (e.g., proximity to water supply well).

k. Detention and Retention Basin Design Requirements.

Detention and retention basins cannot be included as part of the open space requirements.

- 1) The maximum slope of detention basin embankments shall be four to one. Neither the top nor the toe of any slope shall be located less than a minimum of five feet from any property line. Whenever possible the side slopes and basin shape shall conform to the natural topography.
- 2) The minimum top width of the detention basin berm shall be ten feet.
- 3) In order to ensure proper drainage on the basin bottom, a minimum grade of 2 percent shall be maintained for areas of sheet flow. For channel flow a minimum grade of 1 percent shall be maintained.
- 4) An overflow conveyance system shall be designed to carry runoff to the detention basin when the capacity of the storm drain pipe system is exceeded. The overflow system shall have sufficient capacity to carry the runoff difference between the 100-year storm peak flow rate and the capacity of the storm drain pipe system.
- 5) Whenever possible, the emergency spillway for detention basins shall be constructed on undisturbed ground. All emergency spillways shall be constructed so that the detention basin berm is protected against erosion. The minimum capacity of all emergency spillways shall be the peak flow rate for the 100-year design storm after development. The construction material of the emergency spillway shall extend along the upstream and downstream berm embankment slopes. The upstream edge of the emergency spillway shall be a minimum of three feet below the spillway crest elevation. The downstream slope of the spillway shall as a minimum extend to the toe of the berm embankment. The emergency spillway shall not discharge over earthen fill and/or easily erodible material.
- 6) The minimum freeboard shall be one foot. Freeboard is the difference between the design flow elevations in the emergency spillway and the top of the settled detention basin embankment.
- 7) Anti-seep collars shall be installed around the outlet device within the normal saturation zone of the detention basin berms. The anti-seep collars and their connections to the outlet device shall be watertight. The anti-seep collars shall extend a minimum of two feet beyond the outside of the principal outlet device. The maximum spacing between collars shall be fourteen times the minimum projection of the collar measured perpendicular to the outlet. A minimum of two anti-seep collars shall be installed on each outlet pipe.
- 8) All outlet pipes through the basin berm shall be reinforced concrete pipe with watertight joints.
- 9) Energy dissipating devices (rip-rap, end sills, etc.) shall be placed at all basin outlets.
- 10) A perforated riser shall be provided at each outlet of all detention basins during construction for sediment control. The riser shall extend to a maximum elevation of two feet below the crest elevation of the

emergency spillway. The perforated riser shall be designed so that the rate of outflow is controlled by the pipe barrel through the basin berm when the depth of water within the basin exceeds the height of the riser. Circular perforations with a maximum diameter of one inch shall be spaced eight inches vertically and twelve inches horizontally. The perforations shall be cleanly cut and shall not be susceptible to enlargement. All metal risers shall be suitably coated to prevent corrosion. A trash rack or similar appurtenance shall be provided to prevent debris from entering the riser. All risers shall have a concrete base attached with a watertight connection. The base shall be of sufficient weight to prevent flotation of the riser. An anti-vortex device, consisting of a thin vertical plate perpendicular to the basin berm, shall be provided on the top of the riser.

- 11) Stormwater retention and/or detention basins shall be designed to facilitate regular maintenance, mowing, and periodic desilting and reseeded. Basins shall not be located within flood plains or flood plain soils.
- 12) Retention or wet ponds shall be designed so that they return to normal permanent pool conditions within approximately twelve hours after the termination of the storm, unless the Municipal Engineer finds that downstream conditions may warrant other design criteria for stormwater release.
- 13) All drainage channels shall be designed to prevent erosion of the bed and banks. The maximum permissible flow velocity shall not exceed those outlined below under Allowable Water Velocities. Suitable stabilization shall be provided where required to prevent erosion of the drainage channels.

Allowable Water Velocities

Material	Allowable Velocity feet per second
1. Well established grass on good soil	
a. short pliant bladed grass	3-4
b. bunch grass-soil exposed	2-4
c. stiff stemmed grass	2-3
2. Earth without vegetation	
a. fine sand or silt	1-2
b. ordinary firm loam	2-3
c. stiff clay	3-4
d. clay and gravel	3-4
e. soft shale	3-4
3. Shoulders	
a. earth	see 2 above
b. stabilized	6
c. paved	10-15

SOURCE: Middletown Township Specifications and Design Standards for Roads and Streets [Ordinance 92-13].

- 14) Any vegetated drainage channel requiring mowing of the vegetation shall have a maximum grade of four horizontal to one vertical on those areas to be mowed.

- 15) Because of the critical nature of vegetated drainage channels, the design of all vegetated channels shall, as a minimum, conform to the design procedures outlined in the *Erosion and Sediment Pollution Control Handbook* (April 1990) of the Pennsylvania Department of Environmental Protection available through the Bucks County Conservation District.
- 16) Detention basins shall be landscaped in accordance with the requirements in Section 520.C of this ordinance.
- 17) When first flush, dual-purpose, or other detention basins are provided, they shall be designed to utilize the natural contours of the land whenever possible. When such design is impracticable, the construction of the basin shall utilize slopes as flat as possible to blend the structure into the terrain. All basins shall have slopes no more than four horizontal to one vertical. In residential subdivisions and land developments, shallow broad basins are preferred to steep sided basins.

I. Requirements for Drainage Structures and/or Pipes.

- 1) Collection System Standards:
  - (a) Curb Inlets. Curb inlets shall be located at curb tangents on the uphill side of street intersections, and at intervals along the curb line to control the maximum amount of encroachment of runoff on the roadway pavement so that same does not exceed a width of four feet during the design storm event. Design and location of curb inlets shall be approved by Milford Township.
  - (b) Pipe Materials. All storm piping shall be Class III reinforced concrete pipe, except when pipe class and strength is required to be increased in accordance with PennDOT Specifications. Piping shall be saw-cut at ends, as needed, and not hammered or broken. All pipe joints and lift holes must be mortared.
  - (c) Minimum Pipe Size. Minimum pipe size shall be 18 inches.
  - (d) Inlet and Manhole Construction. Inlet and manhole castings and concrete construction shall be equivalent to PennDOT Design Standards.
  - (e) Open end pipes must be fitted with concrete endwalls or wing walls in accordance with PennDOT Standards.
  - (f) Open culvert endwalls or wing walls for pipes larger than eighteen (18) inches in diameter and longer than sixty (60) feet in length shall be fitted with durable hinged covers. Design of protective grates is subject to approval by Milford Township.
  - (g) Flow Velocity. Storm drains shall be designed to produce a minimum velocity of 3.0 feet per second when flowing full. The maximum permissible velocity shall be 15.0 feet per second. However, in no case shall the pipe slope be less than 0.5%.
  - (h) Inlets and manholes shall be spaced at intervals not exceeding 300 feet, and shall be located wherever branches are connected or sizes are changed, and wherever there is a change in alignment or grade. For drainage lines of at least thirty-six (36)

inches diameter, inlets and manholes may be spaced at intervals of four hundred (400) feet. Manholes shall be equipped with open grate lids.

- (i) Inlets shall be located to intercept concentrated runoff prior to discharge over public/private rights-of-way, sidewalks, streets, and driveways.
- (j) The capacity of all inlets shall be based on a maximum surface flow to the inlet of 4.0 cfs, calculated based on the design storm event. The maximum flow to inlets located in low points (such as sag vertical curves) shall include the overland flow directed to the inlet as well as all bypass runoff from upstream inlets. The bypass flow from upstream inlets shall be calculated using inlet efficiency curves included in PennDOT Design Manual Part 2, latest edition. If the surface flow to an inlet exceeds 4.0 cfs, additional inlets shall be provided upstream of the inlet to intercept the excessive surface flow.
- (k) A minimum drop of two (2) inches shall be provided between the inlet and outlet pipe invert elevations within all inlets and manholes. When varying pipe sizes enter an inlet or manhole, the elevation of the crown of all pipes shall be matched.
- (l) Storm sewer pipes shall have a minimum of 12 inches of cover over the bell of the pipe, and in no case shall any part of the pipe project into the road subbase or curb. Where cover is restricted, equivalent pipe arches may be specified in lieu of circular pipe.
- (m) The capacity of all storm sewer pipes shall be calculated utilizing the Manning Equation for open channel flow as applied to closed conduit flow. The Manning's roughness coefficient shall be 0.13 for all concrete pipe. In cases where pressure flow may occur, the hydraulic grade line shall be calculated throughout the storm sewer system to verify that at least one foot of freeboard will be provided in all inlets and manholes for the design storm event.
- (n) Culverts shall be designed based on procedures contained in Hydraulic Design of Highway Culverts, HDS #5, U.S. Department of Transportation, Federal Highway Administration.
- (o) Storm sewer structures (i.e. endwalls, inlets, end sections, etc.) may not be located on top of or within ten (10) feet of electric, water, sanitary sewer, and gas services and/or mains, unless approval is received from Milford Township, and from the authority or utility having jurisdiction over same.
- (p) Storm sewer pipes must be oriented at right angles to electric, water, sanitary sewer, and gas utilities when crossing above or beneath same. Crossing angles of less than 90 degrees will only be permitted at the discretion of the Municipal Engineer. When skewed crossings are permitted, interior angles between alignment of the storm sewer pipe and utility may not be less than 45 degrees. Vertical and horizontal design of storm sewer must be linear.
- (q) Storm sewers shall be placed in the right-of-way, and parallel to the roadway.

- (r) Roadway underdrain is required along both sides of all proposed roadways, or existing roadways proposed to be widened.
- 2) **Open Swales and Gutters:** Open swales shall be designed on the basis of Manning's Formula as indicated for collection systems with the following considerations:
- (a) Roughness Coefficient. The roughness coefficient shall be 0.040 for earth swales.
  - (b) Bank Slopes. Slopes for swale banks shall not be steeper than one (1) vertical for four (4) horizontal.
  - (c) Flow Velocity. Design velocity in grass or vegetated swales shall not exceed four (4) feet per second.
  - (d) To minimize sheet flow of stormwater across lots located on the lower side of roads or streets, and to divert flow away from building areas, the cross-section of the street as constructed shall provide for parallel ditches or swales or curbing on the lower side which shall discharge only at drainage easements, unless otherwise approved by Milford Township.
  - (e) Gutters and swales adjacent to road paving shall be permitted to carry a maximum flow of four (4) cubic feet per second prior to discharge away from the street surface, unless it is proven to the satisfaction of the Township by engineering calculations that the road slopes or other factors would allow higher gutter or swale capacity.
  - (f) Flows larger than those permitted in gutters and roadside swales may be carried in swales outside the required road right-of-way in separate drainage easements, or may be carried in pipes or culverts inside or outside the required road right-of-way.
  - (g) Swales shall be stabilized with vegetation or other materials, approved by Milford Township, to prevent erosion.
  - (h) Swales shall be provided with underdrains as deemed necessary by Milford Township should overland seepage result in potential maintenance problems for same. Underdrains must discharge into a natural drainage channel or storm sewer system.
  - (i) Where drainage swales are used to divert surface waters away from buildings, they shall be sodded, planted or otherwise suitably protected as required and shall be of such slope, shape and size as to conform with the requirements of the Board of Supervisors. Concentration of surface water runoff shall be permitted only in swales, watercourses, retention or detention basins.
- 3) Bridges and Culverts. Bridges and culverts shall be designed in accordance with specifications approved by the Milford Township Engineer. Separate design plans and specifications shall be required for each bridge and culvert and subject to review and approval of Milford Township.

m. Required Maintenance and Operation

- 1) Performance Guarantee. The applicant shall provide a financial guarantee to Milford Township for the timely installation and proper construction of all stormwater management controls as required by the approved stormwater plan and this ordinance equal to the full construction cost of the required controls.
- 2) Maintenance Responsibilities
  - (a) The stormwater management plan for the development site shall contain an operation and maintenance plan prepared by the developer and approved by the Municipal Engineer. The operation and maintenance plan shall outline required routine maintenance actions and schedules necessary to ensure proper operation of the facility(ies). Maintenance shall include but not be limited to:
    - (1) Mowing the lawn.
    - (2) Repairing or replacing fencing.
    - (3) Repairing or replacing landscaping.
    - (4) Controlling vermin and repairing damage from animals.
    - (5) Keeping the stormwater management facility area free of obstructions, structures, vegetation, or accumulated sediment that may block or hinder the function and purpose of the easement.
    - (6) Keeping the stormwater management facility area free of litter or garbage.
    - (7) Repairing erosion and restoring vegetation as necessary to keep the stormwater management facility area in good repair.
  - (b) The stormwater management plan for the development site shall establish responsibilities for the continuing operation and maintenance of all drainage facilities and watercourses, both existing and proposed, within any proposed subdivision and land development. Maintenance shall be the responsibility of the developer until such time as one of the following is accomplished:
    - (1) An easement for these facilities or fee simple title is offered for dedication by the developer and is accepted by Milford Township; its maintenance shall then be the responsibility of Milford Township.
    - (2) An easement acceptable to Milford Township is established. In the case of a subdivision, the maintenance shall then be the responsibility of the individual lot owners over whose property an easement passes. For land developments, the maintenance shall then be the responsibility of the owner.

- (3) A homeowner's association or other approved legal entity, approved by Milford Township, assumes responsibility for the maintenance of the development, including the maintenance of the watercourse and/or drainage facilities.
  - (c) The Board of Supervisors, upon recommendation of the Municipal Engineer, shall make the final determination on the continuing maintenance responsibilities prior to final approval of the stormwater management plan. The Board of Supervisors reserves the right to accept the ownership and operating responsibility for any or all of the stormwater management controls with financial security to ensure continued maintenance.
- 3) Maintenance Agreement for Privately Owned Stormwater Facilities
  - (a) Prior to final approval of the site's stormwater management plan, the property owner shall sign and record a maintenance agreement covering all stormwater control facilities that are to be privately owned.
  - (b) Other items may be included in the agreement where determined necessary to guarantee the satisfactory maintenance of all facilities. The maintenance agreement shall be subject to the review and approval of the municipal solicitor and Board of Supervisors.
  - (c) Guarantees shall be provided to insure that the maintenance agreement will carry through to the new owners.
- 4) Municipal Stormwater Maintenance Fund
  - (a) If stormwater facilities are to be accepted by Milford Township for dedication, persons installing stormwater storage facilities shall be required to pay an amount to the Municipal Stormwater Maintenance Fund for periodic inspections and maintenance expenses. The amount of the deposit shall yield an amount equivalent to the cost of inspecting and maintaining the facilities.
  - (b) If at some future time a storage facility (whether publicly or privately owned) is eliminated due to the installation of storm sewers or other storage facility, the unused portion of the maintenance fund deposit will be applied to the cost of abandoning the facility and connecting to the storm sewer system or other facility.
- 5) Post construction Maintenance Inspections
  - (a) Basins should be inspected by the land owner/developer or responsible entity (including the Municipal Engineer for dedicated facilities) on the following basis:
    - (1) Annually for the first 5 years;
    - (2) Once every 3 years thereafter;

(3) During or immediately after the cessation of a 100-year or greater storm event.

(b) The entity conducting the inspection should be required to submit a report to Milford Township regarding the condition of the facility and recommending necessary repairs, if needed.

Section 513 Blocks

a. The length, width, and shape of blocks shall be determined with due regard to the following:

- 1) Provision of adequate sites for type of buildings proposed.
- 2) Zoning requirements as to lot size, dimension, and minimum lot area per dwelling unit, in the case of residential blocks.
- 3) The limitations and opportunities of the topography.
- 4) Requirements for safe and convenient vehicular and pedestrian circulation and access.
- 5) Provision for satisfactory fire protection.

b. Residential blocks shall have a maximum length of sixteen hundred (1,600) feet, and so far as practical, a minimum length of five hundred (500) feet.

c. Residential blocks shall be of sufficient depth to accommodate two (2) tiers of lots, except where reverse frontage lots bordering an arterial or collector street are used or where not feasible due to a site's topography.

d. Pedestrian interior walks may be required where necessary to assist circulation or provide access to community facilities. Such crosswalks shall have a right-of-way width of not less than ten (10) feet and a paved walk of not less than four (4) feet.

e. In non-residential subdivisions, block lengths and widths shall be reviewed by the Municipal Engineer and approved by the Board of Supervisors.

Section 514 Lots

a. Residential lots shall front on a street, existing or proposed.

b. In general, side lot lines shall be at right angles or radial to ultimate right of ways from the ultimate right of way to the rear lot line.

c. Double-frontage lots shall be deed restricted to require access only to the lower order street.

d. Corner lots and double-frontage lots shall provide for equal front yard setbacks on each street.

e. Remnants of land, smaller than required for a lot, shall not be permitted within any subdivision, with the exception of parcels of land to be dedicated to Milford Township for the purpose of utilities (sewage pumping plant, etc.) and/or open space.

f. Residential lot depth shall not be less than one (1) nor more than three (3) times the lot width.

- g. Except for lane lots and triangular shaped lots, lots shall maintain a minimum width of at least 50 percent of the required lot width for the entire depth of the lot.

Section 515 Easements

- a. Easements with a minimum width of twenty (20) feet shall be provided as necessary for utilities.
- b. Easements with a minimum width of twenty-five (25) feet shall be provided if necessary for site access.
- c. To the fullest extent possible, easements shall be centered on or adjacent to rear or side lot lines.
- d. Nothing shall be permitted to be placed, planted, set or put within the area of an easement unless necessary for the purpose of the easement.
- e. Where a site is traversed by a watercourse, there shall be provided a drainage easement or right-of-way conforming substantially with the line of such watercourse and of such width as will be adequate to preserve natural drainage as determined by the Municipal Engineer, or as may be required or directed by the Department of Environmental Protection. The owner shall properly grade and seed slopes and fence any open ditches when it is deemed necessary by Milford Township.
- f. Where stormwater or surface water will be gathered within the subdivision or land development and discharged or drained in volume over lands within or beyond the boundaries of the subdivision or land development, the applicant or owner shall reserve or obtain easements over all lands affected thereby, which easements shall be adequate for such discharge of drainage and for the carrying off of such water, and for the maintenance, repair and reconstruction of the same, including the right of passage over and upon the same by vehicles, machinery and other equipment for such purposes, and which shall be of sufficient width for such passage and work. The width of the easement shall be determined by the Municipal Engineer. The owner shall convey free of charge or cost, such easements to Milford Township upon demand.
- g. No right-of-way or easement for any purpose whatsoever shall be recited or described in any deed unless such right-of-way has been shown on the approved plan.
- h. The applicant shall provide a method of physically delineating pedestrian easements across private lots. Such method shall include shrubbery, trees, markers, or other method acceptable to the Board of Supervisors.

Section 516 Curbs

- a. Curbs shall be provided along proposed streets at the boundary of the required cartway.
- b. Along the existing street on which a subdivision or land development abuts (hereinafter called boundary street), curbs shall be constructed and the existing paved cartway shall be widened to the curb. The location of curbing along a boundary street shall be determined by the width of the required cartway of the road as established by Milford Township.

- c. Curbs shall be designed and constructed in accordance with municipal specifications or the specifications of the Municipal Engineer.
- d. All curbs must meet the requirements of the Americans with Disabilities Act and the Pennsylvania Universal Accessibility Act, as applicable.

Section 517 Automobile Parking

a. General Standards

- 1) Parking facilities shall be provided off-street in compliance with requirements of the Zoning Ordinance and this ordinance.
- 2) Parking areas shall be designed to permit each motor vehicle to proceed to and from the parking space provided for it without requiring the moving of any other motor vehicle(s).
- 3) At no time shall angle or perpendicular parking be provided along public or private streets. All parking lots and bays permitting parking other than parallel shall be physically separated from the street and confined by curbing or other suitable separating device.
- 4) Parking areas should be designed to encourage cars not to back into a public street in order to leave the lot.
- 5) All public parking areas shall be adequately illuminated during after-dark operating hours. Lighting shall be directed downward and shall be so arranged that glare does not affect neighboring properties or streets. In outdoor lots, lighting standards shall be located on the raised parking islands and not on the parking surface. In garages, lighting standards shall be located on the walls and/or ceilings and not on the parking surface.
- 6) All parking facilities must meet the requirements of the Americans with Disabilities Act and the Pennsylvania Universal Accessibility Act, as applicable.
- 7) No garage used to meet on-site parking standards may be converted to living space unless additional off-street parking can be provided on-lot without exceeding the impervious surface ratio for that lot or violating other provisions of township ordinances. Garages that are used to meet the minimum parking requirements must have deed restrictions in a form approved by the Township Solicitor and shall be recorded.

b. Common Parking Lot Standards

The design standards specified below shall be required for all common parking lots built after the effective date of this ordinance.

- 1) In parking lots designed to accommodate rows of parked vehicles, a ten (10) foot wide raised landscaped parking island shall be provided along every other doubled row of parking spaces, as illustrated below.
- 2) No more than twenty (20) parking spaces or two hundred (200) feet shall be permitted in a continuous row without being interrupted by a ten (10) foot wide raised separation to provide areas for landscaping and to facilitate pedestrian circulation.

- 3) The edge of any common parking lot shall not be closer than ten (10) feet from the outside wall of the nearest building.
- 4) Parking area dimensions shall be no less than those listed in the following table.

Parking		Aisle Width		
Angle of Parking (degrees)	Stall Width (feet)	Stall Depth (feet)	One-Way (feet)	Two-Way (feet)
90	10	20	24	24
60	10	22.3	18	NA
45	10	21.2	15	NA
30	10	17.9	15	NA
Parallel	8	22	15	20

- 5) All lots with dead-end parking areas shall be designed to provide sufficient area for backing and turning movements from the end stalls of the parking lot.
- 6) No less than a five (5) foot radius of curvature shall be permitted for all curblines in all parking lots.
- 7) Except at accessways, all parking areas shall be set back fifteen (15) feet from the street line and at least twenty-five (25) feet from all property lines, or as required by the Zoning Ordinance (the greater provision shall prevail). The distance between this required setback and the street line shall be maintained as a planting strip, or planting strips and a sidewalk.
- 8) All parking lots for any purpose shall be physically separated from any public street by a concrete curb and by planting strips which shall be not less than three (3) feet in depth on each side of a four (4) foot concrete sidewalk built to municipal specifications.
- 9) All common parking lots shall be paved and constructed in accordance with the standards established by Milford Township.
- 10) The depth and width of lots reserved or laid out for commercial and industrial uses shall be adequate to provide for the off-street parking generated by the use.
- 11) The layout of every common parking lot shall be such as to permit safe and efficient internal circulation, in accordance with accepted traffic engineering principles and standards. Parking lots with diagonal parking shall permit only One Way traffic.
- 12) Accessways to and from common parking lots shall be located so as to avoid interference with street traffic.
- 13) Every common parking lot shall include sufficient stacking space to accommodate entering and exiting vehicles without overflowing out onto adjacent streets or service roadways.
- 14) The width of accessways shall be:

- a. A minimum of twelve (12) feet for one-way use only;
  - b. A minimum of twenty-four (24) feet for two-way use;
  - c. A maximum of thirty-five (35) feet at the ultimate right of way.
- 15) For the purpose of servicing any property held under single and separate ownership, accessways crossing the street lot line shall be limited to two (2) along the frontage of any single street, and their center lines shall be spaced at least eighty (80) feet apart. On all corner properties, there shall be spaced a minimum of sixty (60) feet, measured at the curb line, between the center line of any accessway and the street line of the street parallel to said access drive.
  - 16) The external perimeter of all parking areas that abut adjacent lots shall be landscaped with evergreen and deciduous trees and shrubs to provide a dense visual screen for the vehicles.
  - 17) All parking lots shall have at least one (1) tree of two and one-half (2 1/2) inch caliper minimum for every five (5) parking spaces in single bays and one (1) tree of two and one-half (2 1/2) inch caliper minimum for every ten (10) parking spaces in double bays. Trees shall be planted in such a manner as to afford maximum protection from the sun for parked vehicles. However, no plantings that obscure vision or have the potential to obscure vision shall be permitted in interior planting areas within parking lots. A clear sight triangle of fifteen (15) feet shall be provided where parking aisles access parking accessways and where parking accessways intersect streets.
  - 18) A minimum of ten (10) percent of any parking facility over two thousand (2,000) square feet in gross floor area shall be devoted to landscaping, exclusive of required trees.
  - 19) Parking and display areas along arterial and collector roads will be set back at least thirty (30) feet from the street line in order to accommodate acceleration and deceleration lanes and marginal access roads.

c. Common Parking Garage

The design standards specified below shall be required for all common parking garages established after the effective date of this ordinance.

- 1) The standards of Section 517.b.4, 5, 6, 9, 11, 12, 13 and 14 shall apply to common parking garages.
- 2) There shall be a minimum transition length (ramp transition) of twelve (12) feet on all ramps where they meet the parking floor.
- 3) Maximum grades:
  - parking floor–5 percent.
  - ramp–10 percent.
  - ramp transition–5 percent.
- 4) On circular ramp systems the minimum outside radius on all turns shall be thirty-four (34) feet.

- 5) Common parking garages shall be subject to all minimum building setback requirements of this ordinance.
  - 6) Garage entrance:
    - a) There shall be a minimum stacking area beyond the entrance control point for ten (10) cars. The stacking areas shall not be in a public street, nor shall it interfere with vehicular circulation in the vicinity of the common parking garage.
    - b) The grade of the ramp shall begin at least twenty-five (25) feet beyond the control point.
  - 7) Parking stalls next to a wall or a pillar shall be one (1) foot wider.
- d. Spillover Parking Standards
- 1) Where spillover parking is required by the zoning ordinance, and where the spillover parking is permitted on-street, a minimum length of twenty-three (23) feet unobstructed by driveways or fire hydrants, set back at least twenty-five (25) feet from a street intersection, shall be required for each on-street spillover parking space.
- e. Private Parking Areas (Off-street parking and private garages)
- 1) Minimum parking dimensions shall be ten (10) feet by twenty (20) feet.
  - 2) Parking must comply with all provisions of the Zoning Ordinance.

Section 518 Residential Driveways

General Driveway Standards

- a. Sight distance requirements for all driveways shall be in accordance with the Pennsylvania Code, Title 67, Transportation, Chapter 441 "Access To and Occupancy of Highways by Driveways and Local Roads." Driveways shall be so located, designed, and constructed as to provide a stopping space, not to exceed a four (4) percent grade, twenty (20) feet behind the right-of-way line. Excessive grade that may create a hazard at either street or interior terminal will not be permitted.
- b. At each point where a private accessway or driveway intersects a public street, a clear sight triangle, measured fifteen (15) feet in both directions from the point of intersection of the street line and the edge of the accessway, shall be maintained, within which vegetation and other visual obstructions shall be limited to a height of not more than one and one-half (1.5) feet above street level.
- c. Driveways shall be located not less than 40 feet from the nearest tangent point of the curb radius of any intersection (to the driveway).
- d. Driveways to corner lots or lots having access to more than one street shall gain access from the street of lower classification when a corner lot is bounded by streets of two different classifications.
- e. A turn-around space shall be provided on the lot when the driveway takes access from an arterial, collector or primary road. When a driveway takes access from a secondary road, whenever the size of the lot permits, a turn-around space shall

be provided on each lot so that no vehicle need back out onto a street in order to leave the lot.

- f. Where on-street parking is permitted, the layout of the curb cuts of the driveways shall be designed to maximize the number of on-street parking spaces.
- g. A copy of the highway occupancy permit for each lot shall be submitted to the Township.
- h. If a development occurs adjacent to two roads, the development shall take access from the road with the lower street classification and lower volume of traffic.

#### Residential Driveway Standards

- i. For driveways serving single residential units, the driveway apron shall have a minimum width of 10 feet and a maximum width of 20 feet at the edge of the cartway.
- j. A maximum of four (4) single-family dwelling units may share a single common driveway when approved by the Board of Supervisors. A common driveway shall have a minimum width of sixteen (16) feet within the street ultimate right-of-way. Maintenance agreements, as well as escrow costs, to cover anticipated maintenance and possible future repairs shall be provided to Milford Township's satisfaction. The shared portion of driveway shall be built to public road specifications.
- k. All driveways shall be at least five (5) feet from any side or rear lot line.

#### Section 519 Sidewalks

- a. Sidewalks shall be required.
- b. The minimum width of all sidewalks shall be four (4) feet. For sidewalks located in a street right-of-way there shall be a minimum three (3) foot wide planting strip between the curb and sidewalk. This planting strip can be used for the location of the underground utilities.
- c. The grades and paving of the sidewalks shall be continuous across driveways except in nonresidential and multifamily residential developments and in certain other cases where heavy traffic volume dictates special treatment.
- d. The thickness and type of construction of all sidewalks shall be in accordance with the recommendations of the Municipal Engineer.
- e. Sidewalks shall be laterally pitched at a slope not less than one quarter (1/4) inch per foot to provide for adequate surface drainage.
- f. At corners and pedestrian street-crossing points, sidewalks shall be extended to the curblines with an adequate apron area for anticipated pedestrian traffic.
- g. All sidewalks and sidewalk ramps must meet the requirements of the Americans with Disabilities Act and the Pennsylvania Universal Accessibility Act. Where sidewalk grades exceed five (5) percent, a non-slip surface texture shall be used.

Section 520 Landscaping

a. Street Trees

1. Within any land development or subdivision street trees shall be planted on the affected lot before the occupancy permit is issued.
2. Street tree plantings will also be required along access driveways that serve two or more nonresidential properties, and along major walkways through parking lots and between nonresidential buildings, as recommended by the Planning Commission.
3. Street trees shall be planted at the following maximum intervals depending on the size of the trees or an equivalent number of trees may be planted in any informal arrangement:  

large trees -----	50 feet apart
medium trees -----	40 feet apart
small trees -----	25 feet apart
4. Street trees shall not be planted opposite each other but shall alternate.
5. At intersections, trees shall be located no closer than thirty (30) feet from the intersection of the street right-of-way lines.
6. Street trees shall be planted a minimum distance of four (4) feet and a maximum distance of ten (10) feet from the street line. However, in certain cases, as follows, Milford Township may permit trees to be planted within the future right-of-way:
  - a. In areas such as existing villages, where front yards may be located within the future right-of-way;
  - b. In cases where closely spaced rows of street trees may be desirable and future street widening is considered unlikely.
7. If trees are to be planted within fifteen (15) feet of a utility pole or line, measured along the ground from the base of the pole, only trees which grow no taller than 30 feet shall be planted. No trees shall be planted under utility lines.  

If trees are to be planted between 15 and 65 feet of a utility pole or line, measured along the ground from the base of the pole, only trees which grow no taller than 45 feet shall be planted.

Planting Lists (see appendix)

b. Plant Materials Specifications and Installation

1. General

- a. The trees listed in the accompanying appendix have benefits and/or limitations when growing under various conditions. The location, dimensions and spacing of required plantings should be adequate for their proper growth and maintenance, taking into account the sizes of such plantings at maturity and their present and future environmental requirements, such as wind, soil, moisture and sunlight.

- b. Plantings should be selected and located where they will not contribute to conditions hazardous to public safety. Such hazardous locations include, but are not limited to, public street rights-of-way, underground utilities, and clear sight triangle areas required for unobstructed views at street intersections.

2. Plant Specifications

- a. Street trees and other required plants shall be of nursery stock. They shall be of symmetrical growth, free of insects, pests, and disease, and suitable for street use and durable under the maintenance contemplated.
- b. All plants shall meet the minimum standards for health, form and root conditions as outlined in the American Association of Nurserymen (AAN) Standards and shall be hardy within the USDA Hardiness Zone 6.
- c. At the time of installation, the trunk diameter measured at a height of six (6) inches above the finished grade level shall be a minimum of two and one-half (2 1/2) inches.
- d. Required landscaping and street trees shall be maintained permanently and any plant material which does not survive shall be replaced within six months.
- e. Financial security shall be posted with Milford Township in an amount equal to 100 percent of the estimated cost of trees and plantings, to be released 18 months after completion of the project and acceptance by Milford Township.

3. Installation

- a. All trees to be installed shall be balled and burlapped in accordance with American Association of Nurserymen Standards. The ball depth shall be not less than 60 percent of the ball diameter and in all cases contain the maximum of the fibrous roots of the tree.
- b. Excavated plant pits shall be two (2) feet wider than the ball size.
- c. Backfill mix for the excavated plant pit area shall be composed of one part topsoil, one part peat moss, and one part course sand.
- d. Tree guying
  - 1) Three (3) No. 12 galvanized steel wires shall be spaced equally around the tree and connected to the tree with rubber hoses so that the wire does not come into contact with the tree.
  - 2) For trees up to and including three and one-half (3-1/2) inch caliper use three (3) oak 2" x 2" x 8'0" rough sawed stakes.

3) For trees over three and one-half (3-1/2) inch caliper use three (3) ground anchor stakes 2" x 2" x 2'6" driven flush with grade.

e. Provide tree wrapping paper the entire length of the tree trunk from the top of the ball to the start of lateral branching. Tree wrapping shall be tied with natural twine.

f. All plantings should be mulched to a depth of three (3) inches in a 6-foot diameter ring around the base of each tree, or continuous beds if trees or shrubs are less than 6 feet apart.

c. Buffer Yard and Detention Basin Plantings

1. Landscaped buffer areas shall be provided as required in this Ordinance.
2. Landscaping and planting in detention basins shall be provided in conformance with appropriate guidelines (e.g., *A Landscape Strategy for Detention Basins*, Morris Arboretum, 1980).
3. Prior to seeding these areas a soil test should be conducted by a soil testing laboratory acceptable to Milford Township and the soils amended to achieve pH and N.P.K. levels as recommended for turf. At time of dedication all open land areas must have at least 95% cover with appropriate grasses or other species and be free of noxious weeds as defined by the Commonwealth of Pennsylvania.
4. Design Criteria - Buffering serves to soften the outline of buildings, to screen glare and noise, and to create a visual and/or physical barrier between conflicting land uses. Buffer yards are required between uses and along existing and proposed streets. The extent of buffering required shall be determined by the type of use proposed and the adjacent uses or streets surrounding the proposed development.

To determine the required buffer yard and planting schedule, a three step procedure should be followed:

Step 1 — Site Analysis and Determination of Buffer Yard Class.

Step 2 — Selection of the Planting Option for the Buffer Yard Class.

Step 3 — Selection of the Plant Materials from the Plant Materials List.

Step 1 — Site Analysis and Determination of Buffer Yard Class:

For each property boundary, the applicant shall determine the adjacent land use. Land use information shall be determined by an on-site survey. Table 1 specifies the buffer yard class for each boundary.

The applicant shall match his proposed land use with the corresponding adjacent land use for each property boundary. The letter indicates the buffer yard class.

Step 2 — Selection of the Planting Option for the Buffer Yard Class:

After determining the buffer yard class, the applicant shall select a planting option from Table 2. For each buffer class, several planting options are available, one of which the applicant shall select to meet the buffer yard requirement for each boundary.

### Step 3 — Selection of the Plant Materials from the Plant Materials List.

For each planting option, any of the plant materials outlined in Table 3 may be utilized. Minimum plant size, given either in height or in caliper, is indicated on this table. The Planning Commission may permit other plant types if they are hardy to the area, are not subject to blight or disease, and are of the same general character and growth habit as those listed in Table 3. All plant material shall meet the standards of the American Association of Nurserymen.

The applicant shall not be required to provide a buffer yard if existing planting, topography or manmade features are deemed acceptable for screening purposes by the Board of Supervisors.

## 6. General Requirements

### (a) Location of Buffer Yard

- (1) The buffer yard shall be measured from the property line or the near street line where a street serves as the property line.
- (2) The buffer yard may overlap the required front, side or rear yards and, in case of conflict, the larger yard requirements shall apply.
- (3) The buffer yard may be part of the lot area assigned to a dwelling unit; however, the portion of the lot area containing the buffer yard must be in addition to the required minimum lot area. A deed restriction shall be placed on the lot in accordance with requirements of the Zoning Ordinance.
- (4) No more than 30 percent of required open space area shall be located in the buffer yard.

(b) All buffer yards shall be maintained and kept clean of all debris, rubbish, weeds and tall grass.

(c) No structure, stormwater detention / retention basins, sewage treatment / disposal systems, sign, manufacturing or processing activity, commercial activity, parking, or storage or display of materials shall be permitted in the buffer yard.

(d) Existing Buffer: All existing deciduous and coniferous trees larger than two (2) inches in caliper and/or six (6) feet in height may be considered to contribute to the definition of an existing buffer on the property. If the amount of existing plant material that size or greater equals any of the planting requirements, the equivalent reduction of required plant material may be taken. In all cases, existing plant material of the above caliper and height shall be preserved in any buffer yard except where clearance is required to insure adequate sight distance. Any removal shall, where feasible, involve relocation rather than clearing.

(e) Plant materials shall be permanently maintained and any plant material which dies shall be replaced.

(f) Planting design: It is encouraged that plant materials in buffer yards be planted in natural clusters that will give privacy but do not block views or vistas. The exception shall be commercial or industrial uses bordering residential uses. Here a dense, visual screen is required. Thus, plant material shall be at least four (4) feet high when planted and be of such species as will ultimately produce a screen at least eight (8) feet high.

(g) The plant material shall be so placed that at maturity it will be no closer than three (3) feet from any property or street line.

- (h) A clear sight triangle shall be maintained at all street intersections and at all points where private accessways intersect public streets in accordance with this Ordinance.
  - (i) The screen planting shall be broken only at points of vehicular or pedestrian access.
  - (j) Prior to the approval of a Land Development or Subdivision Plan, complete plans showing the arrangement of all buffer yards and the placement, species and size of all plant materials to be placed in such buffer yard shall be reviewed by the Board of Supervisors to ascertain that the plans are in conformance with the terms of this Ordinance. The Board of Supervisors may defer submission of the Plans for buffer yard plantings and/or defer installation of the plant material where, in its sole discretion, deferral of submission of the Plans; or, installation of the plant material will coordinate a particular development with surrounding developments; or, allow the design and planting of buffer yards to be based upon the actual physical layout after improvements have been constructed. In the event the design and/or installation of plant material is deferred, financial security in an amount deemed sufficient by the Board of Supervisors shall be posted to assure the proper design and installation of buffer plantings at such time as they are required.
7. Special Buffer Yard Requirements — The following requirements shall supersede the buffer yard requirements of Table 1: Determination of Buffer Yard Class.
- (a) Buffer Yard Requirements In and Around Villages
    - (1) A Class "C" buffer yard shall be provided for any use proposed adjacent to a VC-1 Village Center District, a VC-2 Village Center District or a VE Village Expansion (Overlay) District.
    - (2) Within a VC-1 Village Center District or a VC-2 Village Center District, a nonresidential use shall provide a Class "A" buffer yard where such use abuts a residential use.
  - (b) Buffer Yard Requirements along Expressway and Arterial Streets
    - (1) Where a residential use is proposed adjacent to an expressway or arterial street, a Class "C" buffer yard shall be provided.
    - (2) No screen planting shall be required along expressway or arterial streets which form district boundary lines provided that:
      - i. The proposed use is nonresidential;
      - ii. No outdoor processing, manufacturing or commercial activity and no outdoor storage or display of material shall be so located as to be visible from the property across the expressway or arterial street; and
      - iii. The front of the building faces the expressway or arterial street.
  - (c) Buffer Yard Requirements for Reverse Frontage Lots
 

Where a subdivision proposes reverse frontage lots, a Class "C" buffer yard shall be provided along the major road (where the rear of the house is intended to face).

Table 1: Determination of Buffer Yard Class

<u>Proposed Land Use</u>	<u>Existing/Adjacent Land Use</u>								Vacant Land (RP, RA, RD, SRC, SRL, SRM, SRH & URL)	Vacant Land (FC, PC, CC, SC, PI & EXT.)
	Agricultural (Uses A3,A5,-A6 & A9 only)*	Residential (Uses B1, B4 & B5 only)*	All Other Residential	Institutional & Recreational	Office	Retail & Consumer Services	Utility, Service, & Transportation	Industrial		
Agricultural (Uses A3, A5, A6 & A9)	—	B	B	A	A	A	A	A	A	A
Residential (Uses B1, B4 & B5)	A	—	A	B	B	B	B	B	—	B
All Other Residential	A	B	A	B	B	B	B	B	B	B
Institutional & Recreational	A	B	B	A	A	A	A	B	B	A
Office	A	B	B	A	—	A	A	A	B	A
Retail & Consumer Services	A	C	C	B	A	A	A	A	C	A
Utility, Service, & Transportation	A	B	B	B	A	A	A	A	B	A
Industrial (Excluding Use G10)	B	C	C	C	B	B	A	A	C	B
Industrial (Use G10 only)	C	C	C	C	C	C	C	C	C	C

\* A3 - Intensive Agriculture; A5 - Riding Academy; A6 - Commercial Kennel; A9 - Farm Support Facility  
 B1 - Single-Family Detached; B4 - Village Twin; B5 - Single-Family Detached Cluster

Table 2 - Planting Options

Buffer Yard Class	Width of Buffer Yard	Options (Choice of one within Class Category)
A	25 feet	(1) 1 canopy tree per 40-feet; plus 1 evergreen tree per 60-feet
		(2) 1 flowering tree per 40-feet; plus 1 evergreen tree per 60-feet
B	50 feet	(1) 1 canopy tree per 40-feet; plus 1 flowering tree per 60-feet; plus 1 evergreen tree per 60-feet
		(2) 1 canopy tree per 40-feet; plus 1 flowering tree per 60-feet; plus 1 hedge on lot line (three-foot enters except as noted in table 3.d)
		(3) 1 flowering tree per 40-feet; plus 1 evergreen tree per 25-feet
C	100 feet	(1) 1 canopy tree per 40-feet; plus 1 evergreen tree per 20-feet; plus 1 shrub per four-feet
		(2) 1 flowering tree per 40-feet; plus 1 evergreen tree per 20-feet; plus 1 hedge on lot line (three-foot enters except as noted in table 3.d)
		(3) 1 flowering tree per 40-feet; plus 1 evergreen tree per 20-feet; plus 1 berm four-feet high

TABLE 3 – Plant Materials List

- a. Canopy Trees (2 inches caliper minimum)
  - Acer ginnala - Amur Maple
  - Acer rubrum - Red Maple
  - Acer saccharum - Sugar Maple
  - Betula alba - European White Birch
  - Cercidiphyllum japonicum – Katsura tree
  - Fagus grandifolia - American Beech \*
  - Fagus sylvatica - European Beech \*
  - Fraxinus americana - White Ash
  - Fraxinus pennsylvania lanceolata - Green Ash
  - Ginkgo biloba - Ginkgo (male only)
  - Gleditsia triacanthos inermis - Thornless Honey Locust
  - Liquidambar styraciflua - Sweet Gum
  - Liriodendron tulipifera - Tulip Tree \*
  - Nyssa sylvatica – Black Gum \*
  - Phellodendron amurense - Amur Cork Tree
  - Platanus acerifolia - London Plane Tree
  - Quercus alba - White Oak
  - Quercus rubra - Red Oak

Quercus coccinea - Scarlet Oak  
 Quercus palustris - Pin Oak  
 Quercus phellos - Willow Oak  
 Robinia pseudoacacia inermis - Thornless Black Locust  
 Sophora japonica - Japanese Pagodatree  
 Tilia-Linden - all species hardy to the area  
 Zelkova serrata - Japanese Zelkova  
 \* Not to be used as street trees or shade trees

b. Flowering Trees (2 inches caliper minimum)

Amelanchier canadensis - Shadblow Serviceberry  
 Cornus florida - Flowering Dogwood  
 Cornus kousa - Kousa Dogwood  
 Cornus mas - Cornelian Cherry  
 Crataegus phaenopyrum - Washington Hawthorn  
 Koelreuteria paniculata - Golden Rain Tree  
 Laburnum vossii - Goldenchain  
 Magnolia soulangiana - Saucer Magnolia  
 Magnolia virginiana - Sweetbay Magnolia  
 Malus baccata - Siberian Crab  
 Malus floribunda - Japanese Flowering Crab  
 Malus hopa - Hopa Red-Flowering Crab  
 Oxydendrum arboreum - Sourwood  
 Pyrus calleryana - Callery Pear (Redspire and Chanticleer)  
 Prunus kwanzan - Kwanzan Cherry  
 Prunus yedoensis - Yoshino Cherry

c. Evergreen Trees (4 feet high minimum)\*\*

Ilex opaca - American Holly  
 Picea abies - Norway Spruce  
 Picea omorika - Serbian Spruce  
 Picea pungens - Colorado Spruce  
 Pinus nigra - Austrian Pine  
 Pinus strobus - White Pine  
 Pseudotsuga menziesii - Douglas Fir  
 Tsuga canadensis - Canada Hemlock

\*\* It is recommended that two or more species of evergreen trees be used in a buffer yard.

d. Hedge (4 feet high minimum)

Crataegus intricata - Thicket Hawthorn  
 Forsythia intermedia - Border Forsythia  
 Rhamnus frangula columnaris - Tallhedge Buckthorn  
 Juniperus virginiana - Upright Juniper  
 Pinus strobus - White Pine (1 per 5 feet)  
 Pyracantha lalandei - Laland Firethorn  
 Taxus cuspidata - Upright Yew  
 Taxus hicksii - Hicks Yew  
 Tsuga canadensis - Canadian Hemlock (1 per 5 feet)  
 Thuja occidentalis - American Arborvitae (1 per 5 feet)

e. Shrubs (4 feet high minimum)

Enkianthus campanulatus – Redvein Enkianthus  
 Euonymus alatus - Winged Euonymus  
 Hamamelis vernalis - Vernal Witch Hazel  
 Hamamelis virginiana - Common Witch Hazel  
 Ilex verticillata - Winterberry  
 Rhamnus frangula - Glossy Buckthorn

Vaccinium corymbosum – Highbush Blueberry  
Viburnum dentatum - Arrowwood Viburnum  
Viburnum lantana - Wayfaring Tree Viburnum

d. Open Space Plantings

All open space areas shall meet the following landscape requirements.

1. Delineation—The applicant shall provide a method of physically delineating the open space areas from private lots. Such methods shall include shrubbery, trees, markers or other method acceptable to the Board of Supervisors. Evergreens or shrubbery shall be a minimum height of two (2) feet at the time of planting. Deciduous trees shall have a minimum trunk diameter of one and two-half (2 1/2) inches at a height of six (6) inches above the finished grade at the time of planting. Trees, shrubbery or markers shall be placed on the linked open space at its boundary. Where hedge plants material is provided as screening or a barrier between private lots and open space areas, additional markers or plant material for delineation are not necessary.

2. Screening—Where private lots abut or are within thirty (30) feet of open space areas, the applicant shall provide screening between the lots and the open space area. The screening material shall be placed on the open space no closer than ten (10) feet from the boundary of the open space. The following plant material list is approved for the purpose of screening:

a. Deciduous Shrub/Small Tree Screens—The following list consists primarily of deciduous multistemmed shrubs, ranging from five (5) to twenty (20) feet in height at maturity which tolerate or prefer moist to wet soil conditions. The intent is to provide a visual edge and, to some extent, a physical barrier to separate private property from public open space. The plants shall be placed on three (3) foot centers.

Aronia arbutifolia—Red Chokeberry  
Aronia melanocarpa—Black Chokeberry  
Cornus alba—Tatarian Dogwood  
Cornus sericea—Red Osier Dogwood  
Hydrangea arborescens—Wild Hydrangea  
Ilex glabra—Inkberry  
Ilex verticillata—Winterberry  
Myrica pensylvanica—Bayberry  
Rosa palustris—Swamp Rose  
Sambucus canadensis—American Elderberry  
Viburnum dentatum—Arrowwood Viburnum  
Viburnum lentago—Nannyberry  
Viburnum opulus—European Cranberrybush  
Viburnum trilobum—American Cranberrybush

b. Evergreen Screens—Trees listed below are medium to large evergreens which will provide a major visual screen or barrier year round. These trees prefer or tolerate moist to wet soil conditions. The trees shall be placed on six (6) foot centers.

Thuja occidentalis—American Arborvitae  
Tsuga canadensis—Eastern Hemlock  
Tsuga caroliniana—Carolina Hemlock

Pinus strobus—White Pine

3. Forestation—The applicant shall provide forest cover in the open space area where portions of the open space are not forested except where provision is made for the continued maintenance of the non-forested areas. The trees shall be placed on eight (8) foot centers or 680 trees per acre in a random pattern.

Section 521 Tree Protection Standards

a. General Requirements

1. Grade changes and excavations shall not encroach upon the tree protection zone (TPZ).
2. No toxic materials shall be stored within one hundred (100) feet of a TPZ, including petroleum-based and/or derived products.
3. The area within the TPZ shall not be built upon, nor shall any materials be stored there either temporarily or permanently. Vehicles and equipment shall not be parked in the TPZ.
4. When tree stumps are located within ten (10) feet of the TPZ the stumps shall be removed by means of a stump grinder to minimize the effect on surrounding root systems.
5. Tree roots which must be severed shall be cut by a backhoe or similar equipment aligned radially to the tree. This method reduces the lateral movement of the roots during excavation, which if done by other methods could damage the intertwined roots of adjacent trees.
6. Within four (4) hours of any severance of roots, all tree roots that have been exposed and/or damaged shall be trimmed cleanly and covered temporarily with moist peat moss, moist burlap or other moist biodegradable material to keep them from drying out until permanent cover can be installed.
7. Sediment, retention and detention basins shall not discharge into the TPZ.
8. Sediment, retention and detention basins shall not be located within the TPZ.

b. The Tree Protection Zone (TPZ)

Prior to construction the tree protection zone shall be delineated by the following methods:

1. The TPZ that is delineated on the site prior to construction shall conform to the approved development plans.
2. All trees scheduled to remain shall be marked; where groups of trees exist, only the trees on the edge need to be marked.
3. Fencing, at least thirty-six (36) inches high, approved by the Township Engineer, shall be placed along the boundary of the TPZ.

4. In addition to the TPZ, trees may be left standing as protection between the trunks of the trees to be retained and the limits of grading. When additional trees are used as protection, the TPZ on the approved plan shall be marked in the field so that the additional buffer area is delineated. When this method of protection is used, these additional trees shall be removed at the time of completion of the project.
  5. When the fencing has been installed, it shall be inspected and approved by the municipal arborist or municipal engineer prior to commencing clearing and further construction; the fencing along the TPZ shall be maintained until all work/construction has been completed; any damages to the protective fencing shall be replaced and repaired before further construction shall begin.
  6. Trees being removed shall not be felled, pushed, or pulled into a TPZ or into trees that are to be retained.
- c. Retaining Walls
1. When the original grade can not be retained at the TPZ line, a retaining wall shall be constructed outside of the TPZ.
  2. The retaining wall design shall be approved by the Township Engineer.
  3. In addition the following methods shall be used to ensure survival of the tree:
    - i. The top of the wall shall be four (4) inches above the finished grade line.
    - ii. The wall shall be constructed of large stones, brick, building tile, concrete blocks, or treated woodbeams not less than six (6) inches by six (6) inches; a means for drainage through the wall shall be provided so water will not accumulate on either side of the wall; weep holes shall be required with any wall.
    - iii. Any severed roots as a result of excavation shall be trimmed so that their edges are smooth and are cut back to a lateral root if exposed.
    - iv. A layer of clean stone (sized three-quarter (.75) to one (1) inch) shall be placed one (1) foot out from the wall to aid in drainage.
- d. Pruning Methods
- All final cuts shall be made sufficiently close to the trunk or parent limb but without cutting into the branch collar or leaving a protruding stub, according to the National Arborist Association standards. All necessary pruning cuts must be made to prevent bark from being torn from the tree and to facilitate rapid healing. Flush cuts are unacceptable.
- e. Fertilization Methods
1. All trees which have experienced any disturbance or have had damages to the roots or branches shall be fertilized.
  2. Trees shall be fertilized in early fall (September–October) or midspring (April–May). Fall applications are preferred.

3. Fertilizer shall be broadcast over the soil surface in an area twice the size of the TPZ at the rates given below in 5. A minimum of 1000 square feet per tree will receive fertilization.
4. Fertilizer grade shall have approximately 3 parts nitrogen to 1 parts phosphorus and potassium (3-1-1 ratio).
5. Fertilizer shall be applied at a rate equivalent to 1 pound nitrogen per 1000 square feet.

Example: How much 20-8-8 fertilizer needed to apply 1 pound nitrogen over 1000 square feet

Need 1 lb. nitrogen

$$.20 X = 1$$

$$X = 1/20$$

$$X = 5 \text{ lbs.}$$

5 lbs. 20-8-8 should be broadcast over a 1000 square foot area.

f. Trenching and Tunnelling

1. If there is no alternative but to locate a utility line through a TPZ, tunnelling shall be used instead of trenching, except where in the opinion of the municipal arborist, survival of the tree would not be affected by either method. The municipal arborist shall determine the most desirable location for the utility line.
2. Trenches shall be filled as soon as possible, and tamped lightly to avoid air spaces.

Section 522 Open Space Standards

a. General

1. All major residential subdivisions and all non-residential subdivisions and land developments shall meet the open space requirements of the Zoning Ordinance. The amount of open space shall be determined in accordance with the provisions of the Zoning Ordinance. All subdivision and land development plans shall contain such material as required to establish the method by which the open space shall be perpetuated, maintained and administered. Open space shall not include land occupied by commercial, industrial, residential or other non-recreational uses, land reserved for future parking areas for non-recreational uses, stormwater detention or retention basins, areas occupied by sewage disposal systems, (including but not limited to, community sewage treatment systems, spray fields and other sewage facilities), and/or the yards or lots of dwelling units.
2. The applicant shall provide a method of physically delineating private lots from common open space areas. Such method shall include shrubbery, trees, markers or other methods acceptable to Milford Township.

- b. Design process for developments with required open space
  - 1. Resource Inventory and Analysis. The tract's resources shall be delineated on an Existing Resources and Site Analysis Plan, as required in Section 701.e.
  - 2. Four-Step Design Process. Following the resource inventory and analysis, all developments with required open space shall follow a four-step design process as described below. Applicants will be required to document the design process as described in Section 701.f.
    - (a) Step 1: Delineation of Open Space and Development Areas
      - i. All primary Conservation Areas (floodplains, wetlands and steep slopes) shall be included in the required open space.
      - ii. Additional minimum acreage requirements for open space shall consist of "Secondary Conservation Areas", as approved by the Board of Supervisors.
      - iii. The locations and boundaries of Primary Conservation Areas shall follow the actual boundaries of floodplains, wetlands and slopes as indicated in paragraph i. above.
      - iv. The locations and boundaries of Secondary Conservation Areas shall be based upon the applicant's analysis of the tract's resource features, using the design standards contained in Section 522.c., herein. The applicant shall also be guided by recommendations provided by Milford Township regarding the delineation of Secondary Conservation Areas lands, following the Site Inspection or the Pre-Sketch Conference.
      - v. Development areas constitute the remaining lands of the tract outside of the designated open space.
    - (b) Step 2: Location of Buildings
 

Applicants shall identify building locations in the tract's designated development areas, designed to: fit the tract's natural topography, served by adequate water and sewerage facilities, and provide views of and access to adjoining open space (without encroaching upon them in a manner visually intrusive to users of such areas). Buildings should be located no closer than 25 feet from Primary Conservation Areas.
    - (c) Step 3: Alignment of Infrastructure: Streets, trails, water service, sanitary sewer and stormwater management
      - i. With building locations identified, applicants shall delineate a street system to provide vehicular access to the development in a manner conforming to the tract's natural topography and providing for a safe pattern of circulation and ingress and egress to and from the tract.
      - ii. Streets shall avoid or at least minimize adverse impacts on the open space. To the greatest extent practicable,

wetland crossings and new streets or driveways traversing slopes over 15 percent shall be avoided.

- iii. A tentative network of trails shall also be shown, connecting streets with various natural and cultural features in the conserved open space. Potential trail connections to adjacent parcels shall also be shown in conformance with the Milford Township Greenway Plan. Trails installed by developers should coincide with any approved municipal trail network. A minimum right-of-way width of 25 feet shall be provided for all trails.
- iv. The method of and approximate locations of sanitary sewer, water and stormwater management facilities shall be shown on the plan and described in narrative.

(d) Step 4: Design of Lot Lines

Lot lines for the development should be drawn as the last step in the design procedure. They should follow the configuration of building sites and streets in a logical and flexible manner.

c. Open space design review standards

- 1. List of Resources to be Conserved. The design of open space in any subdivision or land development plan shall reflect the resource protection standards set forth in the zoning ordinance and the standards set forth in Section 522.b, above. The resources to be incorporated into the open space shall be determined through the site inspection, Existing Resources and Site Analysis Plan, consultation with the municipal Open Space Plan and, to the fullest extent possible, shall incorporate the following resources if they occur on the tract:
  - (a) Stream channels, floodplains, hydric soils, swales, springs and other lowland areas, including adjacent buffer areas which may be required to insure their protection.
  - (b) Significant natural areas of species listed as endangered, threatened, or of special concern, such as those listed in the *Pennsylvania Natural Diversity Inventory*.
  - (c) Moderate to steep slopes, particularly those adjoining water courses and ponds, where disturbance and resulting soil erosion and sedimentation could be detrimental to water quality.
  - (d) Woodlands, particularly those performing important ecological functions such as soil stabilization and protection of streams, wetlands and wildlife habitats.
  - (e) Areas where precipitation is most likely to recharge local groundwater resources because of topographic and soil conditions affording high rates of infiltration and percolation.
  - (f) Hedgerows, groups of trees, large individual trees of botanic significance, and other vegetation features representing the site's rural past.

- (g) Class I, II and III agricultural soils as defined by the USDA Natural Resource Conservation Service.
  - (h) Historic structures and sites.
  - (i) Visually prominent topographic features such as knolls, hilltops and ridges, and scenic viewsheds as seen from the public roads (particularly those with historic features).
  - (j) Existing trails connecting the tract to other locations in Milford Township.
2. Other Design Considerations. Open space in new developments shall be configured such that it is:
- (a) Free of all structures except historic buildings, stone walls, and structures related to open space uses. The acreage of lands required for storm water and water supply uses is not credited towards minimum open space acreage requirements for the tract, unless, in the judgment of the Board of Supervisors, the land they occupy is appropriate for passive recreational use. Sewage treatment shall not be permitted in open space.
  - (b) Comprised of contiguous lands and does not include parcels smaller than three acres, have a length-to-width ratio of less than 4:1, or be less than 75 feet in width, except for such lands specifically designed as neighborhood greens, playing fields, trail links or land adjoining the municipal linked open space network.
  - (c) Directly accessible to the largest practicable number of lots within the subdivision. Non-adjoining lots shall be provided with safe and convenient pedestrian access to open space.
  - (d) Suitable for recreational uses to the extent deemed necessary by the Board of Supervisors, without interfering with adjacent dwelling units, parking, driveways, and roads.
  - (e) Interconnected wherever possible to provide a continuous network of open space within and adjoining the development.
  - (f) Providing buffers to adjoining parks, preserves or other protected lands.
  - (g) Linked with trails that are accessible to the residents of the subdivision. Consideration shall also be given to providing for public access on such trails if they are linked to other publicly-accessible pathway systems within Milford Township. Provisions should be made for access to the open space, as required for land management and emergency purposes.
  - (h) Undivided by public or private streets, except where necessary for proper traffic circulation.
  - (i) Suitably landscaped either by retaining existing natural cover and wooded areas and/or according to a landscaping plan to protect existing natural resources.

- (j) Not permitted to be excavated or filled without an approved grading plan for such areas, which shall be submitted to the Board of Supervisors for its review and action.
  - (k) Subject to such agreement with Milford Township and such conservation easements duly recorded in the Office of the Bucks County Recorder of Deeds as may be required by the Board of Supervisors for the purpose of preserving the common open space for such uses.
  - (l) Consistent with the Milford Township Comprehensive Plan, and the Milford Township Open Space Plan.
3. Ownership and Maintenance. Applicants shall demonstrate compliance with Open Space ownership and maintenance standards in the Milford Township Zoning Ordinance.

Section 523 Performance Standard Subdivisions, Planned Residential Developments, and Mobile Home Parks

a. General

- 1. The density, lot area, building requirements, and parking shall in all respects conform to the Zoning Ordinance.
- 2. Preliminary approval of the site plan must be obtained for the entire proposed development. Final approval may be obtained section by section, but such development sections shall be specified on the preliminary plan and must be numbered in the proposed order that they are to be developed. Such order of development must be adhered to, and if changes are required, plans must be refiled, reviewed, and approved.
- 3. Financial Security procedures, as required in Section 601, shall be resolved before final approval of the land development plan, and shall guarantee the improvements by the developer of the streets, sidewalks, curbs, street lighting, street trees, drainage facilities, utilities, and other facilities that the Board of Supervisors may deem necessary.

b. Arrangement of Buildings and Facilities

- 1. All of the elements of the site plan shall be organized harmoniously and efficiently in relation to topography, the size and shape of the plot, the character of the adjoining property, and the type and size of the buildings, in order to produce a usable, efficient, and economical land use pattern.
- 2. Arrangement of buildings shall be in favorable relation to the natural topography, existing desirable planting, bodies of water, views within and beyond the site, and exposure to the sun and other buildings on the site.

c. Access and Circulation

- 1. Access to the dwellings and circulation between buildings and other important project facilities for vehicular and pedestrian traffic shall be safe and convenient for residents and visitors.

2. Access and circulation for fire-fighting and other emergency equipment, moving vans, fuel trucks, garbage collection, deliveries, and snow removal shall be planned for safe, efficient operation and convenience.
  3. Walking distance from the main entrance of a building to a street, driveway, or parking area shall generally be less than one hundred (100) feet; exception to this standard should be reasonably justified by compensating advantages, such as desirable views and site preservation through adaptation to topography. In no case shall the distance exceed two hundred (200) feet except for overflow parking.
- d. Yards
- Yards shall ensure adequate privacy, adequate natural light and ventilation, and convenient access to and around the dwellings.
- e. Grading
1. Grading for buildings, lawns, paved areas and other facilities shall be designed to assure adequate surface drainage, safe and convenient access to and around the buildings, screening of parking and other service areas, and the conservation of desirable existing vegetation and natural ground forms.
  2. Grading around buildings shall be designed to be in harmony with natural topography.
- f. Streets
1. Streets shall be provided on the site where necessary to furnish principal traffic ways for convenient access to the dwellings and other important facilities on the property.
  2. Streets shall conform to the design requirements and specifications in Sections 503 through 510 of this ordinance and other applicable municipal standards.
- g. Driveways
1. Driveways shall be provided on the site where necessary for convenient access to the living units, garages, parking areas, service entrances of buildings, refuse collection stations and all other necessary services. Driveways shall enter public streets at safe locations. See Section 518.
  2. Driveways shall be planned for convenient circulation suitable for traffic needs and safety.
  3. All driveways shall be paved and constructed in accordance with the recommendations of the Municipal Engineer.
- h. Parking Areas
1. Paved parking areas shall be provided to meet the needs of residents and visitors without interference with normal street traffic.
  2. Parking areas shall conform to the standards and requirements of Section 517 in this ordinance and those of the zoning ordinance.

i. Sidewalks

1. Street sidewalks and on-site sidewalks shall be provided for convenience and safe access to all living units from streets, driveways, parking areas, or garages and for convenient circulation and access to all facilities.
2. Width, alignment, and gradient of sidewalks shall provide safety and convenience for pedestrian traffic. Small jogs in the alignment shall be avoided.
3. The alignment and gradient of sidewalks shall be coordinated with the grading plan to prevent the passage of concentrated surface water on or across sidewalks and to prevent the pocketing of surface water on sidewalks.
4. Sidewalks shall be constructed in accordance with the requirements of Section 519 of this ordinance.

j. Refuse Collection Stations

1. Outdoor collection stations shall be provided for garbage and trash and for recyclable materials when individual collection is not made and indoor storage is not provided.
2. Collection stations shall be located so as to be separated adequately from habitable buildings to avoid being offensive, but at the same time, be convenient for both collectors and residents. The refuse collection stations shall be screened and landscaped.

k. Planting

The appeal and character of the site shall be preserved and enhanced by retaining and protecting existing trees and other site features; and additional new plant material shall be added for privacy, shade, beauty of buildings and grounds and to screen out objectionable features. The buffer yards requirement of this Ordinance shall be met.

Section 524 Nonresidential Developments

- a. Additional width of streets adjacent to areas proposed for nonresidential use may be required as recommended by the Planning Commission to the Board of Supervisors to ensure the free flow of through traffic from vehicles entering or leaving parking areas.
- b. The access requirements of Section 509 of this ordinance shall be met.
- c. For commercial uses, the developer may be required to provide separate access for service vehicles and loading areas from the vehicular accessways and parking areas intended for patron use. This may be accomplished by using an alley and separate access point for service vehicles to move from the road to the loading area. The applicant may also be required to screen the loading area when deemed necessary by Milford Township.
- d. Dead-end streets shall be avoided; but where this proves impossible, they shall be terminated with a paved turn-around meeting the requirements of Section 504 of this ordinance.

- e. Adjacent residential areas shall be protected from potential nuisance of the proposed nonresidential developments. Buffer yards shall be provided as prescribed in this ordinance.
- f. Streets carrying nonresidential traffic shall not be extended to the boundaries of the adjacent existing or potential residential areas, nor connected to streets intended for predominantly residential traffic.
- g. Parking areas shall be located or designed in such a manner that they are visibly secluded from eye level in any surrounding residential area. Grading to depress the parking area, raised berms, landscaping, or fencing are satisfactory methods to create such seclusion.
- h. All area, design, and parking requirements shall conform to the Zoning Ordinance.
- i. Refuse Collection for Nonresidential Developments
  - 1. Outdoor collection stations shall be provided for garbage and trash and for recyclable materials when indoor collection is not provided.
  - 2. Collection stations shall be located to avoid being offensive and shall be screened from view and landscaped.

Section 525 Park and Recreation Requirements

- a. General Requirements
  - 1. All subdivisions and land developments shall provide for the acquisition, development and maintenance of adequate recreational facilities to serve those who work and live in the Township. This will be done by coordinating proposals with the findings of the Township's Comprehensive Plan, Open Space Plan, and Park and Recreation Plan. The advice of the Milford Township Park Board will be considered to insure provision of adequate facilities and/ or enhancement of existing recreational areas and facilities.
- b. Land and Facilities Requirements
  - 1. The developer or applicant shall dedicate land suitable for recreational use or contribute a fee-in-lieu of recreational land as provided in this ordinance and agreed by the Board of Supervisors. Recreational land will generally not be accepted until all required improvements are complete and secured by a maintenance bond or suitable financial security.
  - 2. The amount of recreational land and facilities required shall bear a reasonable relationship to the needs generated by the proposed land development. At a minimum:
    - a. Residential developments shall provide 5,000 sq. ft. of recreational land per dwelling unit
    - b. Non-residential developments shall provide 1 sq. ft. recreational land for each 2 sq. ft. of gross building area.
    - c. If the required recreation land generated from the Site Capacity Calculations of the Zoning Ordinance varies from the above requirements, the greater shall apply.

3. The amount of recreational facilities shall be determined by bear a reasonable relationship to the needs generated by the proposed land development. At a minimum:
  - a. Recreational land of 0 to 20,000 sq. ft. – playground equipment or equivalent
  - b. Recreational land of 20,000 sq. ft. to 40,000 sq. ft. – basketball court or equivalent.
  - c. Recreational land of 40,000 sq. ft. to 80,000 sq. ft. – baseball field with backstop or soccer field with goals or equivalent.
  - d. Recreational land of over 80,000 sq. ft. – facilities in an amount commensurate with those required above.
  
- c. Recreational Design Requirements
  1. The land must be suitable for its intended use and shall not include narrow or irregular remnants from lotting or streets and parking
  2. Recreational land should not contain floodplain, wetlands, steep slopes, stormwater facilities, and land designated for other uses.
  3. Recreational land shall not contain utility easements unless the utilities are placed underground with no part of them or their supportive equipment protrudes above the ground.
  
- d. Ownership and Maintenance
  1. Recreational lands and facilities shall be offered to the township for dedication subject to agreements approved by the Board of Supervisors after review by the Township Solicitor.
  2. Where the Board of Supervisors determines that it is not in the public interest to accept dedication, the recreational land shall be owned and maintained by one of the following entities subject to agreements approved by the Board of Supervisors after review by the Township Solicitor:
    - a. A homeowners or condominium association.
    - b. Dedication to an established State, County, or regional organization acceptable to the Board of Supervisors.
    - c. Private ownership if the development has a single owner with rental units subject to restrictions that ensure perpetual dedication of the land for recreational use.
  
- e. Fee in Lieu of Dedication
  1. Where it is determined that dedication of recreational land is not feasible, the Board of Supervisors shall require a fee in lieu of land and facilities.
  2. The fee shall be equal to fair market value of the required land and facilities.
  3. The fee shall be placed into a “Recreational Fee Account” and used only for acquisition of recreational lands and/or installation of recreational facilities including design, engineering, legal and landscaping costs.

4. The fee shall be collected before recording of plans, or as building permits are issued if provided for in a land development and financial security agreement.

## ARTICLE VI. REQUIRED IMPROVEMENTS

### Section 600 Purpose

- a. The purpose of this article is to establish and define the public improvements that will be required by Milford Township to be constructed or cause to be constructed by the applicant. Inspection of improvements shall be the responsibility of Milford Township with the costs paid by the developer.
- b. All improvements shall be constructed in accordance with the specifications of Milford Township.

### Section 601 Application and Guarantee Requirements

- a. The improvements required by this ordinance are minimum requirements. Milford Township reserves the right in any case to increase the same if conditions so warrant in order to protect the health, safety, and welfare of municipal residents.
- b. Before the Board of Supervisors shall approve and endorse final plans of any subdivision or land development and as a requirement for the approval thereof, the developer shall enter into a written agreement with Milford Township in the manner and form set forth by the municipal solicitor, to guarantee the construction and installation of all improvements required by this ordinance at the developer's expense. When requested by the developer, in order to facilitate financing, the Board of Supervisors shall furnish the developer with a signed copy of a resolution indicating approval of the final plan contingent upon the developer obtaining satisfactory financial security. The final plan or record plan shall not be signed nor recorded until the financial security agreement is executed. The contingent approval shall expire and be deemed to be revoked if the financial security agreement is not executed within 90 days unless a written extension is granted by the Board of Supervisors.
- c. No plan shall receive final approval unless the streets shown have been improved to a permanently passable condition, or improved as may be required by this ordinance and any walkways, bikeways, curbs, gutters, street lights, fire hydrants, shade trees, water mains, sanitary sewers, storm drains and other improvements as may be required by this ordinance have been installed. In lieu of the completion of any improvements as may be required by this ordinance, the developer shall furnish to Milford Township a financial security with such surety as the Board of Supervisors shall approve, in an amount sufficient to cover the costs of any improvements that may be required. Such financial security, or other security, shall provide for and secure to the public the completion of any improvements that may be required on or before the date fixed in the formal action of approval or accompanying agreement for completion of improvements. The amount of financial security to be posted for completion of the required improvements shall be equal to 110 percent of the cost of completion estimated as of 90 days following the date scheduled for completion by the developer. Annually, Milford Township may adjust the amount of the financial security by comparing the actual cost of the improvements that have been completed and the estimated cost for the completion of the remaining improvements as of the expiration of the 90th day after either the original date scheduled for completion or a rescheduled date of completion. Subsequent to said adjustment, Milford Township may require the developer to post additional security in order to assure that the financial security equals said 110 percent. Any additional security shall be posted by the developer in accordance with this section.

- d. The amount of financial security required shall be based upon an estimate of the cost of completion of the required improvements, submitted by an applicant or developer and prepared by a professional engineer licensed as such in the Commonwealth of Pennsylvania and certified by such engineer to be a fair and reasonable estimate of such cost. Milford Township, upon recommendation of the Municipal Engineer, may refuse to accept such estimate for good cause shown. If the applicant or developer and Milford Township are unable to agree upon an estimate, the procedures set forth in the Pennsylvania Municipalities Planning Code, Article V, Section 509(g) shall be followed. If the developer requires more than one year from the date of posting of the financial security to complete the required improvements, the amount of financial security may be increased by an additional 10 percent for each one year period beyond the first anniversary date from posting of financial security or to an amount not exceeding 110 percent of the cost of completing the required improvements as re-established on or about the expiration of the preceding one year period by using the above bidding procedure.
- e. In the case where development is projected over a period of years, the Board of Supervisors may authorize submission of final plans by section or stages of development subject to such requirements or guarantees as to improvements in future stages of development as it finds essential for the protection of any finally approved section of the development. As the work of installing the required improvements proceeds, the developer may request the township to release, from time to time, such portions of the financial security necessary for payment to the contractor performing the work. Any such request shall be in writing addressed to the Board of Supervisors, and the Board of Supervisors shall have forty-five (45) days from receipt of such request within which to allow the Municipal Engineer to certify, in writing, to the Board of Supervisors that the improvements have been completed in accordance with the approved plan. If the Board of Supervisors fails to act within the forty-five (45) day period, the Board of Supervisors shall be deemed to have approved the release of funds as requested. The Board of Supervisors may, prior to final release at the time of completion and certification by the Municipal Engineer, require retention of 10 percent of the estimated cost of the aforesaid improvements.
- f. Where the Board of Supervisors accepts dedication of all or some of the required improvements following completion, the Board of Supervisors may require the posting of financial security to secure structural integrity of the improvements as well as the functioning of said improvements in accordance with the design and specifications as depicted on the final plan for a term not to exceed eighteen (18) months from the date of acceptance of dedication. The amount of this financial security shall not exceed 15 percent of the actual cost of installation of the improvements.
- g. If financial security has been provided in lieu of the completion of improvements required as a condition for the final approval of a plan as set forth in this Section, Milford Township shall not condition the issuance of building, grading or other permits relating to the construction of the improvements, including buildings, upon the lots or land as depicted on the final plan. Moreover, if said financial security has been provided, occupancy permits for any building or buildings to be erected shall not be withheld following: the improvement of the streets providing access to and from existing public roads to such building or buildings to a permanently passable condition, as well as the completion of all other improvements as depicted upon the approved plan, either upon the lot or lots or beyond the lot or lots in question if such improvements are necessary for the reasonable use of or occupancy of the building or buildings.

h. Release from Performance Guarantee

1. When the developer has completed all of the necessary and appropriate improvements, the developer shall notify the Board of Supervisors, by certified or registered mail, of the completion of the improvements and shall send a copy to the Municipal Engineer. The Board of Supervisors shall, within ten (10) days after receipt of such notice, direct and authorize the Municipal Engineer to inspect all of the improvements. The Municipal Engineer shall file a report with the Board of Supervisors, and shall mail a copy of the report to the developer by certified or registered mail. The report shall be made and mailed within thirty (30) days after receipt by the Municipal Engineer of the authorization from the Board of Supervisors. This report shall indicate approval or rejection of the improvements, and if the improvements, or any portion thereof, shall not be approved by the Municipal Engineer, this report shall contain a statement of reasons for such nonapproval or rejection.
2. The Board of Supervisors shall, within fifteen days of receipt of the Municipal Engineer's report, notify the developer by certified or registered mail of their actions in response to the Municipal Engineer's review of improvements.
3. If the Board of Supervisors or the Municipal Engineer fails to comply with the time limitation provisions, all improvements will be deemed to have been approved and the developer shall be released from all liability, pursuant to its performance guarantee bond or other security agreement.
4. If any portion of the improvements shall not be approved or shall be rejected by the Board of Supervisors, the developer shall proceed to complete the improvements and, upon completion, the same procedure of notification, as outlined herein, shall be followed.
5. The applicant shall reimburse Milford Township for the reasonable and necessary expense incurred for the inspection of such improvements. Such reimbursement shall be based upon a schedule adopted by resolution and shall be reasonable and in accordance with the ordinary and customary fees charged by the Municipal Engineer or consultant for work performed for similar services in Milford Township, and in no event shall the fees exceed the rate or cost charged by the Municipal Engineer or consultant to Milford Township when fees are not reimbursed or otherwise imposed on applicants. In the event that the applicant disputes the amount of such expense in connection with inspection of improvements, the procedure set forth in the Pennsylvania Municipalities Planning Code (Act 247, as amended), Section 510(g), subsections (1) through (5), shall be adhered to.

i. Remedies for Completion of Improvements

In the event that required public improvements have not been installed as provided in this ordinance or in accordance with the approved final plan, the Board of Supervisors shall enforce the public improvements agreement and draw on the financial security to insure the installation of the public improvements.

Section 602 Revision of Plans

When changes from the accepted drawings and specifications become necessary during construction, written acceptance by the Board of Supervisors shall be secured before the execution of such changes.

Section 603 As-Built Plans

After completion and municipal approval of subdivision or land development improvements as shown on final plans, and before municipal acceptance of such improvements, the developer shall submit to the Board of Supervisors a corrected copy of said plans showing actual dimensions and conditions of streets and all other improvements, certified by an engineer or surveyor to be in accordance with actual construction.

Section 604 Streets

- a. The construction of streets, roads, lanes and driveways, as shown upon final plans and as contained in contract agreements, shall in every respect conform to such requirements as Milford Township may by resolution require for the construction of streets.
- b. Specifications. The minimum requirements for improvements shall be those contained in the Pennsylvania Department of Transportation's Specifications (Form 408) as last revised, and those of Milford Township.
- c. All streets shall be graded as shown on the street profiles and cross-section plan submitted with the preliminary plan and approved with the final plan.
- d. Along the existing street on which a subdivision or land development abuts, improvements shall be made to the street as required by the Board of Supervisors. The improvements to the existing street shall be determined by the width of the required cartway and built to the specifications established by Milford Township.

Section 605 Street Signs and Street Line Painting

- a. The developer shall erect at every street intersection signs having thereon the names of the intersecting streets.
- b. Street signs, including stop, speed limit, and other required signs, are to be erected when the first dwelling on the street is occupied. Temporary street signs may be erected on the approval of the Board of Supervisors but shall be made permanent before final offer for the dedication of roads is made.
- d. Street signs shall be consistent in design with those in general use by Milford Township.
- e. Center and edge lines shall be painted on all streets. Stop bars shall be painted at all stop signs. Other street painting may be required.

Section 606 Street Lights

The developer shall install or cause to be installed, at the developer's expense, metal pole street lights serviced by underground conduit in accordance with a plan to be prepared by the developer's engineer and approved by the Pennsylvania Power & Light Company and by the Board of Supervisors. The equipment of metal poles may be waived in such instances as approved by the Board of Supervisors due to the existence of wooden poles already in place. Provision shall be made for energizing said lighting after twenty (20) percent or more of the dwellings in a given subdivision or land development or section of a subdivision or land development have been occupied. The developer shall be responsible for all costs involved in lighting the streets until such time that the streets are accepted or condemned as public streets by Milford Township. When Milford

Township accepts the streets, Milford Township may by resolution assess all costs of the lighting to the property owners along the street.

Section 607 Monuments

- a. Monuments shall be placed at each change in direction of boundary, at each angle point and at the beginning and end of curves along all roadways, and at every front lot corner where it intersects the street line. Utility easements shall be monumented at their beginning and at their end; and areas to be conveyed for public use shall be fully monumented at their external boundaries.
- b. Monuments shall be placed in the ground after final grading is completed, at a time specified by the Municipal Engineer. The monument shall be concrete, the size and length as may be approved by the Township Engineer.
- c. All monuments shall be certified for accuracy by the developer's engineer, or their accuracy checked by the Municipal Engineer. Accuracy of monument shall be within three-hundredth ( $3/100$ ) of a foot.
- d. In cases where it is impossible to set a monument or where the permanency of a monument may be better ensured by off-setting the monument with a reference monument(s), the Township Engineer may authorize such procedure, provided that proper instrument sights may be obtained and complete offset data is designated on the record plan, A reference monument (preferably two) should be set on the boundary line(s) that intersect the corner.
- e. Metal alloy pins shall be set at all individual lot corners except where concrete monuments are required.

Section 608 Sidewalks

- a. All sidewalks shall be constructed in accordance with Section 519 of this ordinance and municipal specifications. These standards shall apply on all new streets and on existing streets, unless in the opinion of the Board of Supervisors, the sidewalks are unnecessary for public safety and convenience.
- b. Within multifamily building developments, it is required to install sidewalks, on-site walks and curbs for convenience and access to all living units from streets, driveways, parking areas or garages, and for convenient circulation and access to all project facilities.
- c. Width, alignment, and gradient of walks shall provide safety, convenience, and appearance for pedestrian traffic. Small jogs in the alignment shall be avoided.
- d. The alignment and gradient of walks shall be coordinated with the grading plan to prevent the passage of concentrated surface water on or across the walk and to prevent the pocketing of surface water by walks.

Section 609 Curbs

- a. Curbs shall be provided as required by Section 516.
- b. All curbs shall be designed and constructed in accordance with the standards and specifications of Milford Township or the specifications of the Municipal Engineer.

Section 610 Storm Sewerage System

The developer shall construct stormwater drainage facilities (as required by Section 512), including detention and retention basins, curbs, catch basins and inlets, storm sewers, culverts, road ditches, open channels and other structures in order to prevent erosion, flooding and other hazards to life and property. All such facilities are to be of adequate size and grade to hydraulically accommodate maximum potential volumes of flow; and size, type, and installation of all storm drains and sewers shall be constructed in accordance with the plans.

Section 611 Public Water Supply Systems and Centralized Water Supply and Distribution Systems

- a. When a Milford Township Water Authority public water supply system cannot feasibly be provided as determined by Milford Township, the applicant shall provide a private centralized water supply and distribution system for subdivisions and land development where there would be more than twelve (12) dwellings or non-residential buildings in the subdivision or land development. All public and private systems shall be designed to meet the requirements of Milford Township, DRBC, and the Milford Township Water Authority. All centralized water systems shall be offered for dedication to the township. Agreements suitable to the municipal solicitor shall be established for the ownership and maintenance of the system.
- b. The developer shall construct water mains in such a manner as to make adequate water service available to each lot, building or dwelling unit within the subdivision or land development. A minimum pressure of forty (40) pounds per square inch, measured at the house meter, shall be provided at each house or other building to be connected to the water supply main. The water supply must comply with regulations and standards together with amendments of the MTWA, DRBC, and the Commonwealth of Pennsylvania, Department of Environmental Protection (PA DEP).
- c. Public and private centralized water supply systems shall be designed with a minimum capacity of 1200 gallons per minute for residential and 1500 gallons per minute for commercial at each hydrant with a residual pressure of not less than 20 pounds per square inch and the capability to provide fire flows for a two hour fire and a two hour cool-down period. Fire hydrants shall be spaced an average of six hundred feet (600 ft.) between hydrants as acceptable to Milford Township's Fire Prevention Code Official, the Township Engineer, MTWA and approved by the Board of Supervisors.
- d. Consistent with Pennsylvania's Safe Drinking Water Regulations, any new or expanding community water system constructed after October 9, 1995, shall demonstrate that the water supplier either has ownership or substantially controls by a deed restriction (or other acceptable means), the immediate area surrounding the well which may range from a minimum radius of 100 feet up to 400 feet (depending on the pumping rate of the well). Such a determined radius is known as the Wellhead Protection Area (WHP) Zone I. Within Zone I, the water supplier shall prohibit activities which could have an adverse impact on the community water supply well. The water supplier shall discontinue the storage, use, or disposal of any potential contaminant within WHP Zone I, except for chemicals used in the production or treatment of the drinking water. In addition, liquid fossil fuel storage is not permitted in the WHP Zone I, except for emergency power and heat for the water system and only where natural gas is not available. (Under such conditions, liquid fossil fuel storage within WHP Zone I must be carefully contained above ground.)
- e. All on-site wells shall be shown on all plans.

- f. Any person, firm, corporation or other entity who proposes to develop a new ground water withdrawal or expand an existing ground water withdrawal for any purpose outside the Milford Township public water service area shall be required to obtain a protected area permit from the DRBC under this regulation if the new or increased rate of withdrawal from a well or group of wells operated as a system averages more than 10,000 gallons per day over a 30 day period.

Section 612      On-Lot Water Supply System

Where no public water is accessible, and a private centralized water supply and distribution system is not required under section 611, water shall be furnished by the owner on an individual lot basis. If wells are installed on each lot, the well shall be of the drilled type, cased and grout sealed into the bedrock. Centralized water facilities shall conform with the requirements of Milford Township's Water Ordinance.

Section 613      Public Sanitary Sewers

- a. Sanitary sewers shall be installed and connected to the Milford Trumbauersville Area Sewer System within the zoning districts of the Development Areas (Section 304 of the Zoning Ordinance) only when in accordance with the Act 537 Sewage Facilities Plan.
- b. In areas where a sanitary sewer is not yet accessible, but is planned for extension to the subdivision or land development, the developer shall install sewer lines, including lateral connections, as may be necessary to provide adequate service to each lot when connection with the municipal sanitary sewer system is made. The sewer lines shall be suitably capped at the limits of the subdivision or land development and the laterals shall be capped at the right-of-way line. The sewer installation shall include the construction within rights-of-way or easements to bring the sewer to the future connection with the public sanitary sewer system.
  - 1. A sewer shall be considered to be planned for extension to a given area any time after preliminary engineering and related studies have been completed and the construction of facilities adequate to serve the area containing the subdivision or land development has been programmed for completion within a reasonable time.
  - 2. When capped sewers are provided, on-site disposal facilities shall also be provided.
- c. All public sanitary sewers or treatment plants shall be constructed in accordance with the policies and rules and regulations of the Pennsylvania Department of Environmental Protection and the specifications of the MTASA.
- d. No public sanitary sewer or treatment plant shall be constructed until plans and specifications have been submitted to the State Department of Environmental Protection and the MTASA and approved in accordance with existing laws.

Section 614      Private Sewage Disposal System

- a. If public sewer facilities are not available, the owner shall provide for sewage disposal on an individual lot basis in accordance with the Pennsylvania Sewage Facilities Act, Act No. 537, approved January 24, 1966, as amended, and the Bucks County Department of Health Rules and Regulations Governing Individual and Community On-Lot Sewage Disposal Systems, approved November 9, 1995, by the Bucks County Board of Health, as amended.

- b. When on-lot sewage disposal facilities are proposed, a site suitability report conducted by the Bucks County Department of Health, in accordance with the Pennsylvania Sewage Facilities Act (*satisfactory Bucks County Health Department Feasibility Report that the plan is in compliance with the Municipal Act 537 Sewage Facilities Plan*) must be received by Milford Township before approval of the final plan.
- c. A township representative shall be present for all soils testing related to the permitting and installation of all on-lot sewage disposal systems.

Section 615      On-Lot Sewer and Water Locations

The dimensioned location of the on-lot sewage system and the well must be shown on the plan in accordance with the permit for the on-site sewage system issued by the Bucks County Department of Health prior to the issuance of a building permit.

Section 616      Electric, Telephone, and Communication Facilities

- a. All electric, telephone, and communication service facilities, both main and service lines, shall be provided by underground cables, installed in accordance with the prevailing standards and practices of the utility and other companies providing such services.
- b. Where practicable, all utilities shall be located within the street right-of-way but outside the cartway, otherwise, easements or rights-of-way of sufficient width for installation and maintenance shall be provided.
- c. Final plans shall show locations of all utilities and shall be coordinated with required street tree planting and must be approved by the affected utilities.

Section 617      Grading

- a. Grading shall conform in all respects to the final plan.
- b. No topsoil or sub-soil shall be permitted to be removed from the site without written consent of the Board of Supervisors.
- c. The minimum grade over lawn areas, excluding channels within detention basins or BMP swales, shall be 2%.

Section 618      Landscaping

- a. Street trees and other required planting shall be installed in accordance with Section 520 of this ordinance before a Use and Occupancy permit is issued.
- b. Street trees and other required plant material shall not be planted until the finished grading of the subdivision or land development has been completed.
- c. Plans for proposed street planting or buffer zone plantings shall be reviewed and approved by the Board of Supervisors.

Section 619      Community Facilities

As outlined in Section 502 of this ordinance, additional community facilities may be determined necessary to serve the proposed lots or dwellings in a subdivision or land development. Where a proposed park, playground, or other public facility shown in the comprehensive plan or parts thereof is located in whole or in part in a subdivision or land development, the dedication or reservation of such area may be required by the Board of

Supervisors in those cases in which it deems such requirements to be reasonable. Areas identified for link parks in the Quakertown Area Linked Open Space Plan and the Milford Township Park and Recreation Plan may be required for dedication or reservation.

Section 620      Special Drainage Problems Flood Plain Areas

- a.      The Board of Supervisors may, when it deems necessary for the health, comfort, safety, or welfare of the present and future population of the area, and necessary to the conservation of water, drainage, and sanitary facilities, prohibit subdivision of any portion of the property which lies within the flood plain of any stream or drainage course. Floodways are subject to restrictions of the Zoning Ordinance.
- b.      The areas referred to in (a) above shall be preserved from any and all destruction or damage by clearing; grading; or dumping of earth, waste material, stumps, or other material of any kind.
- c.      For any proposed alteration of a stream, the applicant shall show evidence that all required approvals by state agencies have been granted.
- d.      Within the flood plain, the following provisions shall be met:
  1.      Drainage - Storm drainage facilities shall be designed to detain or convey the flow of stormwater runoff in a safe and efficient manner. The system shall ensure drainage at all points along streets, and provide positive drainage away from buildings and on-site waste disposal sites. Plans shall be subject to the approval of the Board of Supervisors. Drainage plans shall be consistent with local and regional drainage plans. The facilities shall be designed to prevent the discharge of runoff onto adjacent properties.
  2.      Sewer Facilities - All sanitary sewer systems located in any designated floodplain, whether public or private, shall be flood-proofed to and including water tight manholes. All other facilities shall be at least 1.5 feet above the 100 year flood elevation. No on-site system shall be located in the flood plain.
  3.      Water Facilities - All water systems and facilities shall meet the standards of the MTWA and DEP.
  4.      Other Utilities and Facilities - All other public and private utilities and facilities including gas and electric shall be elevated or flood-proofed to one and one-half (1.5) feet above the 100-year flood elevation.

## ARTICLE VII

## PLAN REQUIREMENTS

### Section 700 Sketch or Feasibility Plan

- a. Sketch Plan submission is very strongly encouraged by Milford Township as a way of helping applicants and officials develop a better understanding of the property and to help establish a creative design approach that respects its special or noteworthy features. Such sketch plans should be submitted on an informal basis as a means of initiating very early discussions with the Planning Commission and the Board of Supervisors regarding the overall layout of the subdivision or land development. The importance of engaging in this informal first stage of discussion cannot be overemphasized.
- b. To provide a full understanding of the site's potential and to facilitate the most effective exchange with the Planning Commission, the sketch plan should include the information listed below. Many of these items can be taken from the Existing Resources and Site Analysis Plan, a document that must in any case be prepared and submitted no later than the date of the site inspection (described in Section 701), which precedes the Preliminary Plan review (see sections 402 and 701). In fact, the sketch plan may be prepared as a simple overlay sheet placed on top of the Existing Resources and Site Analysis Plan.
  1. Name of subdivision or land development;
  2. Tax Parcel Number (Bucks County Tax Map), should be shown directly beneath the name of the subdivision or land development;
  3. Name and address of the owner/applicant/developer;
  4. Name and address of engineer, surveyor, architect, or landscape architect responsible for the plan;
  5. A brief description of the proposal;
  6. Tract boundaries;
  7. Date of plan;
  8. True north point;
  9. Location map;
  10. Streets on and adjacent to the tract;
  11. Significant topographical and physical features, including contours based on U.S. Coast and Geodetic maps and all natural resources for which the Zoning Ordinance establishes protection standards;
  12. Site capacity calculations using the standards of the Zoning Ordinance;
  13. Proposed general street layout;
  14. Proposed general lot layout;
  15. Location of construction (for land developments).

16. Graphic scale (not greater than 1" = 200 ft.; however, dimensions on the plan need not be exact at this stage) and north arrow.
  17. Zoning district on the subject tract and all adjoining parcels.
  18. 100-year floodplain limits, and approximate location of wetlands, if any.
  19. Topographic, physical, and cultural features including fields, pastures, meadows, wooded areas, trees with a diameter of fifteen inches or more, hedgerows and other significant vegetation, steep slopes (over 25%), rock outcrops, soil types, ponds, ditches, drains, dumps, storage tanks, streams within two hundred (200) feet of the tract, and existing rights-of-way and easements, and cultural features such as all structures, foundations, walls, wells, trails, and abandoned roads.
  20. Schematic layout indicating a general concept for land conservation and development ("bubble" format is acceptable for this delineation of Step One of the four-step design process described in Section 522 of this ordinance).
  21. General description of proposed method of water supply, sewage disposal, and stormwater management.
  22. Identification of habitat of threatened or endangered species.
- b. Additional material for Residential Performance Standard Subdivisions, mobile home parks, conservation design subdivisions and Planned Residential Developments (also subject to the PRD requirements of the Zoning Ordinance).
1. An Existing Resources and Site Analysis Plan as required in Section 701, showing (1) soil types, flood plains, high water table, etc., (2) vegetation, woodlands and large trees, (3) drainage ways, streams, swales, and ponds.
  2. General site plan showing types of buildings, number and size of units, required open space ratio and maximum impervious surface ratio.
  3. Written statement indicating the method for administration and maintenance of open space.

#### Section 701 Preliminary Plan

The preliminary plan shall be submitted in accordance with Section 400 and 405 of this ordinance and shall provide the name and address of the legal owner or equitable owner of the subject property, and the name and address of the applicant if not the same party, plus the elements listed below. A deed or agreement of sale evidencing that the applicant is the legal or equitable owner of the land to be subdivided or developed shall be submitted.

- a. Preliminary Plan Application Submission Requirements
1. The submission requirements for a preliminary Plan shall consist of the following elements, and shall be prepared in accordance with the drafting standards and plan requirements described herein:
    - (a) Site Context Map
    - (b) General Information

- (c) Existing Resources and Site Analysis Plan
- (d) Four-Step Design Process
- (e) Preliminary Resource Impact and Conservation Plan
- (f) Proposed Layout Plan

b. Drafting Standards

1. All plans, with the exception of the site context map, shall be drawn at a scale of 1" = 100' or larger (1" = 50', etc.).
2. Dimensions shall be set in feet and decimal parts thereof; and bearings in degrees, minutes and seconds.
3. Each sheet shall be numbered and shall show its relationship to the total number of sheets.
4. Where any revision is made, or when the plan is a revision of a previously approved plan, dotted lines shall be used to show features or locations to be abandoned and solid lines shall show the currently proposed features. All revisions shall be noted in a revision block with the revision date, a note of explanation and reference to the page on which the revision is to be found.
5. The plan shall be so prepared and bear an adequate legend to indicate clearly which features are existing and which are proposed.
6. The boundary line of the subdivision or land development shall be shown as a solid heavy line.
7. Plans shall be on sheets of 24" x 36" and all lettering shall be so drawn as to be legible if the plan should be reduced to half size.

c. Site Context Map

A map showing the location of the proposed subdivision within its neighborhood context shall be submitted. For sites under 100 acres in area, such maps shall be at a scale not less than 1" = 100', and shall show the relationship of the subject property to natural and man-made features existing within 1,000 feet of the site. For sites of 100 acres or more, the scale shall be 1" = 400', and shall show the above relationships within 2,000 feet of the site. The features that shall be shown on Site Context Maps include topography (from U.S.G.S. maps), stream valleys, wetland complexes (from maps published by the U.S. Fish & Wildlife Service or the U.S.D.A. Natural Resources Conservation Service), woodlands over one-half acre in area (from aerial photographs), ridge lines, public land, and land protected under conservation easements.

d. General Information

1. Name of subdivision or land development;
2. Tax Parcel Number (Bucks County Tax Map), should be shown directly beneath the name of the subdivision or land development;
3. Name and address of the owner/applicant/developer;

4. Name and address of the registered engineer, surveyor, landscape architect, or architect responsible for the plan;
  5. A brief description of the proposal;
  6. Type of water supply and sewage disposal facilities proposed in accordance with Sections 611, 612, 613, and 614 of this ordinance with an Indication of compliance with the Pennsylvania Sewage Facilities Act, Act No. 537, approved January 24, 1966, as amended;
    - (a) Public Sewer—Certification from the Milford Trumbauersville Area Sewer Authority indicating that sewerage service and capacity are available for lots proposing to use a public sewerage system.
    - (b) On-Lot Sewer—A site suitability report conducted by the Bucks County Department of Health and a letter of approval from the Pennsylvania Department of Environmental Protection (PaDEP) certifying that the proposal is consistent with the Pennsylvania Sewage Facilities Act and the Milford Township Sewage Facilities Plan (Act 537).;
  7. Zoning requirements including applicable district, lot size and yard requirements and proof of any variances or special exception which may have been granted;
  8. A location map for the purpose of locating the site at a scale of not less than 800 feet to the inch showing the relation of the tract to all adjoining properties and streets, roads and municipal boundaries, as well as the habitat of threatened and endangered species, existing within one 1,000 feet of any part of the property proposed to be subdivided or developed.;
  9. Total acreage of the tract;
  10. Date, true north point and scale;
  11. Signature blocks.
- e. Existing Resources and Site Analysis Plan

For all subdivisions (except those in which all proposed lots are to be ten or more acres in area), an Existing Resources and Site Analysis Plan shall be prepared to provide the developer and Milford Township with a comprehensive analysis of existing conditions, both on the proposed development site and within 500 feet of the site. Conditions beyond the parcel boundaries may be described on the basis of existing published data available from governmental agencies, and from aerial photographs.

Milford Township shall review the Plan to assess its accuracy, conformance with municipal ordinance, and likely impact upon the natural and cultural resources on the property. The following information shall be included in the Plan:

1. Complete outline survey of the property to be subdivided or developed showing all courses, distances and area, and tie-ins to all adjacent intersections;

2. The location, names, and widths of streets; the location of property lines and names of owners; the location of water courses, sanitary sewers, storm drains, and similar features within four hundred (400) feet of any part of the land to be subdivided or developed;
3. Location of all existing monuments and pins;
4. Location, size, and ownership of all rights-of-way and/or easements for all drainage, utilities, or other purposes, all underground utility lines shown on the plan pursuant to Act 287 of 1974, along with a notation that the utility company be contacted prior to construction;
5. Contours at vertical intervals of two (2) feet for land with average natural slope of fifteen (15) percent or less; vertical intervals of five (5) feet for more steeply sloping land; Datum to which contour elevations refer; where reasonably practicable, data shall refer to known, established datum.
6. Location of existing buildings and/or structures, the use of each building/structure, existing wells, on-lot sewage disposal systems, driveways, parking and other existing paved areas, and survey monuments;
7. Identification of all historically significant buildings or structures within the property or any adjacent property;
8. The location and delineation of ponds, streams, ditches, drains, and natural drainage swales, as well as the 100-year floodplains, wetlands, and steep slopes as defined in the Zoning Ordinance. Additional areas of wetlands on the proposed development parcel shall also be indicated, as evident from testing, visual inspection, or from the presence of wetland vegetation.
9. Vegetative cover conditions on the property according to general cover type including cultivated land, permanent grass land, meadow, pasture, old field, hedgerow, woodland and wetland, trees with a caliper in excess of fifteen inches, the actual canopy line of existing trees and woodlands. Vegetative types shall be described by plant community, relative age and condition.
10. Soil series, types and phases, as mapped by the U.S. Department of Agriculture, Natural Resources Conservation Service in the published "medium intensity" soil survey for the county (generally accurate to two-acre areas), and accompanying data published for each soil relating to its suitability for construction (and, in unsewered areas, for septic suitability).
11. Ridge lines and watershed boundaries.
12. A view shed analysis showing the location and extent of views into the property from public roads and from public parks, public forests, and state game lands.
13. Geologic formations on the proposed development parcel, including rock outcroppings covering 25 square feet or more, cliffs, escarpments, sinkholes, and fault lines, based on available published information or more detailed site data obtained by the applicant.

14. Location and dimensions of all existing man-made features including but not limited to streets, driveways, farm roads, woods roads, buildings, foundations, walls, wells, drainage fields, dumps, utilities, fire hydrants, and storm and sanitary sewers.
15. Locations of trails that have been in public use (pedestrian, equestrian, bicycle, etc.).
16. All easements and other encumbrances of property which are or have been filed of record with the Recorder of Deeds of Bucks County shall be shown on the plan.
17. Site capacity calculations, using the standards of the Zoning Ordinance.
18. An aerial photograph enlarged to a scale not less detailed than 1 inch = 400 feet, with the site boundaries clearly marked.

f. Four-Step Design Process for Subdivisions and Land Developments with required open space

All Preliminary Plans with required open space shall include documentation of a four-step design process in determining the layout of proposed conservation areas (hereinafter called "open space"), building sites, streets and lot lines, as described below.

1. Step 1: Delineation of Open Space

- (a) The minimum percentage and acreage of required open space shall be calculated by the applicant and submitted as part of the Sketch Plan or preliminary Plan in accordance with the provisions of this ordinance and of the zoning ordinance. Open Space shall include all Primary Conservation Areas and those parts of the remaining buildable lands with the highest resource significance, as described below.
- (b) Proposed open space shall be designated using the Existing Resources and Site Analysis Plan as a base map. Milford Township's maps of conservation lands in the Comprehensive Plan, Open Space Plan and Park and Recreation Plan shall also be referenced and considered. Primary Conservation Areas shall be delineated comprising floodplains, wetlands and slopes over 25 percent.
- (c) In delineating Secondary Conservation Areas, the applicant shall prioritize natural and cultural resources on the tract in terms of their highest to least suitabilities for inclusion in the proposed open space, in consultation with the Planning Commission and in accordance with Section 522 c.1 and 2 herein ("List of Resources to be Conserved" and "Other Design Considerations").
- (d) In developments not served by public sewer, due considerations shall be given to the reservation of the most suitable soils on the property for septic sewage disposal. When lots are not sufficiently large to accommodate individual wells and on-lot septic drainage fields (plus "reserve areas" for future use), such lots shall be "designed around" conservation areas having suitable soil conditions, where off-lot septic systems may be

installed. Such systems may be either individual or shared, and may take the form of traditional filter beds, spray irrigation fields, or any other system meeting applicable local, county, and state regulations.

- (e) Similarly, the conservation open space identified at this stage of the design process shall include locations where stormwater management facilities may be installed. These facilities shall generally take the form of compact "rain gardens" and infiltration trenches situated at frequent intervals along the street system to intercept part of the stormwater flow and allow it to be absorbed into the ground closer to its source, and much larger detention basins that shall generally be designed as broad shallow areas with good recharge potential, which can be artfully blended into the overall landscape with grace and subtlety. Such facilities shall not even remotely resemble the conventional "impact crater" design typical of suburban subdivisions in recent decades.
- (f) On the basis of those priorities and practical considerations given to the tract's configuration, its context in relation to resources areas on adjoining and neighboring properties, and the applicant's subdivision objectives, Secondary Conservation Areas shall be delineated to meet at least the minimum area requirements for open space and in a manner clearly indicating their boundaries as well as the types of resources included within them.

2. Step 2: Location of Buildings

Buildings shall be tentatively located, using the proposed open space as a base map as well as other relevant data on the Existing Resources and Site Analysis Plan such as topography and soils. Buildings shall be located at least 25 feet from Primary Conservation Areas, taking into consideration the potential views and visual settings for occupants of the new development. Buildings shall be so located to avoid having the rear of buildings visible from public streets.

3. Step 3: Alignment of Infrastructure: Streets, trails, water service, sanitary sewer and stormwater management

Upon designating the building sites, a street plan shall be designed to provide vehicular access to the development which reflects a logical relationship to topographic conditions. Impacts of the street plan on proposed open space shall be minimized, particularly with respect to crossing environmentally sensitive areas such as wetlands and traversing slopes exceeding 15 percent. Street connections shall generally be encouraged to minimize the number of new cul-de-sacs to be maintained by Milford Township and to facilitate access to and from homes in different parts of the tract (and adjoining parcels).

Applicant shall also indicate the locations and method for providing water service, sanitary sewer and stormwater management facilities.

4. Step 4: Drawing in the Lot Lines

Upon completion of the preceding three steps, lot lines are drawn as required to delineate the boundaries of individual lots.

5. Documentation

Applicants shall be prepared to submit four separate sketch maps indicating the findings of each step of the design process, if so requested by the Planning Commission or the Board of Supervisors.

g. Preliminary Resource Impact and Conservation Plan

1. A Preliminary Resource Impact and Conservation Plan shall be prepared for all subdivision and land development applications to categorize the impacts of the proposed activities and physical alterations on those resources shown on the Existing Resources and Site Analysis Plan (as required under Section 701.e). All proposed improvements, including but not necessarily limited to grading, fill, streets, buildings, utilities and stormwater detention facilities, as proposed in the other preliminary Plan documents, shall be taken into account in preparing the Preliminary Resource Impact and Conservation Plan, which shall clearly demonstrate that the applicant has conformed to the Environmental Performance Standards of the zoning ordinance and has minimized site disturbance to the greatest extent practicable.
2. Using the Existing Resources and Site Analysis Plan as a base map, impact areas shall be mapped according to the following categories: (1) primary impact areas, i.e., areas directly impacted by the proposed subdivision, (2) secondary impact areas, i.e., areas in proximity to primary areas which may be impacted, and (3) designated protected areas, either to be included in a proposed greenway or an equivalent designation such as dedication of a neighborhood park site.
3. This requirement for a Preliminary Resource Impact and Conservation Plan may be waived by the Board of Supervisors if, in its judgment, the proposed development areas, as laid out in the Sketch Plan or in the preliminary Plan would be likely to cause no more than an insignificant impact upon the site's resources.

h. Proposed layout plan

1. The layout of streets, including width of the streets, alleys and cross-walks;
2. The layout and dimensions of lots;
3. For land developments, the proposed location and dimensions of buildings, parking facilities, service areas, lighting standards, sidewalks and/or pedestrian walkways, and trash receptacles;
4. For multifamily developments, the total areas, total dwelling units, number of buildings, proposed density, total parking spaces, building coverage and the bedroom ratio (percentage of total units with one bedroom, two bedrooms, etc.);
5. A plan for the surface drainage of the tract and a plan to control erosion during and after the construction period as provided in Section 511;
6. Typical cross-sections and center-line profiles provided for each proposed street shown on the preliminary plan; these plans may be submitted as separate sheets.

7. Lots for which other than a residential use is intended.
8. A landscape plan showing proposed contours and required street trees, parking lot plantings, buffers, plant schedule, and other required plantings in accordance with Section 520 of this ordinance;
9. For subdivisions, the total area, number of lots, lot area for each lot, and length of proposed streets shall be noted on the plan with each lot numbered.
10. Building setback lines, established by zoning or other ordinances;
11. Rights-of-way and/or easements proposed to be created for all drainage purposes, utilities or other reasons;
12. Where the preliminary plan covers only a part of the applicant's entire holding, a sketch of the prospective street and lot layout for the remainder;
13. Method of calculating the total number of off-street parking spaces.
14. An encroachment map that illustrates all natural features indicated in Section 701 e 8 & 9, and a regrading plan which illustrates all disturbances of the identified natural feature areas. The amount of each natural feature disturbed shall be indicated and illustrated on the encroachment map.
15. Tree protection zone
  - (a) The location of all trees to be saved, including their trunk and drip-line locations; drip-lines should be plotted accurately, to scale; when groups of trees are to be saved, only the locations of the trees on the perimeter must be shown.
  - (b) The tree protection zone shown on the plan;
  - (c) The location of proposed protection fencing and/or retaining walls around trees;
  - (d) Construction details of all retaining walls, including special soils and fill mediums where applicable; any grade changes that would alter surface and/or subsurface water movement either to or from the tree protection zone must be indicated;
16. Areas to be included in the municipal linked open space system as indicated in the Quakertown Area Linked Open Space Plan and the Milford Township Park and Recreation Plan illustrated with required planting improvements;
17. Transportation Impact Study—Where a proposed subdivision or land development could result in traffic generation of 100 or more trips per day, a transportation impact study shall be prepared in accordance with Zoning Ordinance requirements after consultation with the township;
18. Stormwater Management Plan—The stormwater management plan shall consist of all applicable calculations, maps, and plans. A note on the maps shall refer to the associated computations and erosion and sedimentation control plan by title and date. The cover sheet of the computations and

erosion and sedimentation control plan shall refer to the associated maps by title and date. All stormwater management plan materials shall be submitted to Milford Township in a format that is clear, concise, legible, neat, and well organized; otherwise, the stormwater management plan shall be disapproved and returned to the applicant.

The following items shall be included in the stormwater management plan:

- (a) Written report, including the following information:
  - (1) General description of project
  - (2) General description of permanent stormwater management techniques, including construction specifications of the materials to be used for stormwater management facilities.
  - (3) Complete hydrologic, hydraulic, and structural computations for all stormwater management facilities.
  - (4) Expected project time schedule.
- (b) Map(s) of the project area shall be submitted on 24-inch x 36-inch sheets and shall be prepared in a form that meets the requirements for recording in the offices of the Recorder of Deeds of Bucks County. The contents of the maps(s) shall include, but not be limited to the following:
  - (1) The location of the project relative to highways, municipalities, or other identifiable landmarks.
  - (2) Existing contours at intervals of 2 feet. In areas of steep slopes (greater than 15 percent), 5-foot contour intervals may be used.
  - (3) Existing streams, lakes, ponds, or other bodies of water within the project area.
  - (4) Other physical features including flood hazard boundaries, sinkholes, streams, existing drainage courses, areas of natural vegetation to be preserved, and the total extent of the upstream area draining through the site.
  - (5) The locations of all existing and proposed utilities, sanitary sewers, and water lines within 50 feet of property lines.
  - (6) An overlay showing soil names and boundaries.
  - (7) Proposed changes to the land surface and vegetative cover, including the type and amount of impervious area that would be added.
  - (8) Proposed structures, roads, paved areas, and buildings.

- (9) Final contours at intervals at 2 feet. In areas of steep slopes (greater than 15 percent), 5-foot contour intervals may be used.
- (10) The name of the development, the name and address of the owner of the property, and the name of the individual or firm preparing the plan.
- (11) The date of submission.
- (12) A graphic and written scale of one (1) inch equals no more than fifty (50) feet; for tracts of twenty (20) acres or more, the scale shall be one (1) inch equals no more than one hundred (100) feet.
- (13) A North arrow.
- (14) The total tract boundary and size with distances marked to the nearest foot and bearings to the nearest degree.
- (15) Existing and proposed land use(s)
- (16) A key map showing all existing man-made features beyond the property boundary that would be affected by the project.
- (17) Horizontal and vertical profiles of all open channels, including hydraulic capacity.
- (18) Overland drainage paths.
- (19) A 25-foot wide access easement around all stormwater management facilities that would provide ingress to and egress from a public right-of-way.
- (20) A note on the plan indicating the location and responsibility for maintenance of stormwater management facilities that would be located off-site. All off-site facilities shall meet the performance standards and design criteria specified in this ordinance.
- (21) A construction detail of any improvements made to any geologic or soil hazards (e.g., sinkholes) and the location of all notes to be posted, as specified in this ordinance.
- (22) A statement, signed by the landowner, acknowledging the stormwater management system to be a permanent fixture that can be altered or removed only after approval of a revised plan by Milford Township.
- (23) The location of all erosion and sedimentation control facilities.

(c) Supplemental Information

- (1) A soil erosion and sedimentation control plan, where applicable, including all reviews and approvals, as required by PA DEP.
- (2) A geologic assessment of the effects of runoff on geological and soil hazards (e.g., sinkholes) as specified in this ordinance.
- (3) The effect of the project (in terms of runoff volumes and peak flows) on adjacent properties and on any existing municipal stormwater collection system that may receive runoff from the project site.
- (4) A Declaration of Adequacy and Highway Occupancy Permit from the PENNDOT District Office when utilization of a PENNDOT storm drainage system is proposed.
- (5) When groundwater recharge methods such as seepage pits, beds, or trenches are used, the locations of existing and proposed septic tank infiltration areas and wells must be shown.
- (6) Indication of compliance with the Pennsylvania Sewage Facilities Act. No. 537, approved January 24, 1966, as amended.

i. Improvement Construction Plan (drainage and construction as required by the Municipal Engineer)

1. The improvement construction plan shall be at any of the following scales:

<u>Horizontal</u>	<u>Vertical</u>
20'/inch	2'/inch
50'/inch	5'/inch

Horizontal Plan (streets). The horizontal plan shall show details of the horizontal layout including:

2. Center line with bearings, distances, curve data, and stations corresponding to the profile;
3. Right-of-way and curb lines with radii at intersections;
4. Beginning and end of proposed construction;
5. Tie-ins by courses and distances to intersection of all public roads, with their names and widths;
6. Location of all monuments with reference to them;
7. Property lines and ownership of abutting properties;
8. Location and size of all drainage structures, sidewalks, public utilities, lighting standards, and street name signs;

Horizontal Plan (storm drains and sanitary sewers)

9. Location and size of line with stations corresponding to the profile;
10. Location of manholes or inlets with grade between and elevation of flow line and top of each manhole or inlet.
11. Property lines and ownership where easements are required;
12. Beginning and end of proposed construction;
13. Location of laterals;
14. Location of all other drainage facilities and public utilities in the vicinity of storm and/or sanitary sewer lines;
15. Hydraulic testing data for culverts and/or bridge structures;

Profile (streets)

16. Profile of existing ground surface along center line of street;
17. Proposed center line grade with percent on tangents and elevations at fifty (50) feet intervals, grade intersection and either end of curb radii;
18. Vertical curve data including length, elevations, and minimum sight distance as required by the Municipal Engineer;

Cross Section (streets)

19. Right-of-way width and location and width of paving;
20. Type, thickness, and crown of paving;
21. Type and size of curb;
22. Grading of sidewalk area;
23. Location, width, type and thickness of sidewalks;
24. Typical location of sewers and utilities with sizes;

Profile (storm drains and sanitary sewers)

25. Profile of existing ground surface with elevations at top of manholes or inlets;
26. Profile of storm drain or sewer showing type and size of pipe, grade, cradles, manhole, and inlet locations, and elevations along flow line at fifty (50) foot intervals.

- j. Additional material required for Residential Performance Standard subdivisions, single-family detached clusters, mobile home parks, and planned residential developments (also subject to the requirements of the Milford Township Zoning Ordinance):

1. All open space shall be so identified, and the proposed use and level of maintenance specified. The method of administration and maintenance of the open space shall be detailed;

2. A plan for planting is required for open space; this plan shall show the location of all existing trees greater than twelve (12) inches caliper. All new planting shall indicate species and size;
  3. A table showing net buildable site area calculations as specified in the Zoning Ordinance, open space, number of units, dwelling unit mix, and impervious surface. Regardless of method of ownership, lot lines, buildings, streets, rights-of-way, walks, and other impervious surfaces shall be shown so that the calculations may be verified;
- k. The applicant shall submit a copy of the deed by which the property was acquired; the names of the real (title) owners of the property, the names of all equitable owners, and the names of all option holders.

Section 702 Final Plan

The final plan shall be submitted in accordance with Section 400 and 408 of this ordinance and in accordance with all drafting standards as required in Section 701.b of this ordinance, and shall show or be accompanied by the following information.

- a. All general information as required in Section 701.d of this ordinance;
- b. All existing features as required in Section 701.e of this ordinance.
- c. Proposed Layout
  1. All information required in Section 701.h and i of this ordinance;
  2. Indication of compliance with the Pennsylvania Sewage Facilities Act, Act No. 537, approved January 24, 1966, as amended;
    - (a) Public Sewer—Certification from the Milford Trumbauersville Area Sewer Authority indicating that capacity has been reserved with an agreement with the MTASA
    - (b) On-Lot Sewer—Certification of an approved system by the Bucks County Department of Health including any required operations and maintenance agreement and financial security.
- d. Additional information as required in Section 701.j for Residential Performance Standard subdivisions, single-family detached clusters, mobile home parks and planned residential developments (also subject to the PRD requirements of the Zoning Ordinance;)
- e. A copy of the deed by which the property was acquired; the names of the real (title) owner of the property, the names of all equitable owners, and the names of all option holders

Section 703 Minor Subdivision Final Plan

The minor subdivision plan should be submitted in accordance with Section 400 and 412 of this ordinance and shall show or be accompanied by the following information:

- a. Drafting Standards
  1. The plan shall be drawn at a scale of 1" = 100' or larger (1"= 50', etc.).

2. Dimensions shall be in feet and decimal parts thereof, and bearings in degrees, minutes and seconds.
  3. Where any revision is made, or when the plan is a revision of a previously approved plan, dotted lines shall be used to show features or locations to be abandoned and solid lines shall show the currently proposed features. All revisions shall be noted in a revision block with the revision date, a note of explanation and reference to the page on which the revision is to be found.
  4. Final plans shall be on sheets 24" x 36" and all lettering shall be so drawn as to be legible if the plan should be reduced to half size.
- b. General information to be shown
- All general information as required in Section 701.d of this ordinance.
- c. Existing Features
- All existing features as required in Section 701.e of this ordinance.
- d. Proposed Layout
1. Proposed lot layout;
  2. Lots numbered;
  3. Building setback lines;
  4. Total area of the tract, lot area, and dimensions for each lot;
  5. Indication of compliance with the Pennsylvania Sewage Facilities Act, Act No. 537, approved January 24, 1966, as amended;
    - (a) Public Sewer—Certification from the Milford Trumbauersville Area Sewer Authority indicating that capacity has been reserved with an agreement with the MTASA
    - (b) On-Lot Sewer—Certification of an approved system by the Bucks County Department of Health including any required operations and maintenance agreement and financial security.
  6. An encroachment map which illustrates all natural features indicated in Section 701 e 8 & 9, and a regrading plan which illustrates all disturbances of the identified natural feature areas. The amount of each natural feature disturbed shall be indicated and illustrated on the encroachment map.
  7. Tree protection zone
    - (a) The location of all trees to be saved, including their trunk and dripline locations. Driplines should be plotted accurately, to scale. When groups of trees are to be saved only the locations of the trees on the perimeter must be shown;
    - (b) The tree protection zone shall be shown on the plan;

- (c) The location of proposed protection fencing and/or retaining walls around trees shall be shown;
- (d) Construction details of all retaining walls shall be provided, including special soils and fill mediums where applicable. Any grade changes which would alter surface and/or subsurface water movement either to or from the tree protection zone must be indicated
- e. A copy of the deed by which the property was acquired and the names of the real (title) owner of the property, the names of all equitable owners, and the names of all option holders;
- f. Areas to be included in the municipal linked open space system as indicated in the Quakertown Area Linked Open Space Plan and the Milford Township Park and Recreation Plan shall be illustrated with required planting improvements.

Section 704 Record Plan

The applicant shall submit six record plans, including two mylar and four paper copies (or the number as subsequently required by resolution). Each shall be an exact copy of the approved final plan on a sheet no larger than 24" X 36". If the plan has more pages than those pages to be recorded, one complete paper set is required in addition to the copies of the record plan. In addition, the complete set of plans shall be provided to the township in digital form on CD, Zip disk or other media as accepted by the township.

The following information shall appear on the record plan, in addition to the information required in Sections 702 and 703 for the final plan:

- a. Seals
  - 1. The impressed seal of the licensed engineer, architect, landscape architect, or surveyor who prepared the plan;
  - 2. The impressed corporation seal, if the subdivider is a corporation;
  - 3. The impressed seal of a notary public or other qualified officer acknowledging developer's statement of intent;
  - 4. The impressed seal of Milford Township shall be applied following application of all other required seals.
- b. Acknowledgments
  - 1. A statement to the effect that the applicant is the owner of the land proposed to be subdivided or developed and that the subdivision or development shown on the final plan is made with his or her free consent and that it is desired to record the same;
  - 2. An acknowledgment of said statement before an officer authorized to take acknowledgments;
- c. Standard Notes and Signature Blocks as shown in Appendix.

Section 705      Modification of Requirements

The above requirements for preliminary plans, final plans and record plans, and for supporting data may be modified at the discretion of the Board of Supervisors as warranted by special circumstances provided such modifications meet the requirements of Section 800 hereof.

**ARTICLE VIII. ADMINISTRATION**

Section 800 Modifications (Waivers)

- a. The provisions of this ordinance are the minimum standards for the protection of the public welfare. Milford Township reserves the right to modify or extend them as may be necessary in the public interest.
- b. If the applicant establishes that literal enforcement of any provision of this ordinance will exact undue hardship because of peculiar conditions pertaining to applicants land, the Board of Supervisors may grant a modification in writing to such applicant provided that such modification will not be contrary to the public interest and the purpose and intent of this ordinance.
- c. All requests for modification shall be in writing, signed by the applicant, and shall accompany and be a part of the application for development. The request shall state in full the grounds and facts of unreasonableness or hardship on which the request is based, the provision or provisions of the ordinance involved, and the minimum modification necessary. The request for modification may be referred to the planning commission for advisory comments.
- d. In granting modifications, the Board of Supervisors may impose such conditions as will, in its judgment, substantially secure the objectives of the standards or requirements so modified.
- e. Milford Township shall keep a written record of all action on all requests for modifications.
- f. If a modification is granted, it shall be referenced in the conditions of approval of the plan and shall apply only to that plan.
- g. A listing of any waivers granted shall be placed on the final plan prior to approval by the Board of Supervisors.

Section 801 Fees

The applicant for a subdivision or land development approval shall at the time of making application, pay to Milford Township reasonable and necessary fees in accordance with a fee schedule adopted by resolution of the Board of Supervisors upon the enactment of these regulations or as such schedule may be amended by resolution of the Board of Supervisors.

Section 802 Records

- a. Milford Township shall keep a record of the findings, decisions, and recommendations of the planning commission and Board of Supervisors relative to all subdivision and land development plans filed with it for review or approval.
- b. All records shall be public records.

## ARTICLE IX. AMENDMENTS

### Section 900 Power of Amendments

The Board of Supervisors may, from time to time, amend, supplement, change, modify or repeal this ordinance. When doing so, the Board of Supervisors shall proceed in the manner prescribed in sections 304, 505 and 506 of Article V of the Pennsylvania Municipalities Planning Code, as amended. The pertinent provisions of these sections are summarized below.

- a. Except for an amendment proposed by the municipal planning commission, the Board of Supervisors shall submit any proposed amendment to the municipal planning commission for review and recommendation.
- b. At least 45 days prior to the hearing on the proposed amendment, the Board of Supervisors shall submit any proposed amendment to the Bucks County Planning Commission and the Quakertown Area Planning Committee for review and recommendation. The Board of Supervisors shall take no action to approve or deny any proposed amendment until it has received reports on the proposed amendment from the Bucks County Planning Commission and the Quakertown Area Planning Committee, or until 45 days have been allowed for the receipt of such a report.
- c. Notice of the date, time, and place of the public hearing on the proposed amendment, and the content of such notice, shall be in accordance with Section 506 of the Pa MPC.
- d. In the event substantial amendments are made in the proposed ordinance or amendment, before voting on enactment, the Board of Supervisors, at least 10 days prior to enactment, shall readvertise a brief summary setting forth all the provisions in reasonable detail together with a summary of the amendments.
- e. Within 30 days following adoption, Milford Township shall forward a certified copy of any amendment to this ordinance to the Bucks County Planning Commission.

**ARTICLE X. REPEALER AND EFFECTIVE DATE**

Section 1000 Repealer

The existing subdivision and land development ordinance, adopted \_\_\_\_\_ and entitled \_\_\_\_\_ and all supplements and amendments thereto, are hereby repealed. Provided, however, if the present ordinance is held to be ineffective or invalid by reason of some irregularity in or impediment to its passage, this repealer shall also be ineffective as aforesaid. Then and in that event, the Subdivision and Land Development Ordinance of \_\_\_\_\_, together with its supplements and amendments, would necessarily remain in full force and effect.

Section 1001 Effective Date

This effective date of this Ordinance shall be \_\_\_\_\_.

Section 1002 Enactment

Enacted and ordained into an Ordinance this \_\_\_\_\_ day of \_\_\_\_\_, 2002 \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Attest:

\_\_\_\_\_



**DESIGN ENGINEER CERTIFICATION**

To the best of my knowledge, the plans are in conformity with engineering, zoning, building, sanitation, and other applicable Milford Township Ordinances and Regulations.

\_\_\_\_\_  
Design Engineer Signature

\_\_\_\_\_  
Date

**TOWNSHIP ENGINEER REVIEW**

Reviewed by the Milford Township Engineer this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_.

\_\_\_\_\_  
Township Engineer's Signature

**BUCKS COUNTY PLANNING COMMISSION REVIEW: BCPC No. \_\_\_\_\_**

Certified by the Executive Director of the Bucks County Planning Commission this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
BCPC Signature

**TOWNSHIP PLANNING COMMISSION APPROVAL**

Approved by the Milford Township Planning Commission on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
MTPC Signature

**MILFORD TOWNSHIP BOARD OF SUPERVISORS APPROVAL**

Approved by the Milford Township Board of Supervisors on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Supervisor

\_\_\_\_\_  
Supervisor

\_\_\_\_\_  
Supervisor

## **APPENDIX B Standard Notes**

### **NOTES:**

1. Attention all contractors: locations of all existing utilities shown hereon have been developed from utility company records and/or above-ground inspection of the site. Completeness or accuracy of type, size, depth or horizontal location of underground facilities or structures cannot be guaranteed. Pursuant to requirements of the Pennsylvania Legislative Act Number 38, contractors must verify location and depth of all underground utilities and facilities prior to start of work. Case No. \_\_\_\_\_.
2. The area within the right-of-way of \_\_\_\_\_ is hereby offered for dedication to Milford Township.
3. No plantings or structures other than depicted hereon shall be permitted within the proposed storm sewer and drainage easements. Easements shall be offered for dedication to Milford Township.
4. All units shall be serviced by public sewer and water provided by the Milford-Trumbauersville Area Sewer Authority and the Milford Township Water Authority respectively (or by on-lot wells and on-lot sewage disposal systems) indicate applicable choices.
5. All proposed utilities, including, but not limited to storm, sanitary sewer, water gas, electric, telephone, cable TV facilities for all lots within the development shall be provided by underground service. No new utility poles shall be installed.
6. Typical houses shown on accompanying plans are schematic only. Actual house configurations shall comply with all Milford Township zoning code requirements, setbacks, etc.
7. All construction shall be performed in accordance with PennDOT specifications, publication 408 standards, Milford Township building and construction standards, Milford Trumbauersville Area Sewer Authority standards, and Milford Township Water Authority standards, as applicable.
8. All roof drains, downspouts and sump pumps shall be discharged into subsurface facilities.
9. Streets and stop signs to be placed at all intersections.
10. Handicap parking, curb cuts and ramps shall be provided as required by the Americans with Disabilities Act and Pennsylvania Universal Accessibility Act.
11. Sidewalks to be provided on both sides of all interior streets.
12. All lot corners to have monuments in accordance with the Milford Township Subdivision and Land Development Ordinance.

## Appendix C – Plant Lists

Approved trees for planting include the following:

### Large Trees (over 45 feet in height at maturity)

1. *Celtis laevigata* 'All Seasons'—Sugar Hackberry
2. *Celtis occidentalis*—'Prairie Pride' or 'Magnifica'—Hackberry
3. *Corylus colurna*—Turkish Filbert
4. *Eucommia ulmoides*—Hardy Rubber Tree
5. *Fraxinus pennsylvanica* 'Marshall's Seedless'—Green Ash
6. *Ginkgo biloba*—Ginkgo (male)
7. *Gleditsia triacanthos* var. *inermis*—Thornless Honeylocust
8. *Gymnocladus dioicus*—Kentucky Coffeetree (male)
9. *Liquidambar styraciflua* 'Rotundifolia'—Sweet Gum
10. *Metasequoia glyptostroboides*—Dawn Redwood
11. *Nyssa sylvatica*—Black Gum
12. *Phellodendron amurense*—Amur Cork Tree
13. *Platanus x acerifolia*—London Planetree
14. *Quercus alba*—White Oak
15. *Quercus bicolor*—Swamp White Oak
16. *Quercus rubra*—Red Oak
17. *Quercus coccinea*—Scarlet Oak
18. *Quercus imbricaria*—Shingle Oak
19. *Quercus palustris*—Pin Oak
20. *Quercus phellos*—Willow Oak
21. *Quercus robur* 'Skymaster' ('Pyramich')—Skymaster English Oak
22. *Quercus shumardii*—Shumard Oak
23. *Sophora japonica*—Japanese Scholar Tree (cultivars 'Halka' or 'Regent')
24. *Taxodium distichum*—Bald Cypress
25. *Tilia*-Linden—All species hardy to the area
26. *Ulmus parvifolia*—Lacebark Elm ('Ohio', 'Dynasty' or 'Pathfinder')
27. *Zelkova serrata*—Japanese Zelkova

### Medium Trees (30 to 45 feet in height at maturity)

1. *Acer ginnala*—Amur Maple
2. *Betula nigra*—River Birch
3. *Carpinus betulus*—European Hornbeam
4. *Carpinus betulus* 'Fastigiata'—Upright European Hornbeam
5. *Carpinus caroliniana*—American Hornbeam
6. *Cornus florida*—Flowering Dogwood
7. *Koelreuteria paniculata*—Golden Rain Tree
8. *Phellodendron amurense* 'Macho'—Amur Cork Tree (male trees are seedless)
9. *Prunus x yedoensis*—Yoshino Cherry
10. *Pyrus calleryana*—Callery Pear ('Whitehouse,' 'Aristocrat' or 'Chanticleer')
11. *Quercus acutissima*—Sawtooth Oak
12. *Sorbus alnifolia*—Korean Mountain Ash

### Small Trees (under 30 feet in height at maturity)

1. *Acer campestre* 'Queen Elizabeth'—Hedge Maple
2. *Acer tataricum*—Tatarian Maple
3. *Amelanchier laevis* 'Cumulus' or 'Majestic'—Allegheny Serviceberry
4. *Amelanchier x grandiflora*—Apple Serviceberry (many cultivars)
5. *Crataegus crus-galli* var. *inermis*—Thornless Cockspur Hawthorn
6. *Crataegus x lavalleyi*—Lavelle Hawthorn

7. *Crataegus phaenopyrum* 'Princeton Sentry'—Washington Hawthorn
8. *Maackia amurensis*—Amur maackia
9. *Malus* cultivars—Crabapples (disease resistant emphasized)
10. *Malus floribunda*—Japanese Flowering Crabapple
11. *Malus sieboldii* x *zumi* 'Calocarpa'—Zumi crabapple
12. *Prunus sargentii* 'Accolade'—Flowering Cherry
13. *Prunus sargentii* 'Columnaris'—Columnar Sargent Cherry
14. *Prunus serrulata* 'Amanogawa' or 'Kwanzan'—Japanese Flowering Cherry
15. *Prunus virginiana* 'Shubert'—Shubert Chokeberry
16. *Syringa reticulata* 'Summer Snow' or 'Regent'—Japanese Tree Lilac