

Code of the
Township of Hilltown
Chapter 140
Subdivision and Land
Development

Chapter 140

SUBDIVISION AND LAND DEVELOPMENT

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[HISTORY: Adopted by the Board of Supervisors of the Township of Hilltown 12-26-1995 by Ord. No. 95-9. Amendments noted where applicable.]

GENERAL REFERENCES

Construction codes — See Ch. 65.

Licensing of contractors — See Ch. 68.

Sale of lots within subdivisions — See Ch. 120, Art. I.

Sewers — See Ch. 124.

Stormwater management — See Ch. 134.

Water — See Ch. 157.

Zoning — See Ch. 160.

ARTICLE I

General Provisions

§ 140-1. Title.

This chapter shall be known as the “Hilltown Township Subdivision and Land Development Ordinance.”

§ 140-2. Purpose.

These regulations are adopted for the following purposes:

- A. To protect and provide for the public health, safety, and general welfare of Hilltown Township.
- B. To guide the future growth and development of Hilltown Township, in accordance with the Comprehensive Plan and Act 537 Sewage Facilities Plan of Hilltown Township.
- C. To provide for adequate light, air, privacy; to secure safety from fire, flood, and other danger; and to prevent overcrowding of the land and undue congestion of population.
- D. To protect the character and social and economic stability of Hilltown Township and to encourage the orderly and beneficial development of Hilltown Township.
- E. To protect and conserve the value of land throughout Hilltown Township and the value of building(s) and improvements upon the land and to minimize the conflicts among the uses of land and buildings.
- F. To guide public and private policy and action in order to provide adequate and efficient transportation, water supply, sewerage, stormwater management, schools, parks, playgrounds, recreation, and other public requirements and facilities.
- G. To provide the most beneficial relationship between the uses of land and buildings and the circulation of traffic within Hilltown Township having particular regard to the avoidance of congestion in the streets and highways, and the pedestrian traffic movements appropriate to the various uses of land and buildings, and to provide for the proper location and width of streets and building lines.
- H. To establish reasonable standards of design and procedures for subdivision and resubdivisions, in order to further the orderly layout and use of land; and to insure proper legal descriptions and monumenting of subdivided land.
- I. To insure that public facilities are available and will have a sufficient capacity to serve the proposed subdivision.

- J. To prevent the pollution of air, streams, lakes, and ponds; to assure the adequacy of drainage facilities; to safeguard the water table; and to encourage the wise use and management of natural resources in order to preserve the community and value of the land.
- K. To control stormwater in a manner consistent with the Bucks County Stormwater Management Plan.
- L. To regulate the subdivision and/or development of land within any designated floodplain district in order to promote the general health, welfare, and safety of the community.
- M. To require that each subdivision lot in flood-prone areas include a safe building site with adequate access; and that public facilities which serve such uses be designed and installed to minimize flood damage.
- N. To protect individuals from buying lands which are unsuitable for use because of flooding by prohibiting the improper subdivision and/or development of lands within the designated floodplain districts; and which are unsuitable for use because of topography, wetlands, steep slopes, and other environmental features.
- O. To preserve the natural beauty and topography of Hilltown Township and to ensure appropriate development with regard to these natural features.
- P. To provide for open spaces through efficient design and layout of the land.

§ 140-3. Applicability.

This chapter shall apply to all subdivision and land development plans submitted after the effective date of this chapter and to all subdivision and land development plans submitted before the effective date of this chapter which no longer have protection from the effect of changes in governing ordinances granted by the Pennsylvania Municipalities Planning Code.¹

A. Subdivision control.

- (1) No subdivision, as herein defined, of any lot, tract or parcel of land shall be effected and no street, alley, sanitary sewer, storm sewer, water main or other facilities in connection therewith, shall be laid out, constructed, opened or dedicated for public use or travel, or for the common use of occupants of buildings abutting or to abut thereon, except in strict accordance with the provisions of this chapter. No lot in any subdivision may be sold, and no permit to erect, alter or repair any building upon land in a subdivision may be issued and no building may be erected in a subdivision, unless and until a subdivision plan has been approved by the Board of Supervisors and recorded in the office of the Recorder of Deeds for Bucks County.
- (2) There shall be no subdivision of any lot which has been restricted from further subdivision by a note or restriction on a plan or deed recorded at the office of the Bucks County Recorder of Deeds.

1. Editor's Note: See 53 P.S. § 10508(4).

B. Land development control.

- (1) Land development, as herein defined, must comply with the regulations contained herein. Such compliance shall include but not be limited to the filing of preliminary and final plats, the dedication and improvements of rights-of-way, streets and roads, and the payment of fees and charges as established by resolution of the Board of Supervisors.
- (2) Land development plans shall indicate the location of each structure and clearly define each unit and shall indicate public easements, common areas, and improvements, all easements appurtenant to each unit, and improvements to public rights-of-way. Developments are subject to the zoning regulations as they apply to use and density requirements, setbacks, parking and other features, and the same shall be indicated on the land development plan.

§ 140-4. Interpretation and conflict.

- A. Interpretation. In interpreting and applying the provisions of this chapter, they shall be held to be the minimum requirements for the promotion of public health, safety, comfort, convenience, and general welfare.
- B. Conflict with public and private provisions.
 - (1) Public provisions. Where any provision of this chapter imposes restrictions different from those imposed by any other provision of this chapter or any other ordinance, rule, or regulation, or other provisions of law, whether local, state or federal, whichever provisions are more restrictive or impose higher standards shall control.
 - (2) Private provisions. This chapter is not intended to abrogate any easement, covenant of any other private agreement or restriction, provided that where the provisions of this chapter are more restrictive or impose higher standards or regulations than such easement, covenant, or other private agreement or restriction, the requirements of this chapter shall govern. Where the provisions of the easement, covenant or private agreement or restriction impose duties and obligations more restrictive, or higher standards than the requirements of these regulations, or the determinations of the Board of Supervisors in approving a subdivision or in enforcing this chapter, and such private provision are not inconsistent with this chapter or determinations thereunder, then such private provisions shall be operative and supplemental to these regulations and determinations made thereunder.
 - (3) Municipal liability. The grant of a permit or approval of a plan for any proposed subdivision and/or land development to be located within any identified floodplain area or district shall not constitute a representation, guarantee, or warranty of any kind by Hilltown Township or by any official or employee thereof of the practicability or safety of the proposed use, and shall create no liability upon Hilltown Township, its officials or employees.

ARTICLE II
Definitions and Word Usage

§ 140-5. Word usage.

Unless otherwise expressly stated, the following words shall, for the purpose of this chapter, have the meaning herein indicated. The present tense shall include the future; the singular number shall include the plural; words used in the masculine gender shall include the feminine and the neuter; the word “shall” is always mandatory; the word “may” is always permissive.

§ 140-6. Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

AGRICULTURAL SOILS — Agricultural soils shall be as recognized and classified in the Soil Survey of Bucks County, Pennsylvania, U.S. Department of Agriculture, National Resources Conservation Service, May 2004 Update, or as amended: [Amended 5-23-2005 by Ord. No. 2005-1]

A. PRIME AGRICULTURAL SOILS --

Manuscript Symbol	Soil Name
AIA	Alton gravelly loam, 0 to 3% slopes
ALB	Alton gravelly loam, 3 to 8% slopes
ArB	Arendtsville gravelly silt loam, 3 to 8% slopes
BeA	Bedington channery silt loam, 0 to 3% slopes
BeB	Bedington channery silt loam, 3 to 8% slopes
BrB	Brecknock channery silt loam, 3 to 8% slopes
BsA	Brownsburg silt loam, 0 to 3% slopes
BsB	Brownsburg silt loam, 3 to 8% slopes
CdA	Chester silt loam, 0 to 3% slopes
CdB	Chester silt loam, 3 to 8% slopes
CmB	Clarksburg silt loam, 3 to 8% slopes
DaA	Delaware loam, 0 to 3% slopes
DaB	Delaware loam, 3 to 8% slopes
DfB	Duffield silt loam, 3 to 8% slopes
DuA	Duncannon silt loam, 0 to 3% slopes
DuB	Duncannon silt loam, 3 to 8% slopes
EcB	Edgemont channery loam, 3 to 8% slopes

Manuscript Symbol	Soil Name
FoA	Fountainville silt loam, 0 to 3% slopes
FoB	Fountainville silt loam, 3 to 8% slopes
GIB	Gladstone gravelly silt loam, 3 to 8% slopes
GrA	Glenville silt loam, 0 to 3% slopes
GrB	Glenville silt loam, 3 to 8% slopes
LgA	Lansdale loam, 0 to 3% slopes
LgB	Lansdale loam, 3 to 8% slopes
LkA	Lawrenceville silt loam, 0 to 3% slopes
LmA	Lehigh channery silt loam, 0 to 3% slopes
LmB	Lehigh channery silt loam, 3 to 8% slopes
Lt	Linden loam
MaB	Manor loam, 3 to 8% slopes
McA	Matapeake silt loam, 0 to 3% slopes
McB	Matapeake silt loam, 3 to 8% slopes
MdA	Mattapex silt loam, 0 to 3% slopes
MIA	Mount Lucas silt loam, 0 to 3% slopes
MIB	Mount Lucas silt loam, 3 to 8% slopes
NbB	Neshaminy silt loam, 3 to 8% slopes
PeA	Penn channery silt loam, 0 to 3% slopes
PeB	Penn channery silt loam, 3 to 8% slopes
PnB	Penn-Lansdale complex, 3 to 8% slopes
RaA	Raritan silt loam, 0 to 3% slopes
RaB	Raritan silt loam, 3 to 8% slopes
ReA	Readington silt loam, 0 to 3% slopes
Ro	Rowland silt loam
WaB	Washington silt loam, 3 to 8% slopes

- B. AGRICULTURAL SOILS OF STATEWIDE IMPORTANCE -- The following soil types shall be recognized and classified as agricultural soils of statewide importance:

Manuscript Symbol	Soil Name
AbA	Abbottstown silt loam, 0 to 3% slopes

Manuscript Symbol	Soil Name
AbB	Abbottstown silt loam, 3 to 8% slopes
AbC	Abbottstown silt loam, 8 to 15% slopes
AmA	Amell silt loam, 0 to 3% slopes
AmB	Amell silt loam, 3 to 8% slopes
ArC	Arendtsville gravelly silt loam, 8 to 15% slopes
BeC	Bedington channery silt loam, 8 to 15% slopes
BrC	Brecknock channery silt loam, 8 to 15% slopes
BsC	Brownsburg silt loam, 8 to 15% slopes
BwB	Buckingham silt loam, 3 to 8% slopes
CbA	Chalfont silt loam, 0 to 3% slopes
CbB	Chalfont silt loam, 3 to 8% slopes
CdC	Chester silt loam, 8 to 15% slopes
CyB	Culleoka-Weikert channery silt loam, 0 to 3% slopes
CyC	Culleoka-Weikert channery silt loam, 8 to 15% slopes
DgC	Duffield-Ryder silt loams, 8 to 15% slopes
EcC	Edgmont channery loam, 8 to 15% slopes
FoC	Fountainville silt loam, 8 to 15% slopes
GIC	Gladstone gravelly silt loam, 8 to 15% slopes
Ha	Hatboro silt loam (farmland of statewide importance)
Ho	Holly silt loam
KIB	Klinesville very channery silt loam, 3 to 8% slopes
LgC	Lansdale loam, 8 to 15% slopes
LgD	Lansdale loam, 15 to 25% slopes
LkB	Lawrenceville silt loam, 3 to 8% slopes
LmC	Lehigh channery silt loam, 8 to 15% slopes
MaC	Manor loam, 8 to 15% slopes
MIC	Mount Lucas silt loam, 8 to 15% slopes
NbC	Neshaminy silt loam, 8 to 15% slopes
NkA	Nockamixon silt loam, 0 to 3% slopes
NkB	Nockamixon silt loam, 3 to 8% slopes

Manuscript Symbol	Soil Name
NkC	Nockamixon silt loam, 8 to 15% slopes
PeC	Penn channery silt loam, 8 to 15% slopes
PkB	Penn-Klinesville channery silt loam, 3 to 8% slopes
PkC	Penn-Klinesville channery silt loam, 8 to 15% slopes
PkD	Penn-Klinesville channery silt loam, 15 to 25% slopes
PnC	Penn-Lansdale complex channery silt loam, 8 to 15% slopes
RaC	Raritan silt loam, 8 to 15% slopes
ReB	Readington silt loam, 3 to 8% slopes
RIA	Reaville channery silt loam, 0 to 3% slopes
RIB	Reaville channery silt loam, 3 to 8% slopes
RIC	Reaville channery silt loam, 8 to 15% slopes
StB	Steinsburg gravelly loam, 3 to 8% slopes
StC	Steinsburg gravelly loam, 8 to 15% slopes
WaC	Washington silt loam, 8 to 15% slopes

ALLEY — A strip of land over which there is a public or private right-of-way which serves as the secondary means of vehicular access to the side or rear of two or more properties. Frontage on such a right-of-way shall not be construed as satisfying the requirements of Township ordinances relating to frontage on a street.²

APPLICANT — A landowner, or developer, as hereinafter defined, who has filed an application for development, including his/her heirs, successors and assigns.

APPLICATION FOR DEVELOPMENT — Every application, whether tentative, preliminary, or final, required to be filed and approved prior to 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 the approval of a development plan.

ARCHITECT — A professional architect licensed as such by the Commonwealth of Pennsylvania.

BERM — An earth mound which physically blocks views without using architectural elements.

BLOCK — A tract of land bounded by streets. Block length shall be measured along the center line of a street between center lines of intersecting streets.

2. Editor's Note: Former definition of "Alluvial Soils (Floodplain Soils)," which immediately followed this definition, was repealed 1-26-2015 by Ord. No. 2015-004.

BUILDING — Any structure having a roof supported by columns or walls and intended for shelter, housing, or enclosure of persons, animals or chattels, and including covered porches or bay windows and chimneys. Included shall be all manufactured homes and trailers to be used for human habitation.

CARTWAY or ROADWAY — The portion of a street right-of-way normally paved or stoned and designed or intended for vehicular use.

CENTRALIZED MAIL DELIVERY AND CLUSTER BOX UNITS (CBUs) [Added 12-10-2018 by Ord. No. 2018-004] — Freestanding, concrete-pad-pedestal-mounted mailbox containing 8, 12, 13, or 16 individually locked mailboxes and parcel compartments.

CLEAR SIGHT TRIANGLE — An area of unobstructed vision at street intersection defined by lines of sight between points at a given distance from the intersection of the street right-of-way lines.

COMMON OPEN SPACE — A parcel of land or an area of water, or a combination of land and water within a development site and designed and intended for the use or enjoyment of residents of a development, not including streets, off-street parking areas, and areas set aside for public facilities.

CONDOMINIUM and COOPERATIVE — (An ownership arrangement and not a land use.) A method of ownership which, when applied to a multifamily dwelling, provides for separate ownership for each unit, title of which shall consist of ownership of the unit together with an undivided interest in the common element.

CONSERVATION DISTRICT — Bucks Conservation District.

COUNTY — The County of Bucks, Pennsylvania.

COUNTY PLANNING COMMISSION — The Planning Commission of the County of Bucks.

CROSSWALK — A right-of-way or easement for pedestrian travel which crosses a cartway.

CUL-DE-SAC — A street intersecting another street at one end and terminating at the other in a vehicular turnaround.

CULVERT — A pipe, conduit, or similar structure, including appurtenant works, which convey surface water.

DENSITY — The measure of the number of dwelling units per acre as determined by regulations of Chapter 160, Zoning.

DESIGN STANDARDS — Regulations adopted pursuant to this chapter establishing minimum or maximum standards and a layout by which a subdivision and land development is developed.

DESIGN STORM — The magnitude of precipitation from a storm event measured in probability of occurrence (i.e., fifty-year storm) and duration (i.e., twenty-four-hour), and used in computing stormwater management control system.

DETENTION BASIN — A basin designed to retard stormwater runoff by temporarily storing the runoff and releasing it at a predetermined rate.

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

DEVELOPMENT — Any man-made change to improved or unimproved real estate including, but not limited to, the construction or placement of buildings or other structures, mobile homes, streets and other paving, utilities, mining, dredging, filling, grading, excavation, or drilling operations, and the subdivision of land.

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 development plan” when used in this chapter shall mean the written and graphic materials referred to in this definition.

DRAINAGE FACILITY — Any ditch, gutter, swale, culvert, basin, storm sewer or other structure designed, intended or constructed for the purpose of conveying, diverting or controlling surface water or groundwater.

DRAINAGE RIGHT-OF-WAY — The lands required for the installation of stormwater sewers or drainage ditches, or required along a natural stream or watercourse for preserving the channel and providing for the flow of water therein to safeguard the public against flood damage and unnatural erosion.

DRIVEWAY — A private vehicular passageway providing access between a street and a private parking area or private garage.

DRIVEWAY, SHARED — A private vehicular passage way providing access between a street and private parking area or garage serving four or less dwellings. Shared driveways may cross through lots provided access easements are established. Lot frontage on such easements shall not be utilized to meet minimum lot width requirements of Chapter 160, Zoning.

DWELLING — A building designed and occupied exclusively for residential purposes containing one or more dwelling units on a single parcel of land, excluding hotel, rooming house, tourist home, institutional home, guest house, residential club, motel, motor court, and the like.

DWELLING UNIT — Any room or group of rooms located within a residential building and forming a single, habitable unit with facilities used or intended to be used for living, sleeping, cooking and eating, by one family.

EASEMENT — A grant for the use of a parcel of land by the public, a corporation, or a person, for a specified purpose.

ENCROACHMENT — Any placement or obstruction in a delineated floodway, wetland, right-of-way, easement, required yard, setback, or adjacent land.

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

EROSION — The removal of soil particles by the action of water, wind, ice, or other geological agents.

EXCAVATION — Any act by which earth, sand, gravel, rock, or any other similar material is dug into, cut, quarried, uncovered, removed, displaced, relocated, or bulldozed; and shall include the conditions resulting therefrom.

EXISTING RESOURCES AND SITE ANALYSIS PLAN ("ERSAP") — Documentation prepared in accordance with § 140-23.1 of this chapter identifying existing features and conditions on a proposed Conservation Management Design subdivision site. **[Added 1-26-2009 by Ord. No. 2009-4]**

FILL —

- A. Any act by which earth, sand, gravel, rock, or any other material is placed, pushed, dumped, pulled, transported or moved to a new location above the natural surface of the ground, or on top of a stripped surface; and shall include the conditions resulting therefrom.
- B. The difference in elevation between a point on the original ground and a designated point of higher elevation on the final ground elevation.
- C. The material used to fill.

FINANCIAL SECURITY — Any approved security which may be in lieu of a requirement that certain improvements be made before the Board of Supervisors approves a final subdivision or land development plan, including performance bonds, escrow agreements, and other similar collateral or surety agreements.

FLOOD — A temporary inundation of normally dry land areas.

FLOODPLAIN **[Added 1-26-2015 by Ord. No. 2015-004]** —

- A. Any areas of Hilltown Township, classified as special flood hazard areas (SFHAs) in the Flood Insurance Study (FIS) and the accompanying Flood Insurance Rate Maps (FIRMs) dated March 16, 2015 and issued by the Federal Emergency Management Agency (FEMA) or the most recent revision thereof, including all digital data developed as part of the Flood Insurance Study; and
- B. For areas abutting streams and watercourses where the one-hundred-year floodplain (1% annual chance flood) has not been delineated by the Flood Insurance Study, the applicant shall submit a floodplain identification study. The study prepared by a registered professional engineer expert in the preparation of hydrologic and hydraulic studies shall be used to delineate the one-hundred-year floodplain. The floodplain study shall be subject to the review and approval of the Township. All areas inundated by the one-hundred-year flood shall be included in the Floodplain Area.³

FOREST (WOODLANDS) — Areas comprised of one or more acres of mature or largely mature trees in which the largest trees measure at least six inches dbh (diameter at breast height, or 4 1/2 feet above the ground). Forest shall be measured from the drip line of the

3. Editor's Note: Former definitions of "Floodplain (General Floodplain)," "Floodplain Soils," "Floodproofing," "Floodway" and "Floodway Fringe," which immediately followed this definition were repealed 1-26-2015 by Ord. No. 2015-004.

outer trees. "Forest" is also 10 or more individual trees which measure at least 10 inches dbh and form a contiguous canopy.

FRONTAGE — Refer "lot width."

GOVERNING BODY — The Board of Supervisors of Hilltown Township, Bucks County, Pennsylvania.

GRADE — The slope of a street, other public way, land area, drainage facility or pipe specified in percent.

GRADING AND DRAINAGE PLAN — A plan showing all existing ground features and proposed grading, including existing and proposed surface and subsurface drainage facilities, described by grades, contours, and topography.

GROUNDWATER — Natural underground water supplies.

HYDRIC SOILS — Soils that are categorized as poorly drained that can support hydrophytic plants, but may not do so in many cases. For the purpose of this chapter, hydric soils are general wetland indicator soils. (Refer "wetlands.") The following soils, classified in the Soil Survey of Bucks and Philadelphia Counties, Pennsylvania, U.S. Department of Agriculture, Soil Conservation Service, July 1975, are hydric soils:

- A. Bowmansville silt loam.
- B. Doylestown silt loam.
- C. Fallsington silt loam.
- D. Hatboro silt loam.
- E. Towhee silt loam.
- F. Towhee extremely stony silt loam.⁴

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, packed stone, or other equivalent surfaces shall be considered impervious surfaces within this definition. In addition, other areas determined by the Township Engineer to be impervious within the meaning of this definition will be classified as impervious surfaces.

IMPROVEMENT CONSTRUCTION DOCUMENTS — Include but are not limited to traffic study, stormwater management study, floodplain study, wetland studies, erosion and sedimentation pollution control narrative, geological studies for water supply, sewage facilities alternatives study, etc. Studies requiring engineering calculations shall be prepared, signed, and sealed by a licensed professional engineer when deemed necessary by the Township.

IMPROVEMENTS — Those physical additions, installations, and changes required to render land suitable for the use intended, including but not limited to grading, paving, curbing, street

4. Editor's Note: Former definition of "Identified Floodplain Area," which immediately followed this definition, was repealed 1-26-2015 by Ord. No. 2015-004.

lights and signs, fire hydrants, water mains, electric service, gas service, sanitary sewers, storm drains, sidewalks, crosswalks, driveways, culverts, and street shade trees.

LAND DEVELOPMENT — Any of the following activities:

- A. The improvement of one 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 purposed initially or cumulatively, or a single nonresidential building on a lot or lots regardless of the number of occupants or 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. “Land development” does not include development which involves:
 - (1) The conversion of an existing single-family detached dwelling or single-family semidetached dwelling into not more than three residential units, unless such units are intended to be a condominium;
 - (2) The addition of a residential accessory building, including farm building, not greater than 600 square feet in area on a lot or lots subordinate to an existing principal building; or
 - (3) The addition or conversion of buildings or rides within the confines of an enterprise which would be considered an amusement park. For the purposes of this subsection, an “amusement park” is defined as a tract or area used principally as a location for permanent amusement structures or rides. This exclusion shall not apply to newly acquired acreage by an amusement park until initial plans for the expanded area have been approved by the proper authorities.

LANDOWNER — The legal or beneficial 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, if he/she is authorized under the lease to exercise the rights of the landowner, or other person having a proprietary interest in land.

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 ultimate right-of-way of a public or private street upon which said lot abuts, even if the ownership to such right-of-way is the owner of the lot. In the case where an existing deeded parcel of land is divided into two or more tracts by public street; for the purposes of this chapter, each tract shall be considered a separate lot.

- A. LOT, CORNER -- A lot which has an interior angle of less than 135° at the intersection of two street lines. A lot abutting upon a curved street or streets shall be considered a corner lot if the tangent to the curve at the points beginning within the lot

or at the points of intersection of the side lot lines with the street lines intersects at an angle of less than 135°.

- B. LOT, DEPTH -- The mean distance from the ultimate right-of-way line of the lot to its opposite rear line measured in a direction parallel to the side lines of the lot. Lot depth for triangular lots shall be the mean distance from the street line to the point of intersection of the side yards.
- C. LOT, DOUBLE FRONTAGE -- A lot (except for a corner lot) which fronts two interior proposed streets within a subdivision.
- D. LOT, FLAG (LANE) -- A lot which meets the criteria for an exception to the minimum lot width requirements under § 160-51 of Chapter 160, Zoning.
- E. LOT, INTERIOR -- A lot, the side lot lines of which do not abut on a street.
- F. LOT, MINIMUM WIDTH -- The minimum required lot width measured at the required building setback line.
- G. LOT, NONCONFORMING -- A lot, the area or dimension of, which was lawful prior to the adoption or amendment of the relevant Zoning Ordinance, but which fails to conform to the requirements of the zoning district under the current Zoning chapter.
- H. LOT OF RECORD -- A lot which has been recorded in the Office of the Recorder of Deeds.
- I. LOT, REVERSE FRONTAGE -- A lot (excluding corner lots) which abuts upon two streets. **[Amended 5-23-2005 by Ord. No. 2005-1]**
- J. LOT, THROUGH -- An interior lot having frontage on two parallel or approximately parallel streets.
- K. LOT, TRIANGULAR -- A lot having three lot lines, but which does not qualify as a corner lot.
- L. LOT WIDTH (FRONTAGE) -- The distance measured between the side lot lines, at the required minimum building setback line. In a case where there is only one side lot line, lot width shall be measured between such side lot line and the opposite rear lot line or street line.

LOT LINE ADJUSTMENT — A minor subdivision of land resulting in revised property boundaries between two or more existing lots, and not resulting in the creation of any additional lots.

MAINTENANCE GUARANTEE — Any security which may be accepted by the Township for the maintenance of any improvements required by this chapter.

MAJOR SUBDIVISION — Any subdivision not classified as a minor subdivision or lot line adjustment.

MANUFACTURED/MODULAR HOME — A dwelling unit erected on a foundation and made of one or more sections built in a factory. The completed unit shall meet all applicable building codes in effect.

MINOR SUBDIVISION — Any division or redivision of a lot, tract or parcel of land by any means into two lots or less.

MOBILE HOME — A transportable, single-family dwelling intended for permanent occupancy, contained in one unit, or in two or more 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. For the purposes of this chapter, travel trailers are not considered as mobile homes.

MOBILE HOME LOT — A parcel of land in a mobile home park, improved with the necessary utility connections and other appurtenances necessary for the erections thereon of a single mobile home.

MOBILE HOME PARK — A parcel or contiguous parcels of land which has been so designated and improved that it contains two or more mobile home lots for the placement thereon of mobile homes.

MUNICIPAL AUTHORITY [**Amended 5-24-2004 by Ord. No. 2004-4**] — A body politic and corporate created pursuant to the Act of May 2, 1945 (P.L. 382, No. 164), known as the “Municipality Authorities Act of 1945,” or created pursuant to the current provisions of the Municipality Authorities Act (53 Pa.C.S.A. § 5601 et seq.).

MUNICIPAL ENGINEER — A professional engineer licensed as such in the Commonwealth of Pennsylvania and appointed by the Township pursuant to Article V of the Second Class Township Code.⁵

MUNICIPALITIES PLANNING CODE — Act of Assembly of July 31, 1968, P.L. 805, as amended.⁶

ONE-HUNDRED-YEAR FLOOD — A flood that, on the average, is likely to occur once every 100 years (i.e., that has one-percent chance of occurring each year, although the flood may occur in any year).

OPEN SPACE — Any parcel or area of land or water essentially unimproved and set aside, dedicated or reserved for resource protection, public or private use and enjoyment, or for the use and enjoyment of owners and occupants of land adjoining or neighboring such open space. Open space shall not include land occupied by nonrecreational structures, roads, street rights-of-way, parking lots, land reserved for future parking, or any portion of required minimum lot areas as required by this chapter.

OPEN SPACE, COMMON — Land within or related to a development, not individually owned or dedicated for public use, which is designed and intended for the common use or enjoyment of the residents of the development and may include such complementary structures and improvements as may be required and/or appropriate.

PERSON — An individual, partnership, public or private association or corporation, firm, trust, estate, municipality, governmental unit, public utility or any other legal entity whatsoever which is recognized by law as the subject of rights and duties.

5. Editor's Note: See 53 P.S. § 65101 et seq.

6. Editor's Note: See 53 P.S. § 10101 et seq.

PLAN, FINAL [Amended 12-10-2018 by Ord. No. 2018-004] — A complete and exact plan, prepared by a licensed engineer or surveyor, prepared for official recording showing right-of-way lines, easements, lot dimensions with bearings, lot numbers, and any other relevant information pertaining to the street and lot subdivision or land development. The final plan shall include improvement construction documents prepared by a licensed engineer where applicable. Final plans must show typical cross section of streets and the horizontal and vertical details (plan profiles of all streets, drainage facilities, sanitary sewers, water mains, fire hydrants, streetlights, and all underground and aboveground utility conduits and poles).

PLANNING COMMISSION — The Hilltown Township Planning Commission.

PLAN, PRELIMINARY — A plan prepared by a licensed engineer and/or surveyor showing the existing features of a tract and its surroundings and proposed street and lot layout within and adjacent to the subdivision or land development, as a basis for consideration prior to preparation of a final plan. Preliminary plan shall include improvement construction documents prepared by a licensed engineer (where applicable). Preliminary plan must show typical cross section of the streets and the horizontal and vertical details (plan-profiles of all streets, drainage facilities, sanitary sewers, water mains, fire hydrants, street lights, and all underground and above ground utility conduits and poles).

PLAN, SKETCH — An informal plan indicating salient existing features of a tract and its surroundings and a general layout of the proposed subdivision or land development, to be used as the basis of informal discussions between representatives of the Township and the subdivider or land developer.

PLAN, SOIL EROSION AND SEDIMENTATION CONTROL — A plan approved by the Bucks Conservation District for controlling erosion and sediment during construction which shall provide all steps, including scheduling, to assure erosion and sediment control during all phases of construction, including final stabilization.

PLAT — A map or plan of subdivision or land development whether sketch, preliminary or final.

PUBLIC FACILITIES — Any parks, playgrounds, trails, paths or other recreational areas; any water or sewer collection, transportation or treatment facilities; all street, sidewalk, curb or other roadway facilities to be dedicated; and any drainage or utility easement areas to be dedicated to the Township. Any public improvements required by ordinance or otherwise to be constructed and dedicated to the Township.

PUBLIC HEARING — A formal meeting held pursuant to public notice by the Board of Supervisors or Planning Commission of the Township, intended to inform and obtain public comment, prior to taking action in accordance with this chapter.

PUBLIC MEETING [Amended 5-24-2004 by Ord. No. 2004-4] — A forum held pursuant to notice under the Act of October 15, 1998 (P.L. 729, No. 93), known as the “Sunshine Act” (65 Pa.C.S.A. § 701 et seq.).

PUBLIC NOTICE — Notice published once each week for two successive weeks in a newspaper of general circulation in Hilltown 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 30 days and the second publication shall not be less than seven days from the date of the hearing.

RECREATION FACILITIES — The following definitions apply to the recreation facilities required by § 140-47 of this chapter:

- A. **TOT LOT** -- A confined, developed, neighborhood play area primarily for use by preschool children under the supervision of parents or guardian.
- B. **PLAYFIELD** -- A common area within a subdivision or land development for neighborhood residents to use for informal, active recreation purposes such as ball games and other activities requiring a large lawn area, away from homes or other buildings for their proper conduct.
- C. **BASKETBALL COURT** -- A complete basketball facility including paved, standard-sized court area, with posts, backboards, and baskets at both ends of the court.
- D. **TENNIS COURT** -- A complete tennis facility, including paved, standard-sized court area, posts, net and fencing around its perimeter.
- E. **SWIMMING POOL** -- A complete swimming facility including the pool, surrounding paved deck, lawn area, lifeguard and bathroom facilities, and appropriate mechanical equipment.

RESERVE STRIP — A narrow parcel of ground having inadequate area for building purposes separating a street or a proposed street from other adjacent properties.

RESUBDIVISION — Any subdivision or transfer of land, laid out on a plan which has been approved by the Board of Supervisors which changes or proposes to change property lines and/or public rights-of-way not in strict accordance with the approved plan.

RETENTION BASIN — A basin designed to retain stormwater runoff so that a permanent pool is established.

RIGHT-OF-WAY — A strip of land occupied or intended to be occupied by a street, sidewalk, alley, utilities or other similar use.

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; that part of precipitation which flows over the land.

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

SEDIMENTATION — The process by which mineral or organic material is accumulated or deposited by the movement of wind and water, or by gravity. Once this matter is deposited, or remains suspended in water, it is usually referred to as “sediment.”

SELECT BACKFILL — Crushed stone backfill graded in accordance with PennDOT Form 408.

SELECT EARTH BACKFILL — Earth backfill material free of organics and other objectionable material being a well graded mixture of rock and soil with no particle size greater than eight inches.

SETBACK (BUILDING SETBACK LINE) — The minimum distance that a building must be held back from an adjacent lot line, depending on the applicable zoning district, or the minimum distance from the ultimate right-of-way, depending on the applicable street, road or highway.

SEWER, COMMUNITY — A system, whether publicly or privately owned, for the collection of sewage or nonhazardous industrial wastes of a liquid nature from two or more lots, and for the treatment or disposal of the sewage or industrial waste on one or more of the lots or at any other site.

SEWER, INDIVIDUAL — A system of piping, tanks or other facilities serving a single lot and collecting and disposing of sewage in whole or in part into the soil or into waters of the commonwealth or by means of conveyance to another site for final disposal.

SIGHT DISTANCE — Includes “safe sight distance,” “safe stopping site distance,” “passing sight distance,” and “decision site distance” as defined and regulated by Pennsylvania Code Title 67, Chapter 441, and PennDOT Design Manual, Part 2, Publication 13. Sight distance for intersection of streets, alleys, and driveways shall be measured (unobstructed) from a point 10 feet back from edge of pavement at a height of 3.5 feet above the pavement surface to another point six inches above the pavement surface.

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

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

SOIL PERCOLATION TEST — A field test conducted to determine the absorption capacity of soil to a specified depth in a given location for the purpose of determining suitability of soil for on-site sewage disposal.

SOILS ON FLOODPLAIN — Areas subject to periodic flooding listed in the Official Soil Survey provided by the United States Department of Agriculture, Natural Resource Conservation Service, Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov/>), as soils having a flood frequency other than none. **[Added 1-26-2015 by Ord. No. 2015-004]**

STREET, ROAD or HIGHWAY [Amended 12-10-2018 by Ord. No. 2018-004] — Includes street, avenue, boulevard, road, highway, freeway, parkway, lane, viaduct, alley, or any other ways used or intended to be used by vehicular traffic or pedestrians whether public or private which are identified on the legally adopted Township street or highway plan or the Official Map together with all necessary appurtenances, including bridges, rights-of-way and traffic control improvements. The term shall not include the interstate highway system.

- A. **EXPRESSWAY** -- Highways designed for large volumes of high-speed traffic with access limited to grade-separated intersections.
- B. **ARTERIAL** -- Those serving large volumes of comparatively high-speed and long-distance traffic, and includes facilities classified as main and secondary highways by the Pennsylvania Department of Transportation.
- C. **COLLECTOR** -- Streets which give minimal emphasis to travel mobility; are characterized by low travel speeds, full land access, neighborhood penetration; and

serve minor traffic generators such as local elementary schools, small individual industrial plants, offices, commercial facilities and warehouses not served by arterials. Collector streets are further classified as minor or major.

- D. LOCAL ACCESS -- Those used primarily to provide access to abutting properties.
- E. MARGINAL ACCESS -- Minor streets, parallel and adjacent to arterial streets providing access to abutting properties and control of intersections with the arterial street.
- F. CUL-DE-SAC -- A minor street intersecting another street at one end terminated at the other by a vehicular turnaround.

STRUCTURE — Any man-made object having an ascertainable stationary location on or in land or water, whether or not affixed to the land.

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, partition by the court for distribution to heirs or devisees, 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 10 acres, not involving any new street or easement, access, or any residential dwelling, shall be exempted.

SUBSTANTIALLY COMPLETED — Where, in the judgment of the Township Engineer, at least 90% (based on the cost of the required improvements for which financial security was posted pursuant to the requirements of this chapter) of those improvements required as a condition for final approval have been completed in accordance with the approved plan, so that the project will be able to be used, occupied or operated for its intended use.

SURVEYOR — A licensed surveyor registered by the Commonwealth of Pennsylvania.

SWALE — A low-lying stretch of land characterized as a depression used to carry surface water runoff.

TOPSOIL — Surface soils and subsurface soils which normally are fertile soils and soil material, ordinarily rich in organic matter or humus debris. Topsoil is usually found in the uppermost soil layer called the A Horizon.

UNDEVELOPED LAND — Any lot, tract or parcel of land which has not been graded or in any other manner improved.

UNIT — A part of the property, structure or building designed or intended for any type of independent use, which has direct exit to a public street or way, or to an easement or right-of-way leading to a public street or way, and includes a proportionate undivided interest in the common elements, which is assigned to the property, structure or building.

WATERCOURSE — An intermittent or perennial stream of water, river, brook, creek, or swale identified on USGS mapping or SCS mapping; and/or delineated waters of the commonwealth. **[Amended 5-22-2000 by Ord. No. 2000-6]**

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

WATER SURVEY — An inventory of the source, quantity, yield and use of groundwater and surface water resources within Hilltown Township.

WETLANDS — Those areas that are inundated or saturated by surface or ground water 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. The term also includes but is not limited to wetland areas listed in the State Water Plan, the United States Fish and Wildlife Service Wetlands Inventory of Pennsylvania, the Pennsylvania Coastal Zone Management Plan and a wetland area designated by a river basin commission.

WETLANDS DELINEATION — The process by which wetland limits are determined. Wetlands must be delineated by a qualified specialist according to the 1989 Federal Manuals (as amended) for the Delineation of Jurisdictional Wetlands (whichever is greater) or according to any subsequent federal or state regulation. "Qualified specialist" shall include those persons being certified professional soil scientists as registered with Registry of Certified Professionals in Agronomy Crops and Soils (ARCPACS); or as contained on consultant's list of Pennsylvania Association of Professional Soil Scientists (PAPSS); or as registered with National Society of Consulting Soil Scientists (NSCSS), or as certified by state and/or federal certification programs; or by a qualified biologist/ecologist.

WOODLANDS — Areas, groves, or stands of mature or largely mature trees the majority of which are greater than six inches caliper measured four feet above grade covering an area greater than 1/4 acre; or groves of mature trees without regard to minimum area consisting of more than 10 individual specimens which are greater than 12 inches caliper measured four feet above grade.

ARTICLE III

Submission Procedures

§ 140-7. General procedure. [Amended 9-25-2000 by Ord. No. 2000-8; 5-23-2004 by Ord. No. 2005-1]

- A. Classification of subdivision. Whenever any subdivision of land or land development is proposed, before any contract is made for the sale of any part thereof, and before any permit for the erection of a structure in such proposed subdivision or land development shall be granted, the owner, or his authorized agent, shall apply for and secure approval for such proposed subdivision or land development in accordance with the following procedures for subdivision and land development.
- B. Preapplication consultation.
 - (1) Pennsylvania Department of Environmental Protection (PADEP). Prior to the preparation of any plans, it is suggested that prospective developers consult with PADEP and/or the Bucks County Health Department concerning soil suitability when on-site sewage disposal facilities are proposed.
 - (2) Bucks County Conservation District Consultation (BCCD). Prospective developers shall consult with BCCD representatives concerning erosion, sedimentation control, and geologic conditions at the proposed development.

- (3) Pennsylvania Department of Transportation consultation (PennDOT). When the development site has frontage on a Pennsylvania state highway and/or proposes access to a Pennsylvania state highway, the developer shall consult with PennDOT concerning design requirements, which may be imposed in addition to the requirements of this chapter.
- (4) Hilltown Township staff consultation. Prior to the preparation of any plans, it is recommended that prospective developers, with prior notification to the Board of Supervisors of Hilltown Township, consult with the Hilltown Township staff, including the Manager, Engineer, and Solicitor, concerning general Township submission procedures, zoning issues, and subdivision and land development issues.
- (5) Municipal Authority consultation. When the development anticipates having either public water service and/or public sanitary sewer service, it is recommended that the developer consult with the Hilltown Township Water and Sewer Authority (HTWSA) or the appropriate municipal authority having jurisdiction by service agreement with Hilltown Township for the location in which the development is proposed.

C. Official filing date.

- (1) For the purpose of these regulations, the official filing date shall be the date of the regular meeting of the Planning Commission next following the date complete application and plans are received in the Municipal Building, provided that, should said regular meeting occur more than 30 days following the submission of the application, the official filing date shall be the 30th day following the day the complete application has been submitted. An application will not be deemed complete unless all applicable fees have been paid by the applicant and the application and plans conform with the plan requirements set forth in Article IV of this chapter.
- (2) Upon receipt of an application for subdivision or land development approval, the Township Secretary shall affix to the application both the date of submittal and the official filing date.
- (3) The application record shall be closed 21 days before the Planning Commission meeting at which the plan will be considered to allow time to examine and study the plans and all appropriate supporting documentation. The Township will not accept changes or amendments to the application after this date unless the applicant shall apply for a rescheduling of the meeting at which the plan will be considered before the Planning Commission and makes suitable provision for an extension of the review time. This policy shall apply to sketch, preliminary, and final plan submissions.

D. Bucks County Planning Commission review. All plans shall be submitted to and reviewed by the Bucks County Planning Commission in accordance with its then prevailing rules and regulations.

E. Any renderings, photographs, drawings or plans that are to be presented at a public meeting shall be submitted in PDF format on either a CD or DVD and shall accompany and be part of the plan submission application.

§ 140-8. Fee schedule.

- A. All filing, inspection and professional (engineering/legal) fees shall be submitted to Hilltown Township.
- B. Plan filing fee. A filing fee shall accompany the preliminary plan. No application shall be accepted or acted upon unless payment is made to Hilltown Township. The Hilltown Township Board of Supervisors shall establish by resolution a schedule of fees to be paid by the subdivider or land developer to defray the cost of administering and processing of plans. The schedule of fees may be changed from time to time by resolution of the Board of Supervisors of Hilltown Township.
- C. Review fees.
 - (1) Review fees shall include reasonable and necessary charges by the Township's professional consultants or engineer for review and report to the Township, and shall be set by resolution. Such review fees shall be reasonable and in accordance with the ordinary and customary charges by the Township Engineer or consultant for similar services in the community, but in no event shall fees exceed the rate or cost charged by the engineer or consultant to the Township when fees are not reimbursed or otherwise imposed on applicants.
 - (2) In the event the applicant disputes the amount of any such review fees, the applicant shall, within 10 days of the billing date, notify the Township that such fees are disputed, in which case the Township shall not delay or disapprove a subdivision or land development application due to the applicant's request over disputed fees.
 - (3) In the event that the Township and the applicant cannot agree on the amount of review fees which are reasonable and necessary, then the fees shall be recalculated and recertified by another professional engineer licensed as such by the Commonwealth of Pennsylvania and chosen mutually by the Township and the applicant or developer.
- D. An applicant shall, by filing a plan, be then obligated to pay the fees herein provided. The professional (engineering/legal) fees required to be paid by this section shall be promptly submitted to the Township by the applicant upon the submission of bills therefor to the applicant from time to time by the Board of Supervisors.

§ 140-9. Lot line adjustment procedure.

Lot line adjustment plans shall be initiated and submitted for review in the form of a final plan as specified in § 140-16 and shall be otherwise reviewed in accordance with the procedures and standards of § 140-11.

§ 140-10. Minor subdivision procedure.

- A. Minor subdivision plans shall be initiated and submitted for review in the form of a final plan as specified in § 140-16 and shall be otherwise reviewed in accordance with the procedures and standards of § 140-11.

- B. The applicant shall distribute the required documents in accordance with the most current Hilltown Township application form, which specifies the number of copies and reviewing agencies. All documentation required by this chapter, including, but not limited to, plans, applications, stormwater management reports and, traffic studies, shall also be submitted in PDF format on either a CD or DVD. [Added 5-23-2005 by Ord. No. 2005-1']
- (1) In addition to the above, an information packet shall be included with the submission to the Township at the time the application is made for land development or subdivision of any property. The information packet shall include the location of the land development or subdivision, real and equitable owners, number of lots, lot size, housing type or nonresidential use, water and sewer availability (on site or public), amount of open space, and shall include a map showing the properties (and their uses) surrounding the proposed property and a general plan of the development showing the lots, roads, parking, etc. Said plans shall be submitted on an eleven-inch by seventeen-inch plan sheet.
- (2) It is the responsibility of the applicant to coordinate and submit plans with the respective private and public service agencies, including but not limited to (where applicable) Bucks County Conservation District, Bucks County Department of Health, Pennsylvania Department of Environmental Protection, PennDOT, and municipal authorities.
- C. Additional subdivision. Any additional subdivision of a tract from which a minor subdivision has already been approved shall be deemed to be a major subdivision for the purposes of this chapter and shall follow the procedure applying thereto, if the additional subdivision is submitted for review within five years of the approval of the minor subdivision. This section shall not be deemed inconsistent with Note 1 under the Table of Performance Standards: Bulk and Area in Chapter 160, Zoning, of the Hilltown Township Code adopted on May 22, 1995, relative to public water requirements/exceptions. [Amended 5-24-2004 by Ord. No. 2004-4]
- D. All minor subdivision plans shall contain a notice regarding future subdivision (refer to sample in Appendix B^a).

§ 140-11. Major subdivision and land development procedure.

- A. Sketch plan. Prospective subdividers and developers are strongly urged to discuss possible development sites with the Planning Commission prior to submission of a preliminary plan. A sketch plan may be presented for review not less than 14 days prior to the regular meeting of the Planning Commission. Application for sketch plan review by the Bucks County Planning Commission must accompany the submission. Submission of a sketch plan will not constitute a formal filing of a subdivision or land development plan with the Board of Supervisors. Sketch plans should include those items listed in Article IV, Plan Requirements.
- B. Preliminary plan.

7. Editor's Note: This ordinance also renumbered former Subsections B and C as C and D, respectively.

8. Editor's Note: Appendix B is included as an attachment to this chapter.

(1) Submission of preliminary plans.

- (a) The preliminary plan and all information and procedures relating thereto shall in all respects be in compliance with the applicable provisions of this chapter. It is the responsibility of the subdivider or developer to coordinate plans with the respective private and public service agencies, including, but not limited to (where applicable), Bucks Conservation District, Bucks County Department of Health, Pennsylvania Department of Environmental Protection, PennDOT, and Municipal Authorities.
- (b) The applicant shall distribute the required documents in accordance with the most current Hilltown Township application form, which specifies the number of copies and reviewing agencies. All documentation required by this chapter, including but not limited to plans, applications, stormwater management reports, and traffic studies) shall also be submitted in PDF format on either a CD or DVD. **[Amended 5-10-1999 by Ord. No. 99-4; 2-25-2002 by Ord. No. 2002-3; 5-23-2005 by Ord. No. 2005-1]**
 - [1] In addition to the above, an information packet shall be included with the submission to the Township at the time the application is made for land development or subdivision of any property. The information packet shall include the location of the land development or subdivision, real and equitable owners, number of lots, lot size, housing type or nonresidential use, water and sewer availability (on site or public), amount of open space, and shall include a map showing the properties (and their uses) surrounding the proposed property and a general plan of the development showing the lots, roads, parking, etc. Said plans shall be submitted on an eleven-inch by seventeen-inch plan sheet.
 - [2] It is the responsibility of the applicant to coordinate plans with the respective private and public service agencies including but not limited to (where applicable) Bucks County Conservation District, Bucks County Department of Health, Pennsylvania Department of Environmental Protection, PennDOT, and municipal authorities.
- (c) The application form shall be accompanied by the requisite fee as set forth in § 140-8 of this chapter and by not less than four copies of all required material and not less than seven prints of the preliminary plans of the subdivision or development, or as amended by Township resolution from time to time. **[Amended 5-10-1999 by Ord. No. 99-4; 5-23-2005 by Ord. No. 2005-1]**
- (d) The Township Secretary shall forward one copy of the preliminary plan prints and required material to the Bucks County Planning Commission, Hilltown Township Water and Sewer Authority and such other agencies as he/she deems appropriate for review and comment. One print shall be sent to the Fire Marshal when deemed necessary by the Township. **[Amended 5-23-2005 by Ord. No. 2005-1]**

- (e) The Township Secretary shall forward the remaining copies of the preliminary plan prints and required materials to the Planning Commission.
 - (f) The subdivider or developer shall submit seven prints of the final subdivision or land development plans and at least four copies of all other required information.
 - (g) Upon receipt of final plan, the Township Secretary shall forward two copies of the plan and required materials to the Township Engineer for review and comment; one copy of the plan and one of all other material to the Bucks County Planning Commission; and copies to such other agencies whose recommendations would be pertinent to the processing of the plan. Remaining copies shall be forwarded to the Planning Commission.
 - (h) Adequate water and sewer required. **[Added 5-23-2005 by Ord. No. 2005-1]**
 - [1] Applicants proposing a private water supply shall submit a water resources impact study in accordance with § 140-22 of this chapter.
 - [2] No plan shall receive final plan approval until the applicant has demonstrated that the project can provide adequate water supply and wastewater disposal.
- (2) Review of preliminary plans.
- (a) In cases where the subdivision or land development adjoins an existing or proposed state highway or has proposed streets entering onto state highways, the developer shall submit the plans to the Pennsylvania Department of Transportation for review.
 - (b) The Planning Commission will consider the plan to determine if it meets the standards set forth in this chapter, Chapter 160, Zoning, and all other applicable ordinances and regulations of the Township.
 - (c) The Planning Commission shall act on the preliminary plan in time for the Board of Supervisors to render their decision within 90 days from the official filing date. Any requests for modification or waiver of the requirements of this chapter shall be in writing in accordance with the Pennsylvania Municipalities Planning Code, 53 P.S. § 10101 et seq., as amended; and be reviewed by the Planning Commission for advisory comments.
- (3) Planning Commission recommendation.
- (a) The Planning Commission shall recommend whether the preliminary plan shall be approved, approved with modifications, or disapproved, and shall notify the Board of Supervisors in writing.
 - (b) In making its recommendation, the Planning Commission shall consider the recommendations of the Township Engineer, Township staff, Bucks County Planning Commission, interested residents, and any agency or agencies

from which a review was requested under Subsection B(1)(c) of this section.

- (4) Township Engineer review. All plans and associated documents shall be reviewed by the Township Engineer, prior to the transmission of such plans to the Board of Supervisors.
- (5) Resubmission of preliminary plans. A revised plan submitted after disapproval shall be considered, and processed as a new plan submission. A revised plan submitted after approval shall only be considered a new plan submission if, in the opinion of the Township, it has been substantially revised after said approval.
- (6) All plans shall evidence compliance with requirements of Chapter 160, Zoning. Failure of the applicant to obtain all necessary variances, special exceptions, and/or conditional use approvals prior to preliminary plan approval shall be a cause for denial of the plan.
- (7) Approval of preliminary plans.
 - (a) The Board of Supervisors shall act on the preliminary plan within 90 days of the official filing date. Failure to do so shall be deemed an approval. Before acting on a preliminary plan, the Board of Supervisors may hold a hearing thereon after public notice.
 - (b) The Board of Supervisors shall notify the applicant of its decision to approve, approve with conditions, or disapprove the preliminary plan in writing. Such notice shall be given to the applicant in person or mailed to him at his last known address not later than 15 days following the decision. If the plan is approved with conditions or disapproved, the Board of Supervisors shall specify in their notice the conditions which must be met and/or the defects found in the plan, and the requirements which have not been met, including specific reference to provisions of the Pennsylvania Municipalities Planning Code, 53 P.S. § 10101 et seq., or any other statute or provision of this chapter which has not been fulfilled.
 - (c) Approval of the preliminary plan shall constitute approval of the subdivision or land development as to the character and intensity of development; and the arrangement and approximate dimensions of streets, lots, and other planned features. The approval binds the subdivider or developer to the general scheme of the subdivision shown, unless a revised preliminary plan is submitted, and permits the subdivider to proceed with final detailed design of improvements, to arrange for guarantee to cover installation of the improvements, and to prepare the final plan. Approval of the preliminary plan does not authorize the sale of lots nor the recording of the preliminary plan.
 - (d) Where preliminary plan approval is given subject to conditions, the applicant shall accept or reject any or all of the conditions within 15 days from the date that he/she receives the written notification from the Board of Supervisors. Failure to accept or reject such conditions in writing within the foregoing time limit shall result in the conditional approval of the plat to become automatically rescinded pursuant to 53 P.S. § 10503(9) of the

Pennsylvania Municipalities Planning Code and, in the alternate, the plan is denied due to noncompliance with the specified conditions.

C. Final plan.

(1) Submission of final plans.

- (a) After the subdivider or developer has received official notification from the Board of Supervisors that the preliminary plan has been approved, he must submit a final plan in accordance with the provisions of 53 P.S. § 10508 of the Municipalities Planning Code. Application to the Bucks County Planning Commission with appropriate fee must accompany the final plan submission when deemed necessary by the Township.
- (b) The final plan shall conform in all respects with the approved preliminary plan. If it does not, the plan submitted shall be considered a revised preliminary plan and shall be forwarded by the Township Secretary to the Planning Commission for review and recommendation as a preliminary plan.
- (c) The subdivider or developer must submit with the final plan a guarantee for the installation of improvements which meets the requirements of Article VI.
- (d) The application form shall be accompanied by the requisite inspection and engineering fees as set forth in § 140-8.
- (e) Documented approval of the planning module for land development by the Pennsylvania Department of Environmental Protection shall be part of the requisite materials accompanying the final plan submission.
- (f) The subdivider or developer shall submit seven prints of the final subdivision or land development plans and at least four copies of all other required information. **[Amended 5-10-1999 by Ord. No. 99-4]**
- (g) Upon receipt of final plan, the Township Secretary shall forward two copies of the plan and required materials to the Township Engineer for review and comment; one copy of the plan and one of all other material to the Bucks County Planning Commission; and copies to such other agencies whose recommendations would be pertinent to the processing of the plan. Remaining copies shall be forwarded to the Planning Commission. **[Amended 5-10-1999 by Ord. No. 99-4]**

(2) Review of final plans.

- (a) The Planning Commission shall review the plan and requisite materials for compliance with the approved preliminary plan and for conformance to requirements of this chapter.
- (b) The Planning Commission shall act on the final plan in time for the Board of Supervisors to render their decision within 90 days from the official filing date.

- (3) Planning Commission recommendation.
 - (a) The Planning Commission shall recommend whether the final plan shall be approved, approved with conditions, or disapproved, and shall notify the Board of Supervisors in writing.
 - (b) In making its recommendation, the Planning Commission shall consider the recommendations of the Township Engineer, the Bucks County Planning Commission, the Bucks Conservation District, PennDOT, and the recommendations of any agency or agencies from which a review was requested under Subsection C(1)(g).
- (4) Township Engineer review. All plans and associated documents shall be reviewed by the Township Engineer prior to the transmission of such plans to the Board of Supervisors.
- (5) Resubmission of final plans. A revised plan submitted after denial shall be considered and processed as a new final plan submission.
- (6) Approval of final plans. The Board of Supervisors shall act upon the application for approval of a final plan and render its decision and communicate it to the applicant not later than 90 days following the date of the regular meeting of the Planning Commission next following the date the application is filed, provided that should the next regular meeting occur more than 30 days following the filing of the application, said ninety-day period shall be measured from the 30th day following the day the application has been filed.
 - (a) The decision of the Board of Supervisors shall be in writing and shall be communicated to the applicant personally or mailed to him at his last known address not later than 15 days following the decision.
 - (b) When the application is not approved in terms as filed, the decision shall specify the defects found in the application and describe the requirements which have not been met and shall, in each case, cite to the provisions of the Pennsylvania Municipalities Planning Code, 53 P.S. § 10101 et seq., or any other statute and the provisions of this chapter and any other ordinance relied upon.
 - (c) Failure of the Board of Supervisors to render a decision and communicate it to the applicant within the time and manner required herein shall be deemed an approval of the application in terms as presented unless the applicant has agreed in writing to an extension of time or change in the prescribed manner of presentation of communication of the decision, in which case, the failure to meet the extended time or change in manner of presentation or communication shall have like effect.
 - (d) Where final plan approval is given subject to conditions, the applicant shall accept or reject any or all of the conditions within 15 days from the date that he receives the written notification from the Board of Supervisors. Failure to accept or reject such conditions in writing within the foregoing time limit shall result in the conditional approval of the plat to become automatically rescinded pursuant to 53 P.S. § 10503(9) of the Pennsylvania

Municipalities Planning Code and in the alternate, the plan is denied due to noncompliance with the specified conditions.

(7) Recording of final plans.

- (a) Upon approval of the final plan, the subdivider or developer shall prepare one Mylar reproduction of the original record plan(s), two paper prints of the record plan(s), and three paper prints, including all plan sheets, all executed by the applicant bearing appropriate engineering and surveying seals, which shall be submitted to the Township not later than 30 days after approval. These plans, upon satisfaction of all conditions attached to approval, will be signed by the Board of Supervisors. A copy of the executed record plan shall be recorded by the Township in the office of the Bucks County Recorder of Deed within 90 days after approval of the final plan or the date of the approval of the Board of Supervisors noted on the plan; or the approval of the Board of Supervisors shall be null and void. The final plan must be recorded before proceeding with the sale of lots or construction of buildings. **[Amended 12-10-2018 by Ord. No. 2018-004]**
- (b) Recording the final plan shall be an irrevocable offer to dedicate all streets and other public ways to public use, and to dedicate or reserve all park reservations and other public areas to public use unless reserved by the subdivider as hereinafter provided. The approval of the final plan shall not impose any duty upon the Board of Supervisors of Hilltown Township concerning maintenance of the improvements offered for dedication nor shall such approval be construed as an acceptance of such dedication.
- (c) The subdivider shall place a notation on the final plan if there is no offer of dedication to the public of streets and certain designated public areas, in which event the title to such areas shall remain with the owner, and the Township shall assume no responsibility for improvement or maintenance thereof; which fact shall be noted on the plan.

§ 140-12. (Reserved)*

§ 140-13. Time limitation of plan approval.

When an application for approval of a plan, whether preliminary or final, has been approved without conditions or approved by the applicant's acceptance of conditions, no subsequent change or amendment in the zoning, subdivision or other governing ordinance or plan shall be applied to adversely affect the right of the applicant to commence and to complete any aspect of the approved development in accordance with the terms of such approval within five years of such approval. The five-year period shall be counted from the date of the preliminary plan approval. Failure to substantially complete the required improvements within the aforesaid five-year period, or within any extension thereof, as may be granted by the Board of Supervisors or as may be permitted by 53 P.S. § 10508(v) and (vi) of the

9. Editor's Note: Section 140-12, Park and Recreation Board review, was deleted in its entirety 12-10-2018 by Ord. No. 2018-004.

Pennsylvania Municipalities Planning Code for staged developments, shall make the application subject to any and all changes in zoning, subdivision, and any other governing ordinance enacted by the Township subsequent to the date of the initial preliminary plan approval.

§ 140-14. Modification of requirements.

- A. General. The Board of Supervisors may grant a modification of the requirements of one or more provisions of this chapter if the literal enforcement will exact undue hardship because of peculiar conditions pertaining to the land in question, provided that such modification will not be contrary to the public interest and that the purpose and intent of the chapter is observed.
- B. Procedure. All requests for modification shall be in writing and shall accompany and be 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 chapter involved, and the minimum modification necessary.
- C. Requests for modification shall be referred to the Planning Commission for advisory comments.

ARTICLE IV

Plan Requirements

§ 140-15. Sketch plan.

- A. Purpose. A sketch plan is an optional submission. It is offered to give the applicant an opportunity to consult early and informally in the plan preparation phase with the municipality and Bucks County Planning Commission. The purpose of this submission is to allow the municipality and applicant opportunity to discuss lot layout, street layout, location of buildings, arrangement and location of open space, etc., before detailed engineering is done. The municipality may comment on not only whether the sketch plan meets the objectives of Township ordinances but, also if they feel it is consistent with sound planning and design principles. It is not intended in any way to replace the preliminary plan, but rather to give the applicant guidance in preparing the much more detailed preliminary plan. Recommendations and comments made by the Township in response to Sketch Plan Submission shall in no way be regarded as an official approval, nor shall such action grant any legal rights to the applicant or immunity from full compliance with requirements and procedures set forth for preliminary and final plans.
- B. Data furnished in a sketch plan shall be at the discretion of the subdivider but is suggested to include the following:
 - (1) Tax map parcel number of property involved.
 - (2) Tract boundaries and total acreage.
 - (3) Location map.

- (4) North point.
 - (5) Streets on and adjacent to the tract.
 - (6) Significant topographical, geological, and physical features, including, but not limited to, floodplains, steep slopes, boulders, wetlands, etc., which may impact or limit the proposed use of the property.
 - (7) Existing road/utility and other easements and rights-of-way.
 - (8) Proposed general street layout.
 - (9) Proposed general lot layout, including location of open space and other preservation areas.
- C. A subdivision sketch plan should be drawn to scale although precise dimensions are not required.
- D. An information packet shall be included with the sketch plan. The information packet shall include the location of the land development or subdivision, real and equitable owners, number of lots, lot size, housing type or nonresidential use, water and sewer availability (on site or public), amount of open space, and shall include a map showing the properties (and their uses) surrounding the proposed property and a general plan of the development showing the lots, roads, parking, and similar improvements. Said plans shall be submitted on an eleven-inch by seventeen-inch plan sheet. **[Added 5-23-2005 by Ord. No. 2005-1]**

§ 140-16. Lot line adjustment and minor subdivision.

- A. Purpose. The purpose of this section is to provide an expeditious means of subdivision approval for lot line adjustments and minor subdivisions. A lot line adjustment involves relocation of one or more existing boundary line(s) between two adjacent lots, or the shifting of boundary lines to increase the area of an existing lot; provided however, that the lot line adjustment results in the same number or fewer lots than existed prior to the lot line adjustment.
- B. Plan preparation.
- (1) The plan shall be drawn at a scale of one inch equals 50 feet or one inch equals 100 feet.
 - (2) Dimensions shall be set forth 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) 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 to show the currently proposed features. Notations of revisions shall be numbered and dated.
 - (5) 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 shall be shown as a solid heavy line.
- (7) Plan shall be on sheets either 18 inches by 24 inches or 24 inches by 36 inches. All plan sheets shall be of the same size. All lettering shall be so drawn as to be legible if the plan should be reduced to half size.

C. General information. Plan shall show or be accompanied by the following information:

- (1) Name of subdivision or land development.
- (2) Name and address of owner of record and applicant.
- (3) Name and address of the firm which prepared the plan, and professional seal of the individual certifying the accuracy of the plan and compliance with applicable standards.
- (4) Date of preparation of the plan, a descriptive list of revisions to the plan, and the revision dates.
- (5) Tax parcel numbers, deed book and page numbers of properties involved, including any deed restrictions to the property and recorded plan book and page number for previously recorded subdivisions. A copy of the current deed(s) for the tract shall be submitted with the plan.
- (6) Zoning requirements, including but not limited to the following:
 - (a) Applicable district.
 - (b) Lot size and yard requirements.
 - (c) Natural resource protection standards.
 - (d) Copy of order indicating any variances or special exceptions granted.
- (7) Location map showing the relationship of the site to adjoining properties, proposed property lines, zoning district boundaries, and streets within 1,000 feet. Scale of the location map shall be one inch equals 800 feet. **[Amended 5-23-2005 by Ord. No. 2005-1]**
- (8) North point.
- (9) Written and graphic scales for plan and location map.
- (10) Total acreage of the site (net and gross); proposed lot sizes (net and gross); area of ultimate right-of-way; and in the case of lot line adjustments, area being conveyed, and a summary of pre/post development areas of lots involved.
- (11) Tract boundary (as determined by field survey).
- (12) Both existing and proposed property lines, including bearing and distance information.
- (13) Streets on and adjacent to the site with legal and future rights-of-way.

- (14) All existing buildings/structures (temporary or permanent; and their uses), driveways, wells, sewer systems, utility easements, utility poles (with ownership and pole number I.D. certification), etc.
 - (15) Monuments, existing and proposed.
 - (16) USGS contours.
- D. In addition to requirements of Subsections B and C above, minor subdivision plans shall show or be accompanied by the following information:
- (1) Soil types within the site based on maps contained in the "Soil Survey of Bucks County, Pennsylvania," USDA - NRCS, National Cooperative Soil Survey, May 2004 update. A table shall indicate each soil's limitations for community development. **[Amended 5-23-2005 by Ord. No. 2005-1]**
 - (2) Contour lines measured at vertical intervals of two feet. Contour lines shall be determined by on-site survey, not interpretation of USGS maps. At a minimum, contours shall be established at location of proposed driveways, dwellings, septic systems and other areas of development as deemed necessary by the Township.
 - (3) Datum Shall be the North American Vertical Datum of 1988. Benchmark shall be identified. **[Amended 7-25-2016 by Ord. No. 2016-001]**
 - (4) Existing vegetation, including wooded areas, large trees over six-inches caliper standing alone, and other significant vegetations limits of trees/vegetation to be removed/preserved.
 - (5) Planning modules for land development as required by 25 Pa. Code Chapter 71 and the Pennsylvania Sewage Facilities Act.¹⁰
 - (6) Proposed improvements, including buildings (and their uses), driveways, sewer lines, storm drains, culverts, street improvements, grading, and other requirements of this chapter.
 - (7) Soil erosion and sedimentation control plan prepared in accordance with § 140-40 of this chapter.
 - (8) Existing features as may be required by § 140-17D when deemed necessary by the Township.

§ 140-17. Preliminary plan: land developments and major subdivisions.

- A. Purpose. The purpose of the preliminary plan is to enable the Township to examine proposals for compliance with Chapter 160, Zoning; Chapter 140, Subdivision and Land Development; and other Township ordinances. Preliminary plans are required for all land developments and major subdivisions.
- B. Plan preparation.
- (1) The preliminary plan shall be at a scale of not more than 50 feet to the inch.

¹⁰. Editor's Note: See 35 P.S. § 750.1 et seq.

- (2) Plan and profile views shall be drawn at a scale of one inch equals 50 feet and one inch equals five feet respectively. Horizontal and vertical scales of one inch equals 20 feet and one inch equals two feet shall be permitted when greater detail is required as deemed necessary by the Township Engineer.
 - (3) Enlarged details of special features, intersections, drainage facilities, etc., shall be drawn at a scale of one inch equals 20 feet, or one inch equals 10 feet.
 - (4) Sheet sizes shall be either 18 inches by 24 inches or 24 inches by 36 inches.
 - (5) All sheets shall be the same size and be numbered relative to the total number of sheets (i.e., 1 of 4, etc.) If a new sheet is added, all sheets shall be appropriately renumbered. Use of letters to denote new sheets (i.e., Sheet 1A of 4) shall not be permitted.
 - (6) Where two or more sheets are required to show the entire tract, a reduced scale key plan shall be included to show how the sheets correspond.
 - (7) A reduced scale plan of the entire site at a scale greater than 50 feet to the inch may be required in cases where it will facilitate the review process.
 - (8) Plan shall be so prepared and bear an adequate legend to clearly indicate which features are existing and which are proposed.
 - (9) Site outboundary shall be shown as solid heavy line.
- C. General information. All preliminary plans shall show the following general information:
- (1) Proposed subdivision or land development name or identifying title. Name shall not duplicate an approved plan or plan submitted for review.
 - (2) Name(s) and address(es) of the owner(s) of the property, including reference to deed book, volume and page of current legal owner.
 - (3) Name and address of applicant.
 - (4) Name and address of the firm which prepared the plan, and professional seal of the individual certifying its accuracy and compliance with applicable standards.
 - (5) Date of preparation of the plan and a descriptive list of revisions to the plan, and the revision dates.
 - (6) North point.
 - (7) Location map showing the relationship of the site to adjoining properties, proposed property lines, zoning district boundaries, and streets within 1,000 feet. Scale of the location map shall be one inch equals 800 feet.
 - (8) Written and graphic scales for plan and location map.
 - (9) Tract boundary with bearing and distance information.
 - (10) Tax map parcel number(s) of parcels which comprise the subdivision or land development, deed book and page numbers of the properties involved, including

deed restrictions to the property, recorded plan book, and page number for the previously recorded subdivision (if any). A copy of the current deed(s) for the tract shall be submitted with the plan.

- (11) Zoning requirements, including the following where applicable:
 - (a) Zoning district; and district boundaries if within 500 feet of the site boundary.
 - (b) Lot size and yard requirements.
 - (c) Variances or special exceptions granted.
 - (d) Buffer yard requirements.
 - (e) Site capacity calculations.
 - (f) Inventory of all natural resources, natural resource protection rates, allowable disturbance to each resource, and proposed disturbance to each resource.
 - (g) Parking requirements.
 - (h) Proposed use, including Zoning Ordinance designation (i.e., use B-1, Single-Family Detached).
 - (i) Allowable and proposed density.
 - (j) Impervious surface area ratio, allowable impervious ratio and tabulation of proposed impervious area.
 - (k) Dwelling unit mix.
 - (12) Tax map parcel number and names of current owners of immediately adjacent lands.
 - (13) Total acreage of the site (net and gross) and number of proposed lots and/or dwelling units, or gross leasable floor area.
 - (14) Statement identifying existing and proposed method of sewage disposal and water service. If public, name of agency providing service.
 - (15) Statements regarding maintenance responsibilities of permanent stormwater management control facilities, swales, drainageways, and open space areas.
- D. Existing features plan. Within the tract proposed for subdivision and/or land development, and within 100 feet of the tract boundaries, the following information shall be shown on the preliminary plan:
- (1) All existing property lines of site if currently containing several smaller parcels.
 - (2) All property and easement boundaries defined by bearing and distance information.
 - (3) Total width of streets and alleys; names of streets and alleys; total width of legal rights-of-way and ultimate rights-of-way. Half widths of streets and alleys shall

be dimensioned as measured from physical center line to legal and ultimate rights-of-way.

- (4) Buildings (and their uses), driveways, wells, sewer systems, pipelines, underground and/or aboveground storage tanks, pools, fences, silos, water systems, fire hydrants, valves, towers, etc.
- (5) Utility poles with identification information/numbers and street lights.
- (6) Contour lines measured at vertical intervals of two feet as determined by on-site survey. Datum shall be the North American Vertical Datum of 1988. Benchmark shall be identified. **[Amended 7-25-2016 by Ord. No. 2016-001]**
- (7) Monumentation and pins within and along site outboundary, rights-of-way, easements, etc.
- (8) Soil types within the site based on maps contained in the Soil Survey of Bucks County, Pennsylvania, USDA - NRCS, National Cooperative Soil Survey, May 2004 update. **[Amended 5-23-2005 by Ord. No. 2005-1]**
- (9) Area of vegetation, including wooded areas and large trees over six-inches caliper standing alone. Areas of scrub growth with an understory height of at least four feet shall be delineated independently of wooded areas.
- (10) Watercourses, storm sewers, culverts, bridges, or any other significant drainage features and facilities with associated inverts, pipe/culvert sizes, material, and lengths, and all applicable dimensional information.
- (11) Floodplain areas or districts, including information on one-hundred-year flood elevations. FEMA cross sections and elevations shall be utilized to delineate floodplain boundary where detailed study information is available. Where detailed study information is not available, one-hundred-year flood elevations shall be calculated utilizing HEC I computations to generate flow information and HEC II computations to calculate water surface elevations. Structures culverts, obstructions, bridges or any other significant feature within 500 feet downstream of the site shall be included within the study to account for potential backwater affects. Basins, ponds, flood control facilities or any other significant drainage facility within upstream tributary area shall be included in the study. Use of TR-55 "Urban Hydrology for Small Watersheds," United States Department of Agriculture, Soil Conservation Service, will be an acceptable alternate method for calculating one-hundred-year flow rates. Use of other methods must be approved by the Township Engineer.
- (12) Utility, private and/or public easements, and purposes for which the easements have been established with all applicable restrictions and/or covenants.
- (13) Wetlands, wetland margins, ponds, pond shorelines, lakes, lake shorelines with total area of coverage listed. List of soil consultants qualifications must be submitted with a certification as to accuracy of the delineation. Certification must properly reference plan by title, date and parcel number.
- (14) Steep slopes shall be independently mapped by shading for the following ranges:

- (a) Eight percent to 15%.
 - (b) Sixteen percent to 25%.
 - (c) Over 25%.
- (15) Predeveloped drainage boundaries with associated areas, time of concentration paths, and runoff factors.
- E. Site improvement plan. A site improvement plan shall be prepared and include the following proposed improvements:
- (1) General lot layout, easement and right-of-way boundaries.
 - (2) Location of dwellings and structures, including exterior dimensions, first floor elevation, and garage floor elevation.
 - (3) Sanitary and storm sewer layout, pipe lengths, size, material, slopes, inverts, and grate/manhole elevations.
 - (4) Location of water mains and fire hydrants, electric and gas utilities.
 - (5) Streets, curb, sidewalk, pedestrian ramps, pedestrian paths, recreational facilities.
 - (6) Street and alleys widths.
 - (7) Driveway locations.
 - (8) Intersections.
 - (9) Cartway widening improvements and appropriate dimensions from existing roadway center lines.
 - (10) Existing and proposed sight distances at existing and/or proposed intersections. Sight distances shall be determined in accordance with 67 Pa. Code Chapter 441.
 - (11) Clear sight triangles at proposed and existing intersections.
 - (12) Parking areas, parking stalls, aisles, and associated dimensions.
 - (13) Curb and cul-de-sac radii.
 - (14) Culverts, bridges, basins, and any other significant drainage facility.
 - (15) Street signage.
 - (16) Easement(s) for residential development/neighborhood sign(s). **[Added 5-23-2011 by Ord. No. 2011-4]**
 - (17) Proposed CBU and location(s). A statement shall be included establishing that the applicant has obtained approval of the proposed CBUs and their respective locations from the District Growth Management Coordinator of the United States Postal Service. **[Added 12-10-2018 by Ord. No. 2018-004]**
- F. Grading plan. Grading plan shall include the following:

- (1) General site layout, property lines, easement boundaries, structures, streets, curb, sidewalk, etc.
 - (2) First floor elevation and garage floor elevation of all existing and proposed buildings.
 - (3) Existing and proposed contours.
 - (4) Bottom and top of curb elevations around curb returns at intersection, and turnaround area on cul-de-sac streets.
 - (5) General layout of storm sewer.
 - (6) Grate elevations of storm sewer inlets.
 - (7) Rim elevations of manholes.
- G. Drainage plan. Drainage plan shall include the following:
- (1) General site layout of streets, buildings, sidewalk and curb, and storm sewer.
 - (2) Post-development drainage boundaries with associated areas, time of concentration, flow path and runoff factors listed.
 - (3) Existing contours.
 - (4) Proposed grading.
 - (5) Required stage/storage chart for detention basins.
 - (6) Discharge location of all roof drains and sump pump lines.
- H. Erosion and sedimentation control plan. Erosion and sedimentation control plan shall be prepared in accordance with applicable provisions of 25 Pa. Code Chapter 102, "Erosion and Sediment Control," DEP Erosion and Sediment Pollution Control Program Manual, Erosion and Sedimentation Pollution Control Plan Guide for Small Projects (as published by the Southeast Pennsylvania Association of Conservation Districts), and Special Protection Waters Implementation Handbook, and in accordance with § 140-40 of this chapter.
- I. Recreation, landscaping and lighting plan. Landscaping and lighting plan shall include the following existing and proposed features:
- (1) General lot layout and setbacks, easement and right-of-way boundaries.
 - (2) Location of driveways, structures, curb and sidewalk.
 - (3) Layout of sanitary sewer, associated laterals, storm sewer, water, electric and gas utilities.
 - (4) Proposed tree and planting locations coordinated with underground utilities maintaining required horizontal separation distances.
 - (5) Location of proposed fencing outside of the dripline of trees intended to be saved in construction areas.

- (6) Location of parking area lighting, driveway lamp posts, and street light fixtures with radial extent of illumination in form of isolux contours in units of horizontal foot candles (HFC). Isolux lines shall be in increments of 0.5 HFC.
 - (7) Buffer yards with applicable yard widths dimensioned.
 - (8) Proposed layout and design of recreational facilities and buffering for same.
- J. Plan and profiles. Plan and profiles shall be prepared for all streets and utilities where improvements are proposed or are being extended from existing facilities; and shall include the following:
- (1) Profiles shall include at a minimum the following:
 - (a) Existing and proposed ground elevations and profile.
 - (b) Proposed profile of ground and/or street.
 - (c) All applicable vertical curve data for streets.
 - (d) Sight distance requirements.
 - (e) Sanitary sewer, storm drainage, and water service facilities; vertical separation distances at utility crossings, and encasements; inverts of pipes at crossing locations.
 - (f) All utility and storm pipe sizes, materials, slopes, inverts and lengths.
 - (g) Inlet and manhole inverts, rim and grate elevations; top of wall elevations for endwalls and headwalls.
 - (h) Center line stationing along profile.
 - (i) Profiles for streets shall follow roadway center lines.
 - (j) Stationing of sanitary sewer laterals and inverts for same.
 - (k) Manhole and inlet numbering corresponding to profile view.
 - (l) Profiles along existing streets for areas of cartway widening shall include existing edge of road profile and bottom of curb profile.
 - (2) Plan views shall include at a minimum the following:
 - (a) Right-of-way and easement boundaries.
 - (b) Dimensioning of street widths.
 - (c) Location of curb, sidewalk, driveway entrances and pedestrian ramps.
 - (d) Center line stationing along streets.
 - (e) Location of all sanitary sewer mains and laterals, storm sewer, roof drains and sump pump leaders, water mains and gas mains.
 - (f) Manhole and inlet numbering corresponding to profile view.

- (g) Location of street and regulatory signs.
 - (h) Proposed contours within limits of right-of-way boundaries.
 - (i) Top and bottom of curb elevations at ends of returns; and centrally along returns, at intersections and other critical locations as deemed necessary by Township Engineer.
 - (j) Plan views of improvements along existing streets shall include existing center line and edge of road spot elevations every 25 linear feet.
- K. Construction details plan. The construction details plan shall include but not be limited to the following general construction details:
 - (1) Roadway/widening construction.
 - (2) Utilities installation, bedding and backfill.
 - (3) Storm sewer installation, bedding and backfill.
 - (4) Sanitary sewer installation, bedding and backfill.
 - (5) Basin construction.
 - (6) Traffic control.
 - (7) Miscellaneous erosion and sedimentation control details.
 - (8) Sidewalk and curb installation specifications.
 - (9) Right-of-way and easement restoration.
 - (10) Special structures.
 - (11) Miscellaneous drainage swale design information.
 - (12) Fencing details.
 - (13) Any other details as deemed necessary by the Township and/or Township Engineer.
- L. Additional documentation. The following information shall be submitted with the preliminary plan where applicable:
 - (1) Traffic impact study prepared pursuant to § 140-20.
 - (2) Sewage facilities planning modules prepared pursuant to § 140-21.
 - (3) Water resources impact study prepared pursuant to § 140-22.
 - (4) A statement describing the manner in which the developer shall advise each prospective purchaser of a residential lot or unit of the existence and location of certain conditions impacting on the purchased property, including:
 - (a) Location and type of adjacent open space or recreational facilities.
 - (b) Location and type of any stormwater management easements.

- (c) All utility and other drainage easements.
 - (d) Any deed restrictions and/or restrictive covenants established on the lot during the course of the subdivision approval process.
 - (e) Any street light or fire hydrant assessments by any municipal entity.
 - (f) Such other information as directed by the Township.
- (5) An aerial photography plan, showing the area of the site and surrounding parcels, roadways, and features within 200 feet of the site, drawn at a scale consistent with that used for preparation of the site plan. Source of aerial photography shall be referenced on the plan, and the most recent date of aerial photography shall be used. Site layout shall be superimposed on the aerial photography plan to illustrate the location of lot lines and site improvements relative to existing features shown on the aerial photography plan. **[Added 2-25-2013 by Ord. No. 2013-1]**
- M. Notice of preliminary plan. An applicant proposing a major subdivision or land development shall notify all abutting landowners of record, including parcels across public roadways via certified United States first class mail, return receipt requested. The notice shall state that a subdivision or land development plan has been filed for the site and include a narrative describing the proposed development. A list of the names and addresses to which notices have been sent, along with all the return receipt cards, shall be supplied to the Township at least 10 days prior to the first meeting of the Planning Commission at which the plans are to be discussed. **[Amended 2-25-2013 by Ord. No. 2013-1]**

§ 140-18. Final plan (record).

- A. Upon completion of all conditions of preliminary and final plan approval, applicant shall submit one clear and legible black line Mylar print and two paper prints, all executed by the applicant bearing appropriate engineering and surveying seals, and a PDF copy of the plan set on a compact disk. **[Amended 5-10-1999 by Ord. No. 99-4; 2-25-2002 by Ord. No. 2002-3; 2-25-2013 by Ord. No. 2013-1; 7-25-2016 by Ord. No. 2016-001; 12-10-2018 by Ord. No. 2018-004]**
- B. Drafting standards. The standards required for a record plan shall be the standards outlined in §§ 140-16 and 140-17.
- C. All plans must be acknowledged with a raised Notary Seal affixed; raised seal of registered engineer and/or surveyor responsible for the plan; and raised seal of architect and/or landscape architect who collaborated in the preparation of the plan; and if the applicant is a corporation, a raised Corporate Seal. All plans must be approved by the Board of Supervisors together with the raised official seal.
- D. General information. The general information required for a record plan shall be the general information required by §§ 140-16 and 140-17.
- E. Existing features. The existing features required to be shown on a record plan shall be the existing features required by §§ 140-16 and 140-17.

F. Proposed improvements. Proposed improvements as required by §§ 140-16 and 140-17 shall be included on the record plan.

G. Notes and certificates. The record plan must include the required notes and certificates:

- (1) On all applications where improvement construction plans are required, the following note shall appear on the record plan: "Sheets 2 through _____ inclusive, on record at the Township, shall be considered a part of the approved final plan as if recorded with same." These shall be listed by sheet number and title on the record plan.
- (2) The signature of the registered engineer and/or surveyor certifying that the plan represents a survey made by him; that any existing monumentation shown hereon exists as located; and the dimensional and geodetic details are correct.
- (3) An acknowledgment as follows:

- (a) Where the owner(s) are individuals, all shall join as follows:

Commonwealth of Pennsylvania:

Signature of Owner

SS.

County of Bucks

On the _____ day of _____, _____, before me the subscriber, a Notary Public of the Commonwealth of Pennsylvania, residing in _____ personally appeared (name(s) of all owners), known to me (or satisfactorily proven) to be the persons whose name(s) (is/are) subscribed to the foregoing plan, and acknowledge that (he/she/they)(is/are) the registered owner(s) of the designated plan, that all necessary approvals of the plan have been obtained and is endorsed thereon, and that (he/she/they) desire that the foregoing plan be recorded according to law.

Witness my hand and notarial seal, the day and year aforesaid.

Notary Public

My Commission Expires _____

(SEAL)

- (b) Where the owner is a corporation:

Commonwealth of Pennsylvania

SS.

County of Bucks

On the _____ day of _____, _____, before me the subscriber, a Notary Public of the Commonwealth of Pennsylvania, residing in _____ personally appeared (name of officer of corporation), who acknowledged (himself/herself) to be the (president/secretary) of (name of the corporation), a corporation, and that as such (president or secretary), being authorized to do so, (he/she) executed the foregoing plan by signing that the said corporation is the registered owner of the designated land, that all necessary approvals of the plan have been obtained and is endorsed thereon, and that (he/she/they) desire that the foregoing plan be recorded according to law.

Witness my hand and notarial seal, the day and year aforesaid.

Notary Public

My Commission Expires _____
(SEAL)

- (4) Approved notation by the Township shall be as follows:

Approved by the Board of Supervisors of the Township of Hilltown this
_____ day of _____, _____.

- (5) (Reserved)"

- (6) Bucks County Planning Commission notation:

BCPC No. _____

PROCESSED AND REVIEWED. Report prepared by the Bucks County Planning Commission in accordance with the Municipalities Planning Code.

Certified this date _____

Executive Director, Bucks County Planning Commission

- (7) Recording notation:

"Recorded in the office of the Recorder of Deeds, Bucks County, Pennsylvania
in Plan Book _____ Page _____ on the _____ day of
_____, _____.

- (8) Signatures to appear on plan. The following signatures shall be placed directly on the plan in black ink:

- (a) The owner or owners of the land. If the owner of the land is a corporation, the signatures of the president and secretary and the corporate seal shall appear.

11. Editor's Note: Former Subsection G(5), Township Planning Commission notations, was repealed 5-23-2005 by Ord. No. 2005-1.

- (b) The Notary Public acknowledging the owner's statement of intent.
- (c) The licensed engineer and/or surveyor who prepared the plan. If an architect and/or a landscape architect collaborated in the preparation of the plan, his signature and seal shall also appear.
- (d) The Bucks County Planning Commission.
- (e) The Planning Commission of Hilltown Township.
- (f) The Supervisors of Hilltown Township.

§ 140-19. As-built plans.

Upon completion of public improvements (prior to acceptance of same by the Board of Supervisors in accordance with provisions set forth in Article VI of this chapter), the subdivider or developer will furnish the Township with as-built plans for all utilities, roads, and stormwater management facilities. As-built plans for detention/retention basins and/or underground storage facilities utilized to control stormwater discharge must be prepared and submitted to the Township Engineer for review immediately upon completion of rough grading to verify required stage/storage capacity. As-built plans for these facilities must be reviewed for compliance with stormwater management plan design requirements prior to any additional site work. As-built plans shall contain information listed in Appendix D.¹²

§ 140-20. Traffic impact study.

- A. Purpose. The traffic impact study will enable Hilltown Township to assess the impact of the proposed development on the transportation system, both highways and public transportation, in the Township. Purpose of the impact study is to insure that proposed developments do not adversely affect the transportation network and to identify any traffic problems associated with access between the site and the existing transportation network. The study's purpose is also to delineate solutions to potential problems and to present improvements to be incorporated into the proposed development. The study shall assist in the protection of air quality, conservation of energy and encouragement of public transportation use.
- B. Traffic impact study shall be prepared by a qualified traffic engineer and/or transportation planner with previous traffic study experience. Procedures and standards for the traffic impact study are set forth herein. Applicant may provide funds to the Township which may hire a traffic engineer of its choice to conduct the study, if this procedure is deemed appropriate by the Township.
- C. Applicability.
 - (1) A traffic impact study shall be submitted for all subdivisions and land developments that meet one or more of the following criteria:
 - (a) Residential: 75 or more dwelling units or lots.

12. Editor's Note: Appendix D is included as an attachment to this chapter.

- (b) Nonresidential subdivision: 10 lots or more.
 - (c) Commercial: a commercial building or buildings consisting of 25,000 square feet or more of gross floor space (total floor area on all floors within the exterior walls of the building).
 - (d) Office: a development consisting of 25,000 square feet or more of gross floor space.
 - (e) Industrial: any industrial development consisting of 10 or more lots, or 50,000 square feet or more of gross floor area, or having more than 75 employees (immediately or future) with access from the site onto a Township street, or with an expected daily traffic flow of more than 150 vehicle trips per day with site access onto a Township street.
 - (f) Institutional: any medical, educational or institutional development consisting of 25,000 square feet or more of gross floor area.
- (2) The Hilltown Township Board of Supervisors, at its discretion, may require any other subdivision or land development application to be accompanied by a traffic impact study; provided, however, that the Supervisors notify the applicant within 60 days following the Planning Commission's first meeting to consider the proposal. Such a notification shall specify the reason for the requirement, citing the proposal's particular location or existing problems or type of use (i.e., generation of heavy truck traffic).

D. Definitions.

- (1) As used in this section, the following terms shall have the meanings indicated:

LEVEL OF SERVICE — As described in the 1985 Highway Capacity Manual, indicates how well traffic moves on a particular highway facility or through a specific intersection. There are six levels of servicing ranging from "A" through "F." Level of Service "A" indicates generally free movement. Level of Service "E" represents maximum capacity of the facility. Level "F" indicates congestion. Level of Service "C" is considered the design level of service, representing a stable traffic flow and a relatively satisfactory travel speed.

MAJOR INTERSECTION — Any intersection where traffic generated by the proposal will have a significant impact on the operation of the intersection and/or any other intersection involving an arterial road. Where doubt exists, the transportation engineer shall seek guidance from the Board of Supervisors prior to the submission of the traffic impact study.

PUBLIC TRANSPORTATION — Transportation service for the general public provided by a common carrier of passengers generally on a regular route basis, or a private operator offering service to the public.

STUDY AREA — This area will extend approximately 1/2 mile along the adjacent roadways in both directions from all access points or the first major intersection along these roadways. Where doubt exists, the traffic engineer shall seek guidance from the Township Board of Supervisors prior to the submission of the traffic impact study.

TRIP GENERATION RATES — The total count of trips to and from a study site per unit of land use as measured by parameters such as dwelling units, acres, etc.

VOLUME/CAPACITY ANALYSIS — This procedure compares the volume of a roadway or intersection approach to its capacity (maximum number of vehicles that can pass a given point during a given time period.) The procedures described in the 1985 Highway Capacity Manual, Highway Research Board Special Report 209, shall be followed.

WARRANTS FOR TRAFFIC SIGNAL INSTALLATION — This is a series of warrants which detail the minimum traffic or pedestrian volumes or other criteria necessary for the installation of a traffic signal. These warrants are contained in the Manual on Uniform Traffic Control Devices for Streets and Highways, U.S. Department of Transportation, Federal Highway Administration, 1988, as amended, or the most recent version, whichever is later.

- (2) Engineering and traffic studies shall be prepared in accordance with Title 67, Chapter 201, "Engineering and Traffic Studies."
- E. General requirements and standards. A traffic impact study shall contain the following information:
- (1) General site description. The site description shall include the size, location, proposed land uses, construction staging and completion date of the proposed subdivision or land development. If the development is residential, types of dwelling units shall also be included. A brief description of other major existing and proposed developments within the study area shall be provided. The general site description shall also include probable socioeconomic characteristics of potential site users to the extent that they may affect the transportation needs of the site (i.e., number of senior citizens).
 - (2) Transportation facilities description.
 - (a) The description shall contain a full documentation of the proposed internal and existing external transportation system. This description shall include proposed internal vehicular, bicycle and pedestrian circulation, all proposed ingress and egress locations, all internal roadway widths and rights-of-way, parking conditions, traffic channelizations and any traffic signals or other intersection control devices at all intersections within the site.
 - (b) The report shall describe the entire external roadway system within the study area and include discussion of existing design deficiencies and potential safety hazards. Major intersections in the study area shall be identified and sketched. All existing and proposed public transportation services and facilities within a one-mile radius of the site shall also be documented. Report shall include review and discussion of all available accident reports within the study area during the prior three years. All future highway improvements, including proposed construction and traffic signalization, shall be noted. This information shall be obtained from the 12-Year Highway Capital Program for the Delaware Valley Region and from the Pennsylvania Department of Transportation. Any proposed

roadway improvements due to proposed surrounding developments shall be recorded.

- (3) Existing traffic conditions. Existing traffic conditions shall be measured and documented for all roadways and intersections in the study area. Existing traffic volumes for average daily traffic, peak highway hour(s) traffic, and peak development generated hour(s), and documentation shall be included in the report. A volume/capacity analysis based upon existing volumes shall be performed during the peak highway hour(s) and the peak development generated hour(s) for all roadways and major intersections in the study area. Levels of service shall be determined for each location using the 1985 Highway Capacity Manual methodology.
- (4) Transportation impact of the development. Estimation of vehicular trips to result from the proposal shall be completed for the average daily peak highway hour(s) and peak development-generated hour(s). Vehicular trip generation rates to be used for this calculation shall be obtained from the Trip Generation, An Informational Report, Fifth Edition, Institute of Transportation Engineers, 1991 (as amended). These development-generated traffic volumes shall be provided for the in-bound and out-bound traffic movements as estimated, and the reference source(s) methodology followed shall be documented. All turning movements shall be calculated. These generated volumes shall be distributed to the study area and assigned to the existing roadways and intersections throughout the study area. Documentation of all assumptions used in the distribution and assignment phase shall be provided. Traffic volumes shall be assigned to individual access points. If school crossings are to be used, pedestrian volumes shall be assigned to each crossing. Any characteristics of the site that will cause particular trip generation problems shall be noted.
- (5) Analysis of transportation impact.
 - (a) The total future traffic demand shall be calculated. This demand shall consist of the combination of the existing traffic expanded to the completion year (using an annual background traffic growth rate available), the development-generated traffic, and the traffic generated by other proposed developments in the study area. A second/volume capacity analysis shall be conducted using the total future demand and the future roadway capacity. If staging of the proposed development is anticipate, calculations for each stage of completion shall be made. This analysis shall be performed during the peak highway hour(s) and peak development-generated hour(s) for all roadways and major intersections in the study area. Level of service calculations shall be completed for all major intersections. It is usually at these locations that capacity is most restricted.
 - (b) All access points and pedestrian crossings shall be examined as to the feasibility of installing traffic signals. This evaluation shall compare the projected traffic and pedestrian volumes to the warrants for traffic signal installation.
- (6) Conclusions and recommended improvements.

- (a) Levels of service for all roadways and intersections shall be listed. All roadways and/or intersections showing a level of service below “C” shall be considered deficient, and specific recommendations for the elimination of these problems shall be listed. This listing of recommended improvements shall include, but not be limited to the following elements: internal circulation design, site access location and design, external roadway and intersection design/safety improvements, traffic signal installation and operation including signal timing, and transit design improvements. All physical roadway improvements shall be shown in sketches.
 - (b) Existing and/or future public transportation service shall also be addressed. A listing of all actions to be undertaken to increase present public transportation usage and improve service, if applicable shall be included. An analysis based on the guidelines contained in the “Bucks County Transportation Study, Phase I Report” shall be undertaken to indicate whether or not future public transportation service should be provided to the development.
 - (c) The listing of recommended improvements for both roadways and transit shall include, for each improvement, the party responsible for the improvement, the cost and funding of the improvement and the completion date for the improvement.
- F. Time of submission. The traffic impact study shall be submitted to the Planning Commission with the preliminary plan submittal. Improvement plans shall not be submitted to PennDOT until after review by the Hilltown Township Planning Commission and Board of Supervisors.
- G. Implementation. The Supervisors shall review the traffic impact study to analyze its adequacy in solving any traffic problems that will occur due to the land development or subdivision. The Supervisors may decide that certain improvements contained on and/or adjacent to the site and within the study area are necessary for land development or subdivision plan approval and may attach these conditions to the approval. If the municipality concludes that additional improvements are necessary, the developer shall have the opportunity to resubmit alternative improvements designs to obtain plan approval.

§ 140-21. Sewage facilities.

- A. General. The applicant shall submit the following information for review to insure that the proposed method of sewage collection, treatment, and disposal is adequate to serve the proposed subdivision or land development. The evaluation must establish that each proposed lot, building or structure will be served by an appropriate sewage system.
- B. Development applications. The applicant shall make application to the Pennsylvania Department of Environmental Protection (DEP) which shall determine whether or not the application will require submission of planning modules. Applicant shall provide written verification of the decision of the Pennsylvania DEP.

C. If Pennsylvania DEP determines that planning modules are required for the proposed development, then the following steps must be taken:

- (1) In order to be deemed a complete subdivision or land development application, any application for preliminary subdivision or land development approval must be accompanied by a duly completed Department of Environmental Protection sewage facilities planning module. Such planning module shall also meet all the requirements contained in 25 Pa. Code Chapter 71.
- (2) Such application and planning module shall meet all the procedural and content requirements of 25 Pa. Code Chapter 71, §§ 71.52 and 71.53, including the requirement that they be accompanied by the comments on the planning module of the Bucks County Health Department and the Bucks County Planning Commission. Evidence that the sewage facilities planning module has been before these agencies for 60 days without comment shall be sufficient to satisfy this requirement.
- (3) The Township shall review and act upon the planning modules in accordance with the requirements and criteria set forth in 25 Pa. Code Chapter 71, and may refuse to adopt a proposed revision to its official sewage facilities plan for new land development for reasons including, but not limited to, the following:
 - (a) The plan is not technically or administratively able to be implemented.
 - (b) Present and future sewage disposal needs of the area, remaining acreage or delineated lots are not adequately addressed.
 - (c) The plan is not consistent with the Township land use plans and ordinances, this chapter, or other ordinances or plans controlling land use or development.
 - (d) The plan is not consistent with the comprehensive sewage program of the Township as contained in its official sewage facilities plan.
 - (e) The plan does not meet the consistency requirements set forth in 25 Pa. Code Chapter 71, § 71.21(a)(5)(i) through (iii).
- (4) When the Township refuses to adopt a proposed revision to the official sewage facilities plan, it shall state the reasons for the refusal and forward a copy of this statement to the person making the submission and to the Department of Environmental Protection.
- (5) When the Township adopts the proposed revisions to the official sewage facilities plan, the Township shall forward the proposed revisions to the Department with the information required by 25 Pa. Code Chapter 71, § 71.52. Adoption of the proposed revisions of the official plan shall be by resolution of the Board of Supervisors.
- (6) Approval of the planning modules by the Pennsylvania Department of Environmental Protection shall be a condition of subdivision or land development plan approval by the Township.

- D. Requirements for final plan approval. Where on-lot sewage disposal is proposed, final plan approval shall not be granted for any subdivision or land development until satisfactory evidence has been presented by the applicant to the Township that the Bucks County Health Department and the Pennsylvania Department of Environmental Protection have determined that the lots proposed for subdivision are generally suitable for on-lot septic systems and provided further that a note shall be placed on the final plans as follows:

“The planning module for land development has been approved by the Pennsylvania Department of Environmental Protection and the Bucks County Department of Health as to the subdivision plan. However, the septic system permit has not been issued for the lot(s) upon which new building(s) are proposed. Prior to issuance of a building permit, a septic system permit shall be obtained and presented to the Zoning Officer for each new building.”

§ 140-22. Water resources impact study.

- A. All projects withdrawing 10,000 gpd or greater of groundwater or surface water, or a combination of these two sources, are required to obtain a permit from the DRBC. Copies of all submissions by the applicant to the DRBC shall be sent to the Township. Additionally, copies of all submissions to the Department of Environmental Protection (DEP) and all correspondence received by the applicant from the DEP shall be forwarded to the Township.
- B. Any water withdrawal project not under the jurisdiction of the DRBC will be reviewed by the Township. A water resources impact study shall be required when the proposed development is not served by public water supplied by a municipal authority approved by the Township; and one or more of the following conditions are met:
- (1) The proposed residential subdivision contains three lots or more and the smallest created lot is less than five acres in area.
 - (2) The nonresidential subdivision contains three lots or more.
 - (3) A proposed well is intended for nonresidential use (i.e., industrial, commercial, institutional, community, agricultural).
- C. The water impact study shall be prepared by a hydrologist or professional engineer qualified to conduct groundwater investigations. The purpose of the study will be to determine if there is an adequate supply of water for the proposed use and to estimate the impact of the additional water withdrawals on existing nearby wells, underlying aquifers and streams. The Township Engineer shall be involved in the study as the Township feels is necessary and appropriate.
- D. A water system which does not provide an adequate supply of water for the proposed use, considering both quality and quantity; and/or adversely affects nearby wells and streams shall not be approved by the Township.
- E. The adequacy of water supply shall be determined based upon the assumption that there are 3.5 persons per dwelling unit using 75 gallons of water per person per day. The applicant shall submit an analysis which evaluates the consistency between the

proposed use and the groundwater preservation guidelines included in the Township's Sewage Facilities Plan/201 Facilities Plan.

F. The water impact study shall be signed by the person(s) preparing the study and shall include the following information:

- (1) Calculations of the projected water needs using the criteria set forth in the following references:
 - (a) Public Water Supply Manual, Bureau of Water Quality Management Publication No. 15 by the Pennsylvania Department of Environmental Protection, Harrisburg, Pennsylvania.
 - (b) Guide for Determination of Required Fire Flow by the Insurance Services Office (ISO) as modified.
 - (c) American Water Works Association Standards and Manuals for the American Water Works Association, Denver, Colorado.
- (2) A geologic map of the area within a 1.0 mile radius of the site.
- (3) The location of all faults, lineaments and fracture traces within 1/4 mile of the site.
- (4) The locations of all existing and proposed wells within 1/4 mile of the site, and all large withdrawal wells (10,000 gpd +) within 1.0 mile of the site.
- (5) The location of all existing and proposed on-lot septic systems within 1/4 mile of the site.
- (6) The location of all streams, perennial and intermittent, within 1/4 mile of the site.
- (7) A discussion of the aquifers underlying the site and their long-term drought recharge capability based on accepted published data or detailed site specific investigations.
- (8) Based on the drought recharge capacity of the underlying aquifer and the calculated daily groundwater withdrawals of the project, a hydrologic budget shall be calculated for the site property itself, and for the area within 1/4 mile of the site.
- (9) Based on the results of the hydrologic budget, a determination shall be made on whether or not the potential exists for adverse affects on the hydrologic environment caused by the project.
- (10) The study shall include a brief statement of the qualifications of the person(s) preparing the study.

G. The following site specific investigations shall be required:

- (1) For each well that is constructed:
 - (a) An accurate geologic log should be constructed during the drilling of the well giving a detailed description of the type and thickness of rocks encountered. Additionally, the log should contain information on the depth

and thickness of all water bearing zones encountered and the yield from each zone. Yield from the well must be measured using a quantitative method.

- (b) Samples shall be collected every 20 feet during drilling, or at each change in rock type. Each sample shall be placed in a nonbreakable container. The container, in a sturdy box, shall be made available to the Township.
- (2) A pumping test of not less than 48 hours duration shall be conducted at a rate of not less than 150% of the intended long-term withdrawal from the well. The forty-eight-hour test shall be conducted at a constant pumping rate that should not deviate greater than plus/minus 5% during the test.
- (3) In order to determine the impact of the project well on existing wells, a representative sample of existing wells, evenly spaced around the pumping well, shall be monitored for changes in water level. The number and location of monitoring wells shall be subject to approval by the Township Planning Commission. Sufficient well monitoring shall be performed to allow for the construction of hydrographs showing a continuous record of well levels before, during and after the pumping test.
- (4) A means of accurately measuring the well discharge shall be provided subject to approval by the Township.
- (5) Well discharge shall be directed away from the site by a method suitable to the Township and to a point suitable to the Township.
- (6) Records shall be compiled in typewritten form to include the following information:
 - (a) Name of driller and personnel conducting test.
 - (b) Description of test well to include horizontal and vertical dimensions, casing installed and grouting details.
 - (c) List of formation samples.
 - (d) Static water level immediately prior to yield testing.
 - (e) Hydrograph of depth to water surface during test pumping and recovery period at the test well showing corresponding pump and discharge rate in gallons per minute and time readings were taken.
 - (f) Log of depth to water surface at existing and monitoring wells during test pumping period showing time readings were taken.
- (7) A report shall accompany the test well data which analyzes and interprets all of the data as to the impacts on the groundwater supply and existing wells. Conclusions shall be drawn from the analysis.
- (8) The submission to the Township shall include any and all applications, reports, or supplemental information submitted to the Pennsylvania Department of Environmental Protection and/or the Delaware River Basin Commission.

§ 140-23. Wetland delineation.

When the National Wetlands Inventory (NWI) Maps indicate wetlands on a site or when a site contains hydric soils (refer to § 140-6) or an area with a predominance of wetlands vegetation (refer to Appendix F¹³), an on-site investigation shall be conducted to determine if wetlands are present on the site. A landowner or an applicant shall use one of the following methods to delineate wetlands:

- A. Wetland boundaries shall be delineated through an on-site assessment which shall be conducted by a professional soil scientist or others of demonstrated qualifications. Such a person shall certify that the methods used correctly reflect currently accepted technical concepts, including the presence of wetlands vegetation, hydric soils and/or hydrologic indicators. A study shall be submitted with sufficient detail to allow a thorough review by the municipality. The study must be approved by the governing body.
- B. A wetlands delineation validated by the U.S. Army Corps of Engineers. In the event that a wetlands delineation validated by the U.S. Army Corps of Engineers is shown to vary from a wetlands boundary derived from Subsection A above, the Corps delineation shall govern.

§ 140-23.1. Existing Resources and Site Analysis Plan (ERSAP). [Added 1-26-2009 by Ord. No. 2009-4]

- A. Applicants for zoning Use B1A, Conservation Management Design subdivision wherein six or more lots are proposed shall submit an Existing Resources and Site Analysis Plan (ERSAP) prepared in accordance with the requirements contained in this section. The purpose of this submission is to familiarize officials with existing features and conditions on the applicant's property and within its immediate vicinity and to provide a complete and factual reference of the site.
 - (1) Applicability. All applicants for preliminary or final subdivision proposing Use B1A, Conservation Management Design, wherein six or more lots are proposed, shall submit an ERSAP. It is recommended that this information be provided with presubmission sketch plans. No preliminary or final plan will be accepted by the Township which does not include an ERSAP.
 - (2) Review by the Township. The first item to be discussed when the plan reaches Township Boards and Commissions shall be the ERSAP. No discussion of a preliminary plan shall occur until the applicant has provided a satisfactory ERSAP meeting all requirements. The purpose of an ERSAP is to ensure that the proposed development occurs in a manner that respects the natural environment and that the applicant and Township have a solid understanding of the natural conditions of the development site, as well as conditions around the site.
- B. ERSAP contents. The ERSAP submission shall include the following:
 - (1) Site boundaries.

13. Editor's Note: Appendix F is included as an attachment to this chapter.

- (2) Existing resources inventory. A comprehensive analysis of existing conditions on the proposed development site and areas within 100 feet, showing:
- (a) Soils. Soil types within the site, based on maps contained in the Soil Survey of Bucks County, Pennsylvania, United States Department of Agriculture, as last revised. The soil classifications and boundary lines of all soils located on the tract shall be shown with reference to an alluvial soils, hydric soils, and floodplain soils boundary. Soil descriptions for all soil types shall be provided. Any building or septic system restrictions due to wet soils, seasonably high water table or other restrictions shall be noted on the plan and considered in the site layout. Hydrologic soil groups shall be noted.
 - (b) Topography. Contour lines measured at vertical intervals of two feet. Such slopes shall be determined by an on-site survey, not interpolation of USGS maps.
 - (c) Slope areas. Areas to be shown graphically. The amount of each area in each slope category shall be shown numerically, with a calculation of the amount of slope to be preserved and the amount and percentage to be disturbed.
 - [1] 8% to less than 15%.
 - [2] 16% to 25%.
 - [3] Greater than 25%.
 - (d) Ridge lines and watershed boundaries.
 - (e) Floodplain areas or districts, including information on one-hundred-year flood elevations. FEMA cross sections and elevations shall be utilized to delineate floodplain boundary where detailed study information is available. Where detailed study information is not available, one-hundred-year flood elevations shall be calculated utilizing HEC I computations to generate flow information and HEC II computations to calculate water surface elevations. Structures, culverts, obstructions, bridges or any other significant feature within 500 feet downstream of the site shall be included within the study to account for potential backwater effects. Basins, ponds, flood control facilities or any other significant drainage facility within upstream tributary area shall be included in the study. Use of TR-55 "Urban Hydrology for Small Watersheds," United States Department of Agriculture, Soil Conservation Service, will be an acceptable alternate method for calculating one-hundred-year flow rates. Use of other methods must be approved by the Township Engineer.
 - (f) Vegetative cover conditions on the property, including forest and woodland areas (as defined in § 140-6) and large trees standing alone (i.e., outside of forest or woodland areas measuring 12 inches diameter at four feet above natural grade).

- (g) Streams, watercourses, waters of the Commonwealth, waters of the United States, lakes, ponds, springs, and all natural drainage areas with an explanation of how site drainage works.
 - (h) Wetlands based upon a wetland delineation prepared in accordance with § 140-23 of this chapter.
 - (i) Existing land use.
 - (j) All recorded easements.
 - (k) Existing buildings, structures, and roads.
 - (l) Photographs of the site, including views of the proposed development site from all abutting public roads.
 - (m) Any Pennsylvania Natural Diversity Inventory sites.
 - (n) Reference to any adjoining areas or properties preserved via a recorded conservation or agricultural easement.
 - (o) Orientation of site to sun for use of solar resources.
 - (p) Any existing pedestrian or equestrian trails commonly used on the property.
 - (q) Aerial photograph of the site not more than five years old or the most recent available from the Delaware Valley Regional Planning Commission.
- C. Four-step design process. Applicants shall use the following four-step design process to assist in determining the most suitable approach to development of the subject site. The layout of lots shall be designed such that areas or features identified as being important in the ERSAP or upon site visit are preserved and the areas of secondary importance are used for development. The steps in the four-step design process are as follows:
- (1) Step 1: Establishment of site context and delineation of resources to be left undisturbed or incorporated into development plans, including public amenities.
 - (a) Proposed site resources and open areas to be left undisturbed or specifically incorporated into development plans shall be identified and described based on review and assessment of mapping and other information included in the ERSAP, including woodlands, other significant vegetation, slopes, wetlands, watercourses, etc. A site visit shall be used to discuss and help determine those areas that should have minimal or no disturbance.
 - (b) Special design considerations relative to structural placement, architecture, streetscape and landscape treatment, and site amenities shall be identified.
 - (c) The open and undisturbed areas identified at this stage of the design process shall include consideration for stormwater management, taking into account areas suitable for groundwater recharge and infiltration wherever feasible.
 - (2) Step 2: Location of structures and alignment of infrastructure: buildings, streets, trails, utilities, and stormwater management.

- (a) Potential building area(s) and zones of land disturbance shall be identified in a manner which provides for maximal conservation of significant site resources designated in Step 1.
 - (b) An access and circulation plan shall be designed to provide pedestrian vehicular access to the development which reflects a logical relationship to topographic conditions and neighboring properties, and which minimizes further land disturbance or negative impacts to resource protection objectives.
 - (c) Locations and methods available for providing facilities for water service, wastewater disposal, stormwater management, and other utilities, as necessary, shall be defined and indicated.
- (3) Step 3: Preparation of schematic design, building, and conservation plan.
- (a) Narrative and plans shall be provided as appropriate to indicate the ways in which the applicant proposes development, as defined in Step 2, in order to implement identified design objectives and respect significant existing features of the land described in the ERSAP and areas designated for nondisturbance in Step 1.
 - (b) Proposed limits to land disturbance on the site, including limits to grading and soil disturbance activities shall be identified.
 - (c) Plan shall indicate how proposed limits of land disturbance comply with any applicable disturbance limitations included in Chapter 160, Zoning, in respect to natural resources.
 - (d) Narrative and plans shall be submitted to demonstrate how existing natural contours and vegetation will be respected.
 - (e) Description of the manner in which stormwater will be captured on-site for maximum infiltration shall be submitted. Areas best suited for stormwater infiltration must be identified and selected for that purpose, based on hydrologic soil groups and the stormwater management requirements of this chapter.
- (4) Step 4: Drawing lot lines/defining ownership responsibilities. Lot lines shall be drawn to delineate the boundaries of individual lots and, in all cases, ownership responsibilities shall be defined in a manner which affords implementation of the Schematic Design, Building, and Conservation Plan defined in Step 3.
- (5) Documentation. Applicants shall be prepared to submit maps indicating the findings of each step of the design process, if so requested by Planning Commission or Board of Supervisors at the time of preliminary and/or final plan application.
- D. Site visit. After preparing the ERSAP, applicants shall arrange for a site visit of the property by Township representatives and shall distribute copies of the site analysis plan prior to the on-site meeting. Township representatives may include one member of the Board of Supervisors, one member of the Planning Commission, Township Manager, Assistant Township Manager, Zoning Officer, Township Engineer, and

Township Planner. Applicants are encouraged to accompany the Township representatives. The purpose of the visit is to familiarize officials with existing conditions and special features on the site, to identify potential design issues, and to provide an informal opportunity to discuss site design concepts, including potential locations for proposed buildings and street alignments, stormwater management concepts, and protection of natural resources. Comments made by the Township representatives or their staff and consultants shall be only advisory and are not binding on either the Township or applicant. It shall be understood by all parties that no formal recommendations can be offered, and no official decisions can be made, at the site visit.

- E. Post-visit conference. Following the site visit, the applicant shall attend a Planning Commission meeting to discuss the findings of the site visit and an understanding on the general approach for subdividing the property.

ARTICLE V

General Design Standards

§ 140-24. Application of standards.

The following principles, standards and requirements will be applied by the Township to evaluate plans for proposed subdivision or land developments. 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. Where literal compliance with the standards herein specified is clearly impractical, the Board of Supervisors may modify or adjust the standards to permit reasonable utilization of property while securing substantial conformance with the objectives of this chapter.

§ 140-25. General standards.

- A. All portions of a tract being subdivided or developed shall be taken up in lots, streets, public lands or other proposed uses so that remnants and landlocked areas shall not be created.
- B. Reserve strips controlling access to lots, public rights-of-way, public lands or adjacent private lands shall be prohibited unless their control is placed with the Township under conditions of the Board of Supervisors.
- C. Lot lines shall follow Township boundary lines rather than cross them. **[Amended 5-23-2005 by Ord. No. 2005-1]**
- 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 shall not be platted for residential occupancy or for such other uses as may increase danger to health, life, or property, or aggravate erosion until all such hazards have been eliminated or unless adequate safeguards against such hazards are provided by the subdivision plans. Such land within the subdivision or land development shall be set aside on the plan for uses

which shall not be endangered by periodic or occasional inundation and shall not produce unsatisfactory living conditions.

- F. Every possible means shall be provided to preserve trees, groves, waterways, scenic points, historic spots, or other community assets and landmarks that are located within a proposed subdivision or land development.
- G. All discarded materials, including but not limited to waste paper, rags, metal, bottles, cans, building materials, house furnishings, machinery, and vehicles or parts thereof, shall be removed from land proposed to be subdivided or developed, and disposed of properly.
- H. Proposed subdivisions or land developments shall be coordinated with existing nearby neighborhoods so that the community as a whole may develop harmoniously.
- I. Where the preliminary plan includes a portion of a tract which could be further subdivided or developed under the standards of Chapter 160, Zoning, the applicant shall submit a prospective street/lot layout for the entire tract which shall respect the environmental performance standards included in Article V of Chapter 160, Zoning.
- J. Name of the subdivision/land development is subject to review and approval by the Township. Names which conflict with, or are similar to, existing developments shall not be approved. During construction, the development name shall be in accordance with the approved plan. **[Amended 5-10-1999 by Ord. No. 99-4]**
- K. Residential development/neighborhood signs advertising the name of a residential subdivision or land development are permitted subject to requirements of § 160-79G of Chapter 160, Zoning. When proposed, the sign easement area must be shown on the subdivision/land development record plan. A note must be included on the record plan stating: "The residential development/neighborhood sign architectural/material details must receive approval from the Board of Supervisors prior to issuance of a sign permit from Hilltown Township." **[Added 5-23-2011 by Ord. No. 2011-4]**

§ 140-26. Community facilities and open space. [Amended 5-23-2005 by Ord. No. 2005-1]

- A. In reviewing subdivision plans, the Planning Commission will consider the adequacy of existing or proposed community facilities to serve the additional dwellings proposed by the subdivision.
- B. Where deemed essential by the Board of Supervisors upon consideration of the particular type of development proposed and especially in large-scale planned residential developments, the Board of Supervisors may require the dedication or reservation of such areas or sites of an extent and location suitable to the needs created by the development for schools, parks and other purposes.
- C. 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.

- D. Open space area landscaping shall conform to § 140-37E of this chapter. [**Amended 5-23-2011 by Ord. No. 2011-7**]
- E. Designation of and permitted uses on open space land shall conform to requirements of § 160-58 of Chapter 160, Zoning. [**Amended 5-23-2011 by Ord. No. 2011-7¹⁴**]

§ 140-27. Blocks and lots.

- A. The length, width, shape, and design of blocks shall be determined with due regard to the provision of adequate site for buildings of the type proposed, land use and/or zoning requirements of the Township, topography of the land being subdivided, and requirements for safe and convenient vehicular and pedestrian circulation.
- B. Unless the topography of the land being subdivided or the existing pattern of development in the immediately adjacent area shall be otherwise than herein required, the following minimum standards for the design and size of blocks and lots shall prevail:
 - (1) Blocks shall not exceed 1,600 feet in length, nor be less than 500 feet in length. Block length shall be measured along the center line of a street between center lines of intersecting streets.
 - (2) Residential blocks shall be of sufficient depth to accommodate two tiers of lots, except where reverse frontage lots containing frontage on a local street and either an arterial or a collector street. [**Amended 5-23-2005 by Ord. No. 2005-1**]
 - (3) Blocks for commercial and industrial areas may vary from the elements of design contained in this section if the nature of the use requires other treatment. In such cases, off-street parking for employees and customers shall be provided along with safe and convenient limited access to the street system. Space for off-street loading shall also be provided with limited access to the street system. Extension of streets, and utilities shall be provided as necessary.
 - (4) Lot lines intersecting street lines shall be substantially at right angles or radial to street lines from the street line to the rear lot line. "Substantially at right angles" shall mean an intersection angle of not less than 80°. [**Amended 2-25-2002 by Ord. No. 2002-3**]
 - (5) Lots shall front on a street which has already been dedicated to the Township, or which the subdivider or developer proposes to dedicate to the Township in connection with approval of the final plan.
 - (6) The Township shall assign house numbers to each lot within a subdivision.
 - (7) Minimum lot sizes shall be in accordance with Chapter 160, Zoning.
 - (8) Remnants of land, smaller than required for a lot, shall not be permitted within any subdivision. Such remnants shall be incorporated into existing or proposed lots, or dedicated to public use if acceptable to the Board of Supervisors.

14. Editor's Note: This ordinance also repealed former Subsection F, regarding the perimeter of common open space areas, which immediately followed this subsection.

- (9) Reverse frontage lots are prohibited except in accordance with § 140-27B(2) above. Vehicular access for reverse frontage lots is restricted to local streets. **[Amended 5-23-2005 by Ord. No. 2005-1]**
- (10) Residential lots shall not be created which front upon an arterial street, as defined in § 140-29 herein.
- (11) Residential lot depth shall not be less than one nor more than three times the lot width. Lot depth shall be measured as the average distance from the ultimate right-of-way line to rear property line. Lot width is the distance between side property lines measured at the required minimum building setback line.
- (12) Minimum lot width required by Chapter 160, Zoning, must be continuous along an existing or proposed street upon which the lot abuts.

§ 140-28. Street regulations.

- A. Proposed streets shall be properly related to such street plans or parts thereof as have been officially prepared and adopted by the Township and shall be coordinated with existing or proposed streets in adjoining subdivisions or land developments.
- B. Any developer subdividing or developing a parcel which fronts a state highway or proposes access thereto shall be required to obtain a PennDOT highway occupancy permit for any access, improvement, and encroachment within the roadway right-of-way. No plat which will require access to a highway under the jurisdiction of the Department of Transportation shall be finally approved unless the plat contains a notice regarding permit requirements. (Refer to sample in Appendix B.¹⁵)
- C. Proposed streets shall further conform to such county and state road and highway plans as have been prepared, adopted or filed as prescribed by law.
- D. Streets shall be related to topography so as to produce usable lots and acceptable grades.
- E. Center lines of proposed streets must coincide with center line of right-of-way.
- F. Access shall be given to lots and portions of the tract in the subdivisions or land development and to adjacent unsubdivided property unless the topography clearly indicates that such connection is not feasible. Streets giving such access shall be improved to the limits of the subdivision or land development to Township specifications. Reserve strips and landlocked areas shall not be created.
- G. Streets shall be laid out to preserve the integrity of their design. Local access streets shall be laid out to discourage their use by through traffic and, where possible, collector streets shall be designed for use by through traffic.
- H. Where the proposed subdivision or land development contains or is adjacent to an existing or proposed arterial street, provision shall be made for marginal access streets. The Township may also require rear service areas, reverse frontage, or such other

15. Editor's Note: Appendix B is included as an attachment to this chapter.

treatment as will provide protection for abutting properties, reduction in number of intersections with arterial streets, and separation of local and through traffic.

- I. Screening through the use of appropriate plant materials and berms subject to site plan review shall be provided along the property line of lots with reverse frontage to buffer the lot from the higher order street. Berms shall undulate with a height varying from two feet to six feet. A minimum of eight inches of topsoil shall be placed on the berm. Plant material shall consist of a mixture of shrubs, evergreen trees and deciduous trees. A minimum of 12 shrubs, eight evergreen trees, and four deciduous trees per 100 lineal feet of frontage shall be planted in an informal arrangement. Planting shall conform to genus, species, caliper, and height requirements of § 140-37 of this chapter. A yard area with a minimum depth of 25 feet shall be provided between the principal structure and edge of the reverse frontage planting. Required street trees shall not be counted toward the minimum number of screening plants. **[Amended 5-23-2005 by Ord. No. 2005-1]**
- J. Half or partial streets will not be permitted in new subdivisions or land developments.
- K. Dead-end streets shall be prohibited, except as stubs to permit future street extension into adjoining tracts, or when designed as culs-de-sac. Temporary stub streets shall be permitted only if the street is less than 200 feet in length and provides access to two or less dwelling units.
- L. Street names shall be coordinated with existing or platted street names, and shall be reviewed by the Postmaster. If a new street is a continuation of or is aligned with an existing or platted street, it shall bear the same name as the existing or platted street. All street names shall be subject to approval of the Board of Supervisors. **[Amended 7-25-2016 by Ord. No. 2016-001]**
- M. No street shall be laid out or opened which extends to or crosses any boundary between the Township and any other municipality except with the specific approval of the Board of Supervisors and upon such condition as the Township may impose.
- N. All streets shall have a uniform width throughout their respective lengths except where otherwise required by the Board of Supervisors pursuant to § 140-29.
- O. All lots, public lands, open space, remnants of land, or other proposed uses within subdivisions shall be served by paved public streets.
- P. When the subdivision or land development abuts an existing street, drainage improvements shall be made to existing streets. Required improvements must be extended as necessary to provide positive drainage to existing storm drainage facilities or drainage channels. Additionally, existing cartways (full width) shall be reconstructed where necessary to establish minimum construction standards of § 140-29. Where reconstruction is not required, full-width leveling with 9 mm Superpave wearing course material, and overlay with 1 1/2 inches (minimum) of 9 mm Superpave wearing course material is required to improve the cartway surface. When leveling is required, structural paving fabric designed for use as an interlayer must be installed between the leveling and wearing course if determined necessary by the Township Engineer. **[Amended 7-25-2016 by Ord. No. 2016-001]**
- Q. No new street will be permitted which will cause an existing principal structure to become nonconforming to front yard requirements of Chapter 160, Zoning.

- R. All new residential subdivisions or land developments containing 25 dwelling units or more, or generating 250 daily vehicle trips or more, shall have a minimum of two public street accesses to/from existing public roadways. No residential subdivision or land development of 25 units or more shall be served only with a P-loop street, but shall include construction of a new through street. [Added 2-25-2002 by Ord. No. 2002-3]

§ 140-29. Street classification and design standards.

- A. Street classification. Four functional classifications are hereby established for the streets and roads in Hilltown Township:
- (1) Expressway. This classification includes highways designed for large volumes of high-speed traffic with access limited to grade-separated intersections. Future rights-of-way shall be as determined by the Pennsylvania Department of Highways.
 - (2) Arterial. This classification includes highways which provide intracounty or intermunicipal traffic of substantial volumes where the average trip lengths are usually five miles or greater. Generally, these highways should accommodate operating speeds of 35 to 55 miles per hour.
 - (3) Collector. This classification is intended to include those highways which connect local access highways to arterial highways. They may serve intracounty and intramunicipal traffic. They may serve as traffic corridors connecting residential areas with industrial, shopping, and other service. They may penetrate residential areas. Generally, these highways will accommodate operating speeds of 35 to 45 miles per hour.
 - (4) Local access. This classification is intended to include streets and roads that provide direct access to abutting land and connections to higher classes of roadways. Traffic volumes will be low and travel distances generally short. These streets and roads should be designed for operating speeds of 25 to 35 miles per hour or under.
- B. Right-of-way widths. Minimum widths for each type of public street shall be as follows:

Type of Street	Right-of-Way Width (feet)
Expressway	Determined by PennDOT
Arterial	100
Major collector	80
Minor collector	60
Local access	50 or greater depending on development type/on-street parking requirements as determined by the Board of Supervisors

- (1) Where a proposed subdivision abuts or contains an existing public street or road having a right-of-way width less than would be required if said street or road were created under this chapter, sufficient additional width for right-of-way shall be provided and dedicated to meet the foregoing standards.
- (2) Additional right-of-way and cartway widths may be required by the Board of Supervisors to promote public safety and convenience when required by special conditions and to provide parking space in areas of intensive use.

C. Street classification. Streets within Hilltown Township are classified as follows:

- (1) Expressway: Route 309.
- (2) Arterial: Bethlehem Pike, Route 113, and Route 313.
- (3) Major collector: Callowhill Road, Route 152, Diamond Street, Hilltown Pike, and Stump Road.
- (4) Minor collector: Blooming Glen Road, Minsi Trail, Rickert Road, and Fairhill Road. **[Amended 5-10-1999 by Ord. No. 99-4]**
- (5) Local access: all other roads not classified above as arterial, major collector, or minor collector.

D. Cartway width.

- (1) Minimum width of paving on existing streets shall not be less than the following: **[Amended 5-23-2005 by Ord. No. 2005-1]**

Type	Cartway Width (feet)
Arterial	34 (or as required by PennDOT)
Major/minor collector	28 (or as required by PennDOT)
Local access	26 (28 if curb required)

- (2) Residential streets. Proposed residential streets shall be constructed in accordance with the following requirements: **[Amended 7-25-2016 by Ord. No. 2016-001]**

Minimum Requirements ¹		
Minimum Lot Size (square feet)	Row (feet)	Cartway (feet)
50,000 or greater	50	26 ³ (28 when curb required) ⁴
Less than 50,000 (parking permitted one side) ²	56	32
Less than 50,000 (parking permitted both sides) ²	60	36

NOTES:

¹The Township reserves the right to require additional cartway width.

²On-street parking requirements determined by Board of Supervisors.

³On-street parking permitted.

⁴On-street parking permitted on one side.

- (3) Nonresidential streets. Nonresidential streets shall have a minimum right-of-way width of 56 feet. Minimum cartway width shall be 34 feet.
- E. Design standards. Design of streets shall conform with PennDOT Design Manual, Part 2, Highway Design (PDT Pub. 13), and all applicable PennDOT RC standards, unless specifically modified by this chapter.
- F. Pavement design. **[Amended 2-25-2013 by Ord. No. 2013-1]**
- (1) All work and materials involved in the construction of roadways shall be designed and constructed in accordance with Pennsylvania Department of Transportation Specifications, Form 408, as amended, and shall be noted as such on the plan.
 - (2) The roadbed subgrade shall be prepared to the established subgrade elevation and compacted to not less than 100% of the determined dry-weight density as set forth in ASTM D 698. Preparation of the subgrade shall conform to PennDOT Form 408, as amended.
 - (3) Subgrade drains shall be placed along proposed roadways to drain wet areas. Subgrade drains shall be constructed in accordance with PennDOT Form 408, as amended.
 - (4) Utility trench construction (storm sewer, wastewater lines, water main, gas main, etc.) within existing streets shall be backfilled with 2A modified stone placed and compacted in eight-inch lifts. The trench shall be paved with bituminous concrete base course (five-inch compacted depth), bituminous binder course (Superpave) (two-inch compacted depth) and the entire cartway shall be paved with a full-width overlayment (edge of road to edge of road) of bituminous wearing course (Superpave) (1 1/2-inch compacted depth). Full-width cartway overlay shall extend a minimum of 10 feet beyond the edge of the utility trench. Utility trenches within proposed street shall be backfilled with clean, dry, select material and compacted in eight-inch lifts to not less than 100% of the determined dry weight density of the backfill material. Trenches within easements shall be backfilled with clean, dry, select material and compacted in 12-inch lifts to not less than 100% of the determined dry weight density of the backfill material as set forth in ASTM D 698 and PennDOT Form 1408, as amended. (Refer to Appendix A.¹⁶)
 - (5) All roadways covered by these specifications shall be constructed in accordance with the following standards and in accordance with specifications as found in PennDOT Form 408, as amended:

16. Editor's Note: Appendix A is included as an attachment to this chapter.

- (a) Subbase: This work consists of construction of a compacted aggregate (PennDOT No. 3A) to a depth of six inches on a prepared subgrade.
 - (b) Base course: 25 mm bituminous Superpave concrete base course to a compacted minimum depth of five inches.
 - (c) Binder course: 19 mm bituminous Superpave concrete binder course to a compacted minimum depth of two inches shall be provided for all arterial, collector, and primary streets and all nonresidential streets. A bituminous tack coat shall be applied to the binder course prior to placement of the final wearing course.
 - (d) Wearing course: 9.5 mm bituminous Superpave wearing course to a compacted depth of 1 1/2 inches.
- (6) Bituminous paving mixtures shall not be placed when surfaces are wet or when the temperatures of either the air or the surface on which the mixture is to be placed is 40° F. or lower, or between October 31 and April 1 in any calendar year unless authorized by the Township Engineer.
- G. Roadside barriers. Roadside barriers and guide rail shall be required in accordance with PennDOT Design Manual, Part 2, Highway Design, Chapter 12. (PDT Pub. 13) Construction and materials shall be in accordance with applicable PennDOT RC standards.
- H. Traffic control. Vehicular traffic control in work zone areas on and along streets open to the public shall be in strict accordance to requirements of PennDOT Publication 203, Work Zone Traffic Control (67 Pa. Code Chapter 203).
- I. Stop, speed limit, no parking, snow emergency route, street name and advisory signs shall be installed along new development streets in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). Street name sign lettering shall conform with MUTCD and shall have white lettering with green background consistent with the design utilized by the Township Public Works Department. **[Added 2-25-2002 by Ord. No. 2002-3; amended 5-23-2005 by Ord. No. 2005-1; 7-25-2016 by Ord. No. 2016-001]**
- J. Stop line markings shall be installed at all intersections of proposed public streets with arterial and major/minor collector streets and with other existing local streets where determined necessary by the Township. Stop line markings shall be thermoplastic white lines 12 inches wide extending across the approach lane(s). Lines shall be placed four feet in advance of and parallel to the nearest crosswalk line. Where marked crosswalks do not exist, the stop line shall be placed at the desired stopping point, but no more than 30 feet or less than four feet from the nearest edge of the intersection travelway. **[Added 5-23-2005 by Ord. No. 2005-1; amended 7-25-2016 by Ord. No. 2016-001]**
- K. Crosswalk marking shall be installed (where sidewalk exists or is proposed) at all intersections of proposed public streets with arterial and major/minor collector streets and with other existing local streets where determined necessary by the Township, and where midblock pedestrian crossings are appropriate to connect trails, open space, community facilities, schools, and parking. Crosswalk markings shall consist of six-

foot-long white thermoplastic longitudinal lines 24 inches wide, spaced 24 inches apart. Warning signs, flashing lights, advance stop lines (Stop Here For Crosswalk), and refuge islands must be evaluated with consideration given to site-specific issues such as roadway width, number of lanes and traffic volumes, and are required to be installed where deemed necessary by the Township. **[Added 5-23-2005 by Ord. No. 2005-1; amended 7-25-2016 by Ord. No. 2016-001]**

- L. Stamped asphalt crosswalks shall be installed on major pedestrian routes and internally on new residential streets where determined necessary by the Township due to anticipated pedestrian traffic volume and for traffic calming. Stamped crosswalks shall conform to PennDot MS-0530-0024. Pattern and color shall be subject to approval by the Township.¹⁷ **[Added 5-23-2005 by Ord. No. 2005-1; amended 7-25-2016 by Ord. No. 2016-001]**
- M. Traffic calming techniques shall be incorporated into design of all new residential streets unless, upon review of the design plan and proposed calming, it is determined by the Board of Supervisors that traffic calming is not warranted. Traffic calming measures and design guidelines shall be in accordance with Pennsylvania Department of Transportation Publication 383, dated January 2001, as amended. In particular, consideration should be given to the following traffic calming techniques:
 - (1) Textured crosswalk.
 - (2) Raised crosswalk.
 - (3) Speed humps.
 - (4) Gateways.
 - (5) Curb extension/bulb outs.
- N. All new residential streets where parking is permitted on one side (only) shall be designated as snow emergency routes. **[Added 7-25-2016 by Ord. No. 2016-001]**
- O. Centralized mail delivery and cluster box units shall be designed such that same are centrally located to serve the residents of the development, while providing safe and efficient access for pedestrians and motor vehicles in the vicinity of the CBU. Provisions for off-street and/or on-street parking, and ADA compliance accessibility, shall be considered when locating the CBUs. Where possible, CBUs shall be located within publicly or privately owned open space, or on private property within an access easement in favor of a community homeowners' association. CBUs shall be in the style, color and location approved by the Board of Supervisors subject to the United States Postal Service approved specifications which are incorporated herein by reference. **[Added 12-10-2018 by Ord. No. 2018-004]**

§ 140-30. Cul-de-sac streets.

- A. Cul-de-sac streets shall not be permitted unless the applicant can demonstrate to the satisfaction of the Township that construction of a through street is not feasible.

17. Editor's Note: Appendixes G and H are included as attachments to this chapter.

Applicant shall submit for review by the Township aerial mapping with tax map parcels identified which indicate the viability of potential future street construction to establish the through street. **[Amended 5-23-2005 by Ord. No. 2005-1]**

- B. Cul-de-sac streets shall be designed to permit future extension into adjacent undeveloped property. Unless future extension is clearly impractical or undesirable, the turnaround right-of-way shall be placed adjacent to a property line and contained within an easement area. A right-of-way of the same width as the street shall be carried to the property line in such a way as to permit future extension of the street into the adjoining tract. At such time as such a street is extended, the overage created by the turnaround outside the boundaries of the extended street shall revert in ownership to the property owners fronting on the cul-de-sac turnaround.
- C. Permanent cul-de-sac streets shall be kept to a minimum and shall not exceed 500 feet in length or serve as access to more than 12 dwelling units, whichever is more restrictive, unless specifically authorized by the Board of Supervisors. The minimum length of a cul-de-sac shall be 250 feet. For the purpose of this chapter, cul-de-sac streets shall be measured from the intersection of the right-of-way line with the future right-of-way line of the existing street to the center of the turnaround area.
- D. Cul-de-sac streets with curb, whether permanent or temporary, shall be provided with a turnaround at the closed end having a minimum radius to the edge of the finished street or curbline of not less than 40 feet. Permanent cul-de-sac streets shall be provided at the terminus with a right-of-way radius of 60 feet and a minimum return radius of 50 feet. **[Amended 5-23-2005 by Ord. No. 2005-1; 12-10-2018 by Ord. No. 2018-004]**
- E. Commercial and industrial culs-de-sac shall be reviewed for adequacy by the Township Engineer. When deemed necessary by the Township, additional cartway and/or right-of-way radius may be required.
- F. A snow storage area shall be provided along the right-of-way of the turnaround. The snow storage area shall be contained within an easement not less than 15 feet measured from the right-of-way line, and of sufficient length as deemed necessary by the Township to provide adequate snow storage area.
- G. P-loops (loop streets from a single access point) shall have an entrance leg not exceeding 500 feet. The loop of a P-loop shall have a street length not exceeding 3,000 feet.

§ 140-31. Street alignment.

- A. Whenever street lines are deflected in excess of 1 1/2°, connection shall be made by horizontal curves. Long radial curves shall be used rather than a series of short curves and tangents.
- B. The minimum radius at the center line for horizontal curves on collector and arterial streets shall be 300 feet, and for local streets the minimum radius shall be 150 feet.
- C. On local access streets, the minimum tangent between reverse curves shall be at least 100 feet; on collector and arterial streets, the minimum tangent shall be at least 250 feet.

§ 140-32. Street grades.

- A. The minimum center line grade on all streets shall be 0.75% on streets with curbs, 1% on streets without curbs.
- B. The maximum grade on collector or arterial streets shall be 7% and on local access streets 10%.
- C. Vertical curves shall be used in changes of grade exceeding 1% and shall provide proper sight distance.
- D. Minimum vertical sight distance shall be in accordance with PennDOT Chapter 441, as amended.
- E. Maximum grade of proposed street within 50 feet of the ultimate right-of-way of an existing or proposed street shall not exceed 3%.

§ 140-33. Street intersections.

- A. Local streets shall not intersect with collector or arterial streets on the same side at intervals of less than 800 feet as measured from center line to center line.
- B. The distance between center lines of streets opening onto the opposite side of a proposed or existing street shall be not less than 150 feet unless the streets are directly opposite each other.
- C. Multiple intersections involving the junction of more than two streets shall not be permitted.
- D. Proposed street intersections shall be designed at right angles. The intersection of a new street with an existing street shall not be at an angle of less than 75°, except that all intersections with an arterial or collector street shall be at 90°.
- E. Horizontal curves will not be permitted on a proposed street within 50 feet of the ultimate right-of-way of an existing or proposed street.
- F. Minimum curb radius at the intersection of two local streets shall be at least 20 feet; and minimum curb radius at an intersection of a local street and a collector or arterial street shall be at least 25 feet. [Amended 5-10-1999 by Ord. No. 99-4]
- G. A clear sight triangle of 75 feet in all directions shall be provided and maintained at all intersections of public or private streets, measured along the center line from the point of intersection. Nothing which obstructs the vision of a motorist shall be permitted in this area. [Amended 12-10-2018 by Ord. No. 2018-004]
- H. Minimum horizontal and vertical sight distances shall be established in accordance with PennDOT Chapter 441, as amended.

§ 140-34. Driveways.

- A. General.

- (1) Driveways on corner lots shall be located no less than 60 feet from any street intersection (measured from the intersection of the ultimate right-of-way lines). Sight distance requirements for all residential and nonresidential driveways shall be in accordance with PennDOT Chapter 441. **[Amended 5-23-2005 by Ord. No. 2005-1]**
- (2) Driveways to corner lots shall gain access from the street of lower classification when a corner lot is bounded by streets of two different classifications as described herein. A corner lot created by a proposed street and an existing street shall gain access to the proposed street.
- (3) All driveways serving single-family dwellings, except shared driveways, shall be at least five feet from any side or rear lot line.
- (4) All driveways serving single-family dwellings shall be a minimum of eight feet in width with a grade not to exceed 15%. Maximum change in grade at any location on the driveway shall not exceed 8%.
- (5) All single-family residential driveways shall be paved from the edge of cartway to the ultimate right-of-way, or for a length of 15 feet, whichever is greater using the following minimum standards:
 - (a) A crushed aggregate base course with a compacted depth of six inches.
 - (b) A bituminous binder course (ID-2) with a compacted depth of 1 1/2 inches.
 - (c) A bituminous wearing course (ID-2) with a compacted depth of one inch.
 - (d) In the case where sidewalks are provided, a concrete driveway apron shall be required.
- (6) Where an existing roadside drainage swale is too shallow to permit installation of a driveway pipe, a paved swale may be installed conforming to requirements of PennDOT Chapter 441 unless the anticipated depth of flow across the driveway exceeds 1/2 inch during the ten-year return storm. Where the anticipated depth of flow across the driveway exceeds 1/2 inch during the ten-year return storm, a concrete trench box with steel grate must be installed. Grates must be recessed below edge of cartway to establish a minimum 2% slope from the cartway to the grate. Trench boxes must extend beyond edge of driveway paving a minimum five feet. **[Amended 5-23-2005 by Ord. No. 2005-1]**
- (7) Driveway pipes.
 - (a) Driveway pipes must include flared end sections.
 - (b) End of pipes must extend a minimum of five feet beyond edge of paving.
 - (c) Minimum pipe length is 20 feet.
 - (d) Minimum pipe size shall be 12 inch round or 14 inches by nine inches arch.
 - (e) Pipe must be corrugated metal except when reinforced concrete pipe is required by the Township.

- (f) Minimum nine inches of cover must be maintained between top of pipe and finished paving elevation.
 - (8) Intersection of single-family driveways with cartways shall be installed with minimum paving radii of five feet at both sides.
 - (9) Where curb and sidewalk are required, concrete aprons shall be poured with a minimum thickness of six inches on a minimum four-inch-thick bedding of PennDOT 2B stone. All concrete shall be PennDOT Class "AA" 3750 psi mix. One-half-inch expansion shall be placed between apron and curb. One-fourth-inch score contraction joints shall be installed at 1/3 intervals.
- B. Shared residential driveways.
- (1) Minimum driveway width shall be 18 feet within the street ultimate right-of-way.
 - (2) Entrance must be paved in accordance with Subsection A(5) within the ultimate right-of-way or for a minimum length of 20 feet (whichever is greater).
 - (3) Intersection of driveways with cartways shall be installed with minimum paving radii of 10 feet at both sides.
 - (4) Driveways must be centered on property lines.
- C. Nonresidential driveways.
- (1) Design requirements shall be in accordance with PennDOT Chapter 441.
 - (2) Driveways shall be paved. Design of paving section shall be in accordance with expected loading and frequency of loading. Minimum paving specification shall be in accordance with Subsection A(5), except that minimum compacted depth of the coarse aggregate base course must be eight inches.

§ 140-35. Curbs.

- A. Curbs shall be installed on all streets and parking areas located within multifamily and apartment building developments. Curbs shall also be required on new residential streets in subdivisions or land developments in which the minimum lot size is less than 50,000 square feet, where on-street parking is required by the Township, and all new nonresidential streets. Curbs may also be required on all streets in any subdivision in which the lot areas exceed the above minimum, when the center line street grade of any street exceeds 6%; and along all existing streets where deemed necessary by the Township. In such cases curbs or other drainage controls shall be installed to properly control surface drainage and protect the streets from erosion. The requirement of the curbs may be waived at the discretion of the Board of Supervisors.
- B. All curbs shall be depressed at intersections to sufficient width to accommodate wheelchairs and shall be in accordance with the latest PennDOT and Americans with Disabilities Act (ADA) standards.
- C. Curbing shall be plain cement concrete curb, 18 inches in depth, placed and finished in accordance with requirements set forth in the latest edition of PennDOT Specifications,

Form 408. Concrete shall conform to specifications contained in Appendix H. After completion of the bituminous paving, Class BM-1 asphalt shall be applied to the joint between the curb and bituminous paving for a distance of one foot from the curb toward the center of the road to seal the joint between the curb and bituminous paving. **[Amended 5-23-2005 by Ord. No. 2005-1]**

- D. As an alternate to concrete curb, Belgian block curb may be used where authorized by the Township. Belgian block curb must be installed in accordance with the construction detail included in Appendix A.
- E. Curb cuts (driveway depression) shall be a maximum of 1 1/2 inches above roadway surface, a minimum of one inch above the roadway surface, and a minimum of 14 feet in width.
- F. Profile of curb design along existing streets shall be shown on the plan. Profiles shall be smooth and designed with vertical curves where there is a change in grade. Breaks in grade shall not be permitted. Existing edge of road and bottom of curb elevations shall be identified every 50 feet and at locations specified by the Township Engineer. Minimum cross-slope for cartway widening sections shall be 3/8 inch per foot to establish positive drainage from the existing edge of road to the curbline.

§ 140-36. Sidewalks.

- A. Sidewalks are required along both sides of all existing streets unless waived by the Board of Supervisors. Sidewalks are also required on all new residential streets where curbing is required.
- B. Sidewalks shall be located within a public right-of-way, public easement, or common open space area. Any such system shall be interconnected and not disjointed.
- C. All sidewalks located within the street right-of-way shall be located in such a manner as to provide sufficient area for street trees.
- D. The minimum width of all sidewalk and pedestrian paths shall be four feet wide for residential developments and six feet wide for commercial/industrial areas. **[Amended 2-25-2002 by Ord. No. 2002-3]**
- E. Sidewalks shall have a minimum depth of four inches and shall be placed on a four-inch-thick bed of PennDOT 2B stone base. Concrete driveways, driveway aprons, and sidewalks that will provide access for vehicles shall have a minimum concrete depth of six inches reinforced with wire mesh, and placed on a six-inch-thick bed of PennDOT 2B stone base. Concrete shall conform to specifications contained in Appendix H.¹⁸ **[Amended 5-23-2005 by Ord. No. 2005-1]**
- F. Sidewalks shall not exceed a ten-percent grade. All sidewalks shall be finished using methods that will provide a skid-resistant surface.
- G. Curb depressions designed to accommodate wheelchairs shall be provided at street and other crossings and shall be in accordance with the latest PennDOT and Americans

18. Editor's Note: Appendix H is included as an attachment to this chapter.

with Disabilities Act (ADA) standards. Detectable warnings, 24 inches in width (in the direction of travel) shall extend the full width of the curb ramp and be located so that the edge nearest the curbline is between six and eight inches from the curbline. Detectable warnings shall consist of raised truncated domes with a diameter of nominal 0.9 inches, a height of nominal 0.2 inches and a center to center spacing of nominal 2.35 inches, and shall contrast visually with adjoining surfaces. (Refer to ADA Guidelines Section 4.29.) [Amended 5-23-2005 by Ord. No. 2005-1]

- H. Sidewalks shall be laterally pitched at a slope of 1/4 inch per foot to provide for adequate surface drainage.
- I. Pedestrian and bike paths within open space and recreational facilities shall be concrete, asphalt, wood chips or stone, subject to approval by the Board of Supervisors. Width and design of cross sections shall be subject to approval by the Township Engineer. Maximum center line grade of pedestrian paths shall be 7%. Design center line profile of pedestrian paths shall be shown on the plan. Vertical curves must be designed for changes in grade. Breaks in grade are not permitted. Horizontal curves must be designed for changes in direction. Location of the pedestrian path center line must be defined by detailed bearing and distance information. Where pedestrian paths are designed for combined use with bicycles, center line grades and curves shall be designed as specified by the Township Engineer.

§ 140-37. Landscaping and street trees. [Amended 2-25-2002 by Ord. No. 2002-3; 5-23-2005 by Ord. No. 2005-1; 5-23-2011 by Ord. No. 2011-7]

- A. General landscaping requirements.
 - (1) Where vegetation exists that meets the objectives and planting standards of this chapter, it shall be preserved and may be used to meet planting requirements. Photo documentation of the existing vegetated condition must be submitted for review. Quantities, size, species, genus, and locations of existing materials must be shown on the plans and verified by the Township. Where the Township allows existing vegetation to be counted toward meeting the buffer requirements (including berm requirements) of Chapter 160, Zoning, the vegetation shall not be removed except for dead plants or exotic invasive species, and noxious weeds as defined by 3 Pa.C.S.A § 1501, as amended. Additional plantings shall be required if the existing vegetation is not adequate to meet the buffer standards for density, width, or size. The vegetation shall be protected by recorded plan note to ensure that it remains as a part of the subdivision or land development.
 - (2) Any plant material which does not survive, exhibits poor growth habits, is diseased, is missing, or is damaged by deer or natural causes within 18 months from the date of acceptance by the Township, or 18 months following installation of replacement landscape material, whichever is later, shall be replaced by the developer.
 - (3) Financial security shall be posted with the Township in an amount equal to the estimated cost of the trees and plantings, to be released 18 months from Township acceptance of the installation or installation of replacement trees pursuant to § 140-37A(2) above.

- (4) Prior to acceptance of street tree installation/replacement and prior to acceptance of the eighteen-month maintenance period, all street trees must be pruned to provide a clear zone of seven feet above the sidewalk (if existing) and curb. Tree branches shall be pruned in accordance with the standards of the Tree Care Industry Association (formerly the National Arborist Association).
- (5) All plant material shall be protected from deer damage. Any material damaged by deer prior to Township acceptance and/or completion of a maintenance period must be replaced by the developer.

B. Plant material specifications.

- (1) Names of plants shall agree with the nomenclature of standard plant names, as adopted by the American Joint Committee on Horticulture Nomenclature, 1942 edition, as amended; size and grading standards shall conform to those specified by the American Association of Nurserymen in the latest edition of the United States Department of Agriculture Standards for Nursery Stock. No substitutions shall be permitted except by written permission of the Township.
- (2) Quality. All plants shall be typical of their species or variety and shall have normal, well-developed branches and vigorous fibrous root systems. All plants shall be nursery-grown unless otherwise stated and shall have been growing under the same climate conditions as Hilltown Township for at least two years prior to the date of planting. Written verification of nursery/location shall be provided to the Township for approval prior to installation. All plants which are found unsuitable in growth or condition or which are not true to name shall be removed and replaced with acceptable plants. No plants with trunk damage or scarring shall be installed. All nursery-installed trunk wrapping must be removed at the time of installation to permit inspection of the trunk condition.
- (3) Preparation of plants. All precautions customary in good trade practice shall be taken in preparing plants for moving. All balled and burlapped plants shall be dug to meet or exceed the United States Department of Agriculture Standards for Nursery Stock.
- (4) Delivery. Plants shall be packed, transported, and handled with the utmost care to ensure adequate protection against injury.
- (5) Pruning. Each plant shall be pruned to preserve the natural character of the plant in a manner appropriate to the particular requirements. Branches should be thinned by approximately 25% by removal of crossing, damaged, or competing limbs back to the major crotch. The leader is to be left intact. Pruning shall comply with ANSI A300 Tree Pruning Best Management Practices (Revised 2008).
- (6) Plant material. Trees shall be nursery grown stock of specimen quality. They shall be of symmetrical growth or typical of the variety and supplied from sources in the same hardiness zone as Hilltown Township and free of insect or disease problems.

- (7) Required plant material shall meet the genus, species, and minimum size requirements as specified in the Township's Plant List contained in Appendix K, included as an attachment to this chapter.

(8) Installation.

- (a) All street trees and buffer trees to be installed shall be balled with untreated burlap in accordance with American Association of Nurserymen Standards. The ball depth shall be not less than 60% of the ball diameter, and in all cases, contain the maximum of the fibrous roots of the tree. The following standards shall apply:

Caliper (inches)	Minimum Ball Diameter (inches)
2 to 2 1/2	28
3 to 3 1/2	32
3 1/2 to 4	36
4 to 5	44
5 to 6	54

- (b) Excavated plant pits shall be a minimum two feet wider than the ball size.
- (c) Backfill mix for the excavated plant pit area shall be composed of topsoil, compost, or other recommended material.
- (d) Trees shall be supported in accordance with American National Standards (ANSI) A 300 requirements. Tree guying shall be removed one year after planting.
- (e) If used, tree wrapping paper shall not be installed prior to delivery to the project site. All tree wrapping material shall be removed one year after planting.
- (f) All plantings shall be mulched to a depth of three inches in a six-foot-diameter ring around the base of each tree or continuous beds if trees or shrubs are less than six feet apart.¹⁹

C. Street landscaping. [Amended 12-10-2018 by Ord. No. 2018-004]

- (1) Trees within the right-of-way of a Township street shall not be removed without Township approval except removal of trees within the clear sight triangle, removal of invasive species and/or diseased trees, and dead trees, or removal of trees determined by the Township to be in poor health
- (2) Street trees or front yard landscaping trees shall be required along all existing and proposed streets within any land development or major subdivision where suitable

19. Editor's Note: Former Subsection B(8)(g), as amended, concerning mulch dimensions around tree bases, was deleted in its entirety 12-10-2018 by Ord. No. 2018-004.

street trees do not exist. Street trees shall not be required for a minor subdivision. Street trees shall not be planted opposite each other but shall alternate.

- (3) Where sidewalk does exist and is not proposed, street trees shall be planted within the street right-of-way a minimum of 10 feet from the edge of cartway, except where the Township agrees suitable trees are already in place. (Refer to Appendix A-1.²⁰) Where street trees cannot be installed within the right-of-way a minimum of 10 feet from the cartway, or sidewalk exists or is proposed, an equal number of trees shall be planted on-lot within the front yard.
 - (4) Street trees shall be selected and coordinated to provide adequate separation from overhead and underground utilities. (Refer to Appendix K.²¹) A note shall be included on all subdivisions and land development plans indicating that, prior to installation of street trees, tree location and species will be reviewed by the Township relative to the location of installed utilities. If a potential conflict is determined by the Township, tree location and species must be revised.
 - (5) Street trees shall be selected to create uniformity and cohesiveness within a development, limiting the number of varieties of trees and installing trees that have similar growth and shape patterns.
 - (6) Medium-to-large street trees shall be planted at intervals of not more than 40 feet. Small street trees shall be planted at intervals not to exceed 30 feet measured along the lot width. (Refer to Appendix K.²²)
 - (7) Street trees shall meet the following standards:
 - (a) At the time of planting, medium-to-large street trees shall have a trunk diameter of not less than three inches measured six inches above grade; small street trees shall have a trunk diameter of not less than 2 1/2 inches measured six inches above grade.
 - (b) Branching height. The height of branching shall bear a relationship to the size, species, and location of the tree. Trees selected for street tree use shall have a minimum clearance height of seven feet above grade before branching begins.
- D. Landscaping of parking areas. Any subdivision or land development application that includes an off-street parking facility shall propose landscaping of all such facilities. An off-street parking facility includes the designated parking areas and any appurtenant surfaced areas upon which a vehicle is designed to maneuver, including, but not limited to, all parking stalls, loading areas, driveways, and areas for maneuvering. Every off-street parking facility shall be landscaped so that 50% of each facility will be shaded with trees based upon the anticipated tree crowns at maturity. Development of such canopy shall be in accordance with the following:

20. Editor's Note: Appendix A-1 is included as an attachment to this chapter.

21. Editor's Note: Appendix K is included as an attachment to this chapter.

22. Editor's Note: Appendix K is included as an attachment to this chapter.

- (1) The amount of facility that will be shaded at maturity shall be determined by using the appropriate percentage of the crown based upon whether the tree is a medium to large tree or a small tree as included within the Deciduous Tree List (refer to Appendix K, which is included as an attachment to this chapter), and on their location relative to the parking facility. A 35-foot-diameter crown shall be utilized for trees included on the Medium to Large Deciduous Tree List; a 20-foot-diameter crown shall be utilized for trees included on the Small Tree Deciduous List.
- (2) Trees not included on the Medium to Large Deciduous Tree List or Small Deciduous Tree List may be used as parking lot shade trees, if approved by the Township. No one species shall comprise more than 25% of the total number of parking lot trees.
- (3) Trees (existing trees to be preserved and proposed trees) shall receive 25%, 50%, 75%, or 100% shading credit based upon their location relative to the parking area. Areas where canopies overlap shall not be counted twice. Where the actual tree crown based upon species/location is less than one of the established percentage increments, the credit shall be "rounded" down to the next increment. [For example, if a crown will result in a large tree having 800 square feet of shading, the shading credit is reduced to 75% (722 square feet) based upon the shading credit chart.] If the site has two or more separate parking areas, the amount of shading shall be calculated separately for each facility. Refer Appendix C.²³

Shading Credit Chart				
	100%	75%	50%	25%
Medium to Large Tree (square feet)	962	722	481	240
Small Tree (square feet)	314	236	157	79

- (4) A Parking Facilities Shading Plan shall be submitted with any subdivision or land development application, including an off-street parking facility. The plan shall clearly show (graphically) all surfaced areas included in the calculation of the amount of the facility to be shaded. Trees shall be drawn to scale representing the canopy size at maturity as listed in the Deciduous Tree List.
 - (a) The shading plan shall also include a table identifying the quantity and type of trees used; the percentage of shade credited to each; and their corresponding canopy size.
 - (b) All off-street parking facilities shall be indicated on the shading plan, and the total area calculated shall be noted in the shade calculation table. Surfaced areas for automobile dealerships, lumber yards, and similar facilities as determined by the Township that are used for display, sales,

²³ Editor's Note: Appendix C is included as an attachment to this chapter.

service, and vehicle storage may be relieved of 50% shading requirement as follows:

- [1] The Township may accept a fee in lieu of the 50% shading requirement;
- [2] The Township may accept an applicant's offer to plant the required number/size of trees on riparian areas that may or may not be owned by the Township, or other Township-owned property as designated by the Township. Where trees are to be planted on privately owned land, a conservation easement must be recorded at the Bucks County Courthouse, in a manner acceptable to the Township, to guarantee preservation of the plant material.

(c) Sample shade calculation table.

Tree Label	Botanical Name/Common Name	100% Shading Credit (square feet)	75% Shading Credit (square feet)	50% Shading Credit (square feet)	25% Shading Credit (square feet)	Total Credit (square feet)
T1						
T2						
T3						
Total Tree Shade						
Total Paved Area						
Percent of Shade Coverage						

- (5) A minimum six-foot-by-six-foot planting area shall be provided for each tree planted in a tree well or planter strip. A minimum four-foot-by-eight-foot planting area shall be provided for each tree planted in an island planter. Planter dimensions are measured from the interior side of the curb or other impervious surface. Center line of trees must be planted at a minimum 24 inches from the face of curb or other impervious surface (where curb is not utilized). A two-foot overhang for vehicles into the planter area is allowed as long as trees are installed a minimum of four feet from the edge of the parking area.
- (6) Planting areas shall contain soil, shrubs, and/or living ground cover with two inches of natural bark or root mulch. Dyed mulch may not be utilized. Interlocking pavers and decomposed granite may also be utilized in heavily used areas.
- (7) Proper planting is essential to achieve the best growth of the tree. This includes, but is not limited to: tree handling, tree spacing, tree well size, soil composition, irrigation, and maintenance. The entire tree planting area (tree well, island or strip) shall be excavated to a depth of three feet. The planter area shall be

backfilled with native soil and necessary amendment prior to tree planting. All planting areas shall have a minimum of 12 inches of topsoil.

- (8) All plantings shall be able to survive soot, gas fumes and salt. Trees which have low growing branches, gum or moisture which may drop on vehicles; or blossoms, thorns, seeds or pods which may clog drainage facilities shall not be installed adjacent to streets, parking lots, sidewalks, pedestrian paths, and drainage facilities.

E. Open space plantings.

- (1) The applicant shall provide a method of physically delineating open space areas from private lots. Such methods shall include shrubs, trees, markers, fencing, or other methods acceptable to the Township. Trees, shrubs, markers, or fencing shall be placed on the open space at its boundary. Where hedge plant material is provided as screening or a barrier between private lots and open space, additional markers or plant material for delineation are not necessary.
- (2) A plan for control of noxious weeds, as defined by 3 Pa.C.S.A § 1502, shall be submitted for approval by the Township for all open space areas. The control plan may include periodic cutting, grubbing, foliar spray, basal bark herbicide application, soil application, or a combination of methods. Control plan shall be determined based upon the extent of infestation, quality of native vegetation, existing natural resources (floodplains, wetlands, steep slopes), natural habitat disturbance, etc. Noxious weeds include, but are not limited to, the following:
 - (a) *Cannabis sativa*, commonly known as marijuana.
 - (b) The *Lythrum salicaria* complex: Any nonnative *Lythrum*, including *Lythrum salicaria* and *Lythrum virgatum*, their cultivars and any combination thereof.
 - (c) *Cirsium arvense*, commonly known as Canadian thistle.
 - (d) *Rosa multiflora*, commonly known as Multiflora rose.
 - (e) *Sorghum halepense*, commonly known as Johnson grass.
 - (f) *Carduus nutans*, commonly known as musk thistle.
 - (g) *Cirsium vulgare*, commonly known as bull thistle.
 - (h) *Datura stramonium*, commonly known as jimson weed.
 - (i) *Polygonum perfoliatum*, commonly known as mile-a-minute.
 - (j) *Puerria lobata*, commonly known as kudzu vine.
 - (k) *Sorghum bicolor* cv. *Drummondii*, commonly known as shattercane.
 - (l) *Heracleum mantegazzianum*, commonly known as Giant Hogweed.
 - (m) *Galega officinalis*, commonly known as Goatsrue.

- (3) Recreational open space areas not existing as forest or proposed as natural areas (e.g., wetland) shall be established in meadow, turf grass, or lawn; or established as forest. Open space areas to be dedicated to the Township and to remain "natural" which are fallow field/meadow shall be planted with native tree species to establish forest.
 - (a) A planting plan which identifies tree species, genus, size, and spacing, and ground cover/preparation shall be submitted with the preliminary plan application and is subject to approval by the Township.
 - (b) The planting plan shall, at a minimum, provide for the installation of one tree per 100 square feet of reforestation area. Trees shall have a minimum height of two feet at the time of installation. Bare root plants shall be planted between October 15 and December 1. Potted plants shall be planted between March 15 and May 1. Trees shall be fertilized, mulched, and staked, and protected from deer browsing. Species shall be native hardwoods.
 - (c) Township-owned open space may be designated and remain in agricultural use pursuant to Chapter 160, Zoning, requirements where permitted by the Board of Supervisors.
- (4) Prior to seeding open space areas, a soil test must be conducted by a soil testing laboratory and the soils amended to achieve pH and NPK (nitrogen, phosphorous, and potash) levels as recommended for the proposed seeding. At time of dedication, all open land areas must have at least 90% cover with appropriate grasses or other species and be free of noxious weeds as defined by the Commonwealth of Pennsylvania.
- (5) Open space reforestation plantings which do not survive, exhibit poor growth habits, are diseased, are missing, or are damaged by deer within five years from the date of acceptance by the Township shall be replaced in kind by the developer.
- (6) Any plant material which does not survive, exhibits poor growth habits, or is damaged by deer or natural causes within five years following installation shall be replaced by the developer within six months following notification by the Township.
- (7) Financial security shall be posted with the Township in an amount equal to the estimated cost of the trees and plantings to be released five years from Township acceptance of the installation or reinstallation of replacement trees in accordance with § 140-37E(6) above.

F. Protection of existing plant material:

- (1) All subdivisions and land developments shall be laid out in such a manner so as to preserve healthy trees and shrubs on the site.
- (2) No grading, construction activity, or storage of topsoil or materials shall occur within a tree protection zone (TPZ) measured 15 feet from the trunk of a tree to be retained, or the distance from the trunk to the dripline, whichever is greater.

No equipment may be driven over this area and no building materials are to be stacked against the trees or within the area of this buffer. Prior to construction, the TPZ shall be delineated by the following methods:

- (a) The TPZ that is delineated on the site prior to construction shall conform to the approved development plans;
 - (b) All trees scheduled to remain shall be marked; where groups of trees exist, only the trees on the edge need to be marked;
 - (c) A forty-eight-inch high plastic snow fence (tree protection fence) mounted on steel posts, located eight feet on center, or other delineation approved by the Township, shall be placed along the boundary of the TPZ;
 - (d) When the tree protection fence has been installed, it shall be inspected and approved by the Township prior to clearing and further construction;
 - (e) Fencing along the tree protection zone shall be maintained until all work/construction has been completed; any damaged protective fence shall be replaced and repaired immediately;
 - (f) Trees being removed shall not be felled, pushed, or pulled into a TPZ or any area where vegetation is to be retained.
- (3) Prior to the commencement of construction on any lot, and as prerequisite for the issuance of a building permit for a building within a major subdivision or land development, the applicant shall mark the tree protection zone boundary with four-foot high orange snow fence or three-foot high orange super silt fence. On notification that the marking is completed, the Township shall conduct an inspection to ensure that field conditions represent conditions presented on the plan. A reinspection of the site shall occur once notified of the completion of site work. The reinspection will verify the number of dead or dying trees (if any) in the tree protection zone.
- (4) During construction on any site, the tree protection fence shall be maintained to ensure that there is no encroachment within the area of their dripline by changing grade, trenching, stockpiling of building materials or topsoil, or the compaction of the soil and roots by any motor vehicle unless the following regulations are met:
- (a) The grade of land within the entire area of dripline shall not be raised more than six inches unless tree wells are constructed around each trunk or group of trunks and aeration pipes are extended out to the edge of the dripline. Any increase in grade shall consist of hand-placed, uncompacted topsoil only.
 - (b) Tree wells are to be constructed of uncemented stone or any other suitable material. Such walls shall be a minimum in one foot in diameter for each inch in caliper measured 12 inches above natural ground level.
 - (c) Retaining walls are to be constructed around each tree or group of trees immediately after any grade is lowered within the area of the dripline. This retaining wall is to be constructed of eight inches by eight inches pressure treated landscape ties, uncemented stone, or any other suitable material.

Retaining walls must be designed and constructed to withstand overturning and frost heave.

- (5) If any plant material is to be moved, it must be done in accordance with specifications set forth by the American Association of Nurserymen.
 - (6) All diseased or dead trees shall be promptly removed from the site. All trees to be preserved shall be pruned when necessary to remove dead limbs.
 - (7) No tree is to support any scaffolding, signs, temporary utilities, surveying spikes, or any other device.
 - (8) Topsoil stockpiles shall be located outside the tree protection zone or a minimum of 15 feet, whichever is greater from any tree designated to remain.
 - (9) Those trees whose removal will damage other trees which are to remain must be removed by hand. The resulting stumps must be carefully removed to minimize damage to roots and trunks of other trees.
 - (10) Trees damaged during construction.
 - (a) Tree trunks and exposed roots damaged during construction shall be protected from further damage. Damaged branches shall be pruned according to Tree Care Industry Association (formally National Arborist Association) standards. All cuts shall be made sufficiently close to the trunk or parent limb but without cutting into the branch collar or leaving a protruding stub. All necessary pruning cuts must be made to prevent bark from being torn from the tree and to facilitate rapid healing.
 - (b) All trees which have been disturbed or have experienced damage to their roots or branches shall be fertilized in early fall or mid-spring. Fertilizer grade shall have approximately three parts nitrogen to one part phosphorus and potassium (3-1-1 ratio). Fertilizer shall be broadcast over the soil surface in an area twice the size of the tree protection zone at a rate of one pound of nitrogen per 1,000 square feet.
 - (c) Trees proposed to remain on a subdivision or land development plan which die or are so severely damaged during construction to require removal as determined by the Township shall be replaced pursuant to § 140-37G of this chapter.
 - (11) Stumps, branches and other wood debris shall not be buried on site. Where trees are removed outside of an area to be excavated, it is preferred that stumps be removed by grinding to a point six inches below existing grade.
- G. Replacement trees/reforestation. Trees with a diameter of 10 inches or more which are to be removed or destroyed during any stage of development, grading and/or construction within a subdivision or land development shall be replaced with a tree or trees of the type identified in Appendix K, Medium to Large Deciduous Trees, Small Deciduous Trees, or Evergreen Trees. However, removal of trees on a site shall not exceed the maximum permitted pursuant to Natural Resource Protection Standards of § 160-28, Environmental protection standards, in Chapter 160, Zoning. Replacement trees shall meet the following size limitations:

- (1) Trees with a diameter of 10 inches or more, but less than 18 inches, which are removed shall each be replaced with a tree of like caliper or no fewer than four trees measuring 2 1/2 inches to three inches in diameter.
- (2) Trees with a diameter of 18 inches or more, but less than 30 inches, which are removed shall each be replaced with no fewer than seven trees measuring 2 1/2 inches to three inches in diameter.
- (3) Trees with a diameter of 30 inches or more which are removed shall each be replaced with no fewer than 10 trees measuring 2 1/2 inches to three inches in diameter.
- (4) All replacement trees shall be measured at a height of four feet above the finished grade level. Replacement trees shall be provided in addition to, not in place of, required buffers, street trees, trees in parking lots, or trees planted on single-family lots or common open space.
- (5) Where sufficient replacement trees of the required caliper size are not available or smaller caliper trees would have a greater survivability rate due to the planting environment, the Board of Supervisors may authorize smaller caliper replacement trees, provided that the total caliper inches to be planted is comparable to the requirements set forth above.
- (6) Where development takes place on fully wooded lots, replacement trees or their equivalent may be planted as follows:
 - (a) The applicant shall enhance existing wooded areas through planting of shade tolerant and deer resistant understory trees, shrubs, and ground cover; or
 - (b) In order to mitigate the impact of stormwater runoff either on site or upon adjacent properties, the applicant shall plant riparian buffers in areas designated by the Township, provided that the Township secures the necessary permission if the riparian buffer areas are on private property; or
 - (c) The Township may accept designated off-site areas or other riparian buffer areas in need of planting; or
 - (d) The Township may accept a fee in lieu of the required replacement tree plantings which shall be calculated in a manner acceptable to the Township.
- (7) Where replacement trees are to be planted on privately owned off-site land pursuant to § 140-37G(6), a conservation easement must be recorded at the Bucks County Courthouse in a manner acceptable to the Township to guarantee preservation of the plant material.

§ 140-38. Stormwater management. [Amended 5-10-1999 by Ord. No. 99-4; 5-22-2000 by Ord. No. 2000-6; 7-25-2016 by Ord. No. 2016-001]

All subdivisions and land developments shall comply with Chapter 134, Stormwater Management, as amended. Requirements of Chapter 134, Stormwater Management, shall be in addition to, and not in lieu of, requirements set forth within § 140-38 of this chapter.

Stormwater facilities shall be designed to manage runoff from the maximum permitted site and individual lot impervious surface for all major residential subdivisions (three lots or more) where the smallest lot is less than three acres.

A. General requirements.

- (1) Lots shall be laid out and graded with a minimum slope of 2% to provide positive drainage away from buildings. The Township may require a grading and drainage plan for individual lots indicating a buildable area within each lot, complying with the setback requirements, for which positive drainage is assured.
- (2) On-lot drainage swales shall be designed to provide positive conveyance of surface water from the individual lot. Each swale lot shall convey stormwater from the lot to a storm sewer system, street, open space area, or stormwater management easement without crossing or combining with stormwater from more than the adjacent lot.
- (3) Drainage swales necessary to control surface drainage between lots shall be centered about the common property line.
- (4) No person, corporation, or other entity shall block, impede the flow, alter, construct any structure, or deposit any material or thing, or commit any act which will affect normal or flood flow in any stream or watercourse without having obtained prior approval from the Township and/or Department of Environmental Protection, whichever is applicable.
- (5) Whenever a watercourse, perennial 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 (except for road crossings). It is the responsibility of the developer to stabilize existing eroded stream/channel banks.
- (6) Where a subdivision or land development is traversed by a natural watercourse, there shall be provided a drainage easement or right-of-way conforming substantially with the line of such watercourse. The width of the easement shall be adequate to provide for unimpeded flow of stormwater runoff from the one-hundred-year return storm event based upon existing topography. Terms of the easement shall prohibit excavation, the placing of fill or structures, and any alterations which may adversely affect the flow of stormwater runoff within any portion of the easement. Periodic maintenance of the easement to ensure proper runoff conveyance shall be required by the landowner. **[Amended 2-25-2002 by Ord. No. 2002-3]**
- (7) Existing points of concentrated drainage discharge onto adjacent property shall not be altered without written approval of the affected property owner(s).
- (8) Areas of existing diffused drainage discharge onto adjacent property shall be managed such that, at a minimum, the peak diffused flow does not increase in the general direction of discharge, except as otherwise provided in this section. If diffused flow is proposed to be concentrated and discharged onto adjacent property, the developer must document that there are adequate downstream conveyance facilities to safely transport the concentrated discharge or otherwise prove that no harm will result from the concentrated discharge.

- (9) Any drainage facilities required by this section that are located on, or discharge to, a state highway rights-of-way shall be subject to approval by the Pennsylvania Department of Transportation.
- (10) Storm drainage facilities and appurtenances shall be so designed and provided as to minimize erosion in swales, watercourse channels and at all points of discharge.
- (11) Minimization of impervious surfaces and infiltration of runoff through seepage beds, infiltration trenches, etc., are encouraged, where soil conditions permit, to reduce the size or eliminate the need for retention/detention facilities.
- (12) Roof drains and sump pumps shall be discharged to a natural watercourse, drainage swale, or stormwater easement. Roof drains and sump pumps shall not be connected to a storm sewer or street unless designed as part of a stormwater management facility within a proposed development. In no case shall roof drains or sump pumps be connected to a sanitary sewer.

B. Storm drainage system requirements.

- (1) Any proposed storm drainage plans which affect the drainage basin in any stream or watercourse shall be approved by the Division of Dams and Waterway Management of the Pennsylvania Department of Environmental Protection in accordance with the Title 72, Chapter 105, as amended.
- (2) Easements.
 - (a) Easements shall be dedicated to the Township along all natural or man-made streams and watercourses and/or stormwater management facility areas within a subdivision or land development. These easements shall be of sufficient width to convey a one-hundred-year design storm. Easements shall be provided where storm drainage swales, culverts, or other structures traverse, enter or discharge onto private property. On private property, the entire easement area and fencing and landscaping (if any) shall be maintained by the property owner. The Township shall not maintain and/or repair any improvements within that easement 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, the Township shall, upon satisfactory installation of improvements as specified in a developer's improvement agreement and maintenance agreement, maintain and repair only the structural stormwater management improvements within the easement such as:
 - [1] Piping.
 - [2] Inlets.
 - [3] Outlet, headwalls.
 - [4] Energy dissipation structures or facilities.
 - [5] Stormwater management facility control structures.

- (b) The landowner shall be responsible for all other maintenance and repairs within this easement. For example, the landowner must:
- [1] Mow the lawn.
 - [2] Repair or replace fencing.
 - [3] Repair or replace landscaping.
 - [4] Control vermin and repair damage from animals.
 - [5] Keep the area free of obstructions, structures, vegetation, or accumulated sediment that may block or hinder the function and purpose of the easement.
 - [6] Keep the area free of litter or garbage.
 - [7] Repair erosion and restore vegetation as necessary to keep the easement in good repair.
- (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 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) Flood protection. No stormwater runoff or natural drainage water shall be so diverted as to overload existing drainage systems, or create flooding or the need for additional drainage structures on other private properties or public lands, without proper and approved provisions being made to address these conditions.
- (5) Whenever the location of concentrated runoff from a site is changed due to development, the developer must secure written approval from any adjacent downstream property owners. The developer shall indemnify and/or hold harmless the Township against any claim of damage from any downstream property owners that may result from the proposed development.
- (6) Scour and erosion prevention. In areas in which the street curbs are not required by either this chapter 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 nondegradable geotextile linings, may be required to prevent scour or erosion in locations with large runoff quantities or steep slopes. Bituminous paved swales will not be permitted.
- (7) 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.

- (8) Design criteria. Unless a more conservative design is required by another regulation, or is required because of conditions particular to an individual development, the following storm criteria shall be used to design storm collection and conveyance systems:

	Design Storm Return (years)
Fixed pipe	10
Total conveyance	100

- (9) Design preparation. Designs of storm drainage systems shall be prepared by a licensed professional engineer. Complete detail calculations shall be submitted to the Township for review. Calculations shall cover the entire drainage basin involved, including consideration of areas outside the proposed subdivision or developed land areas.
- (10) Setback to boundaries. No piped storm sewer system outlet, detention basin, or energy dissipation structure shall discharge closer than 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.

C. Collection system design.

- (1) The collection system shall be designed by the Rational Method of Design in accordance with American Society of Civil Engineers Manual No. 37 except where noted, using the formula $Q = CiA$, unless otherwise approved by the Township.
- (a) Capacity: "Q" is the required capacity in cubic feet per second for the collection system at the point of design.
- (b) Runoff coefficient: "C" is the runoff coefficient applicable to the entire drainage area. It shall be based on consideration of soil conditions, average slope of the drainage area and the ultimate development of the entire drainage area according to comprehensive plans. For the various types of ultimate development, the runoff coefficient shall be taken from the table in Appendix C²⁴ unless sufficient engineering data has been presented to the Township Engineer by the developer which information in the judgment of the Township Engineer is sufficient to warrant the use of an alternate runoff coefficient.
- (c) Rainfall intensity formula: "i" is the rainfall intensity in inches per hour and shall be determined from rainfall intensity charts for this area, based on time of concentrations, including Overland Flow Time, Manning's Formulae for channelized flow time and pipe flow time. The design rainfall

24. Editor's Note: Appendix C is included as an attachment to this chapter.

frequency shall be taken from the PennDOT Intensity-Duration-Frequency Field Manual, Region 4 as presented in Appendix C.

- [1] A five-minute storm duration shall be used if the duration does not result in a maximum expected discharge that exceeds the capacity of a thirty-inch pipe.
- [2] If a five-minute storm duration results in a pipe size exceeding 30 inches, the time of concentration approach shall be used in determining storm duration.
- [3] If a five-minute storm duration results in a pipe size exceeding 30 inches, within any run of pipe, the time of concentration approach may be used for sizing of pipes from that point on by adjusting the time of concentration.

- (d) Drainage area: "A" is the drainage area, in acres, tributary to the point of design, and shall include areas tributary from outside sources as well as from within the subdivision or developed land area itself.

(2) Collection system standards.

- (a) Curb inlets. Curb inlets shall be located at curb tangents on the uphill side of street intersection, and at intervals along the curblane to control the maximum amount of encroachment of runoff on the roadway pavement so that same does not exceed 1/2 of the traveled lane width during the design storm event. Design and location of curb inlets shall be approved by the Township.
- (b) State approvals. Drainage structures that are located on state highway rights-of-way shall be approved by the Pennsylvania Department of Transportation, and a copy of the highway occupancy permit shall be submitted to the Township.
- (c) 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.
- (d) Minimum pipe size. Minimum pipe size shall be 18 inches.
- (e) Inlet and manhole construction. Inlet and manhole castings and concrete construction shall be equivalent to Pennsylvania Department of Transportation Design Standards.
- (f) Roof drainage. Stormwater roof drains and pipes shall not discharge water over sidewalks or walkways.
- (g) Open end pipes must be fitted with concrete endwalls or wing walls in accordance with PennDOT Standards.

- (h) Open culvert endwalls or wing walls for pipes larger than 18 inches in diameter and longer than 60 feet in length shall be fitted with durable protective grates. Design of protective grates is subject to approval by the Township.
- (i) 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%.
- (j) 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 36 inches diameter, inlets and manholes may be spaced at intervals of 400 feet. Manholes shall be equipped with open grate lids.
- (k) Storm sewer bedding/backfill requirements shall conform to the construction details included in Appendix A.²⁵
- (l) Inlets shall be located to intercept concentrated runoff prior to discharge over public/private rights-of-way, sidewalks, streets, and driveways.
- (m) 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 in inlet exceeds 4.0 cfs, additional inlets shall be provided upstream of the inlet to intercept the excessive surface flow.
- (n) A minimum drop of two 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.
- (o) 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.
- (p) 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.

25. Editor's Note: Appendix A is included as an attachment to this chapter.

- (q) Culverts shall be designed based on procedures contained in Hydraulic Design of Highway Culverts, HDS No. 5, U.S. Department of Transportation, Federal Highway Administration.
 - (r) Storm sewer structures (i.e., endwalls, inlets, end sections, etc.) may not be located on top of or within 10 feet of electric, water, sanitary sewer, and gas services and/or mains, unless approval is received from the Township, and from the authority or utility having jurisdiction over same.
 - (s) 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° will only be permitted at discretion of the Township Engineer. When skewed crossings are permitted, interior angles between alignment of the storm sewer pipe and utility may not be less than 45°. Vertical and horizontal design of storm sewer must be linear.
 - (t) Where a public storm sewer system is not located within a right-of-way, or dedicated public property, a twenty-foot-wide easement shall be established to encompass the storm sewer system. For multiple pipes or utilities, the width of the easement shall be a minimum of 30 feet.
- (3) 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 vertical for three horizontal.
 - (c) Flow velocity. Design velocity in grass or vegetated swales shall not exceed four 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 the Township.
 - (e) Gutters and swales adjacent to road paving shall be permitted to carry a maximum flow of five 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 the Township, to prevent erosion.

- (h) Swales shall be provided with underdrains as deemed necessary by the Township should overland seepage result in potential maintenance problems for same. Underdrains must discharge into a natural drainage channel or storm sewer system.
- (4) Bridges and culverts. Bridges and culverts shall be designed in accordance with Pennsylvania Department of Transportation Construction Standards. Separate design plans and specifications shall be required for each bridge and culvert which plans and specifications shall be subject to review and approval of the Township.
- (5) HEC I and HEC II study shall be performed where it is necessary to determine the limits of the one-hundred-year floodplain. Technical Paper No. 40, U.S. Department of Commerce, "Rainfall Frequency Atlas of the United States," and NOAA Technical Memorandum NWS Hydro-35 shall be used to establish rainfall intensities for HEC programs. [Added 2-25-2002 by Ord. No. 2002-3]

§ 140-39. Excavation and grading. [Amended 5-22-2000 by Ord. No. 2000-6]

All construction wherein excavation, placement of fill, and/or grading activities are performed shall conform with the following general requirements:

- A. No excavation or fill shall be made with a face steeper than three horizontal to one vertical, except under one or both of the following conditions:
 - (1) The material is sufficiently stable to sustain a steeper slope. A written statement to that effect from a professional engineer licensed in the Commonwealth of Pennsylvania and experienced in erosion control shall be submitted to the Township. The statement shall affirm that the site has been inspected and the deviation from the slope restriction shall not result in injury to persons or damage to property. A detail of the treatment of the slope (proposed grade, seeding, erosion protection, etc.), shall be submitted with the application.
 - (2) A concrete, masonry, or other approved retaining wall is designed by a registered professional engineer licensed in the Commonwealth of Pennsylvania constructed to support the face of the excavation or fill.
- B. If the vertical drop of an excavation or fill slope is greater than five feet, then the maximum slope shall not exceed four horizontal to one vertical.
- C. The top or bottom edges of slopes shall be a minimum of five feet from property lines or right-of-way lines of streets in order to permit the normal rounding of the edge without encroachment on abutting property.
- D. Adequate provision shall be made to prevent surface water from damaging the cut face of excavation and the sloping surfaces of fills.
- E. No person, corporation, or other such entity shall block, impede the flow of, alter, construct any structure, or deposit any material or thing or perform any work that will affect the normal or flood flow in any stream or watercourse without having obtained

prior approval from the Township and/or Department of Environmental Protection, whichever is applicable.

- F. All lots, tracts, or parcels shall be graded to provide positive drainage away from buildings and dispose of it without ponding, except where ponding (detention/retention facilities, swales, etc.) is part of the stormwater management plan for the site.
- G. Concentration of surface water runoff shall be permitted only in swales, watercourses, or stormwater management facilities.
- H. In no case shall grading be done in such a manner as to divert water onto the property of another landowner unless part of a stormwater management plan.
- I. Earth disturbance/staging shall be in strict accordance with the approved grading and erosion/sedimentation control plan.
- J. Areas of the site to remain undisturbed shall be protected from encroachment by construction equipment/vehicles to maintain the existing infiltration characteristics of the soil.
- K. The minimum depth of topsoil to be replaced shall be eight inches, or the existing depth of topsoil encountered on the site, whichever is greater.
- L. Topsoil shall not be removed from the development site. Topsoil shall be stripped, stockpiled, and redistributed on the site. Prior to plan approval, the applicant/designee shall provide the Township with calculations to determine the volume of topsoil anticipated to be stripped, stockpiled, and replaced on the site to verify that excess topsoil will not be generated as a result of construction activity.
- M. During grading operations, necessary measures for dust control must be exercised.
- N. No grading equipment shall be permitted to be loaded and/or unloaded on a paved public street, and no grading equipment shall be permitted to travel on or across a public street unless licensed for operation on public thoroughfares.
- O. Grading equipment shall not be permitted to cross streams. Temporary crossings shall only be permitted where application is made to, and approval received from, PADEP (where applicable), Bucks Conservation District, and the Township.
- P. No area designated as open space shall be used for storage of construction materials, construction trailers, sales trailers, or parking; or to stockpile fill or topsoil material upon occupancy of 50% of the dwelling units within the development phase. Removal of such materials/construction items shall be designated within the construction staging plan. **[Added 2-25-2002 by Ord. No. 2002-3]**

§ 140-40. Erosion and sedimentation control.

- A. An erosion and sedimentation control plan shall be submitted with all applications wherein excavation, placement of fill, and/or grading activities are proposed. The plan shall include a construction staging narrative indicating the sequence of earthmoving activities, and proposed erosion and sedimentation control procedures. Measures used to control erosion and reduce sedimentation during construction activities shall strictly

conform to the standards and specifications of the Bucks Conservation District and sequence of earthmoving activities. At a minimum, the following measures shall be included where applicable:

- (1) Stripping of vegetation, regrading, or other activities shall be done in a way that will minimize erosion and resulting sedimentation.
- (2) Cut and fill operations shall be kept to a minimum. Wherever feasible, natural vegetation shall be retained, protected and supplemented.
- (3) All erosion and sedimentation control measures shall be installed per the approved plan prior to any earthmoving activities. Where a stormwater management basin is involved, the basin shall be constructed, functional, and stabilized prior to any additional site activity. An as-built plan of the facility prepared by a registered professional land surveyor or engineer, licensed in the Commonwealth of Pennsylvania, shall be submitted to the Township for review to verify adequate stage/storage capacity prior to commencement of other site activity. Plan must include note stating the same.
- (4) Disturbed earthen areas and duration of exposure shall be kept to a practical minimum, but shall not exceed 20 days. All disturbed soils and topsoil stockpile areas shall be stabilized as quickly as possible and, if necessary, seeded with temporary vegetation and mulched. If stockpile areas are located on sloping ground or near waters of the commonwealth, same shall be enclosed with silt fencing.
- (5) Permanent vegetation shall be installed as soon as practical on all sites.
- (6) All runoff from project areas shall be collected and diverted to facilities for removal of sediment.
- (7) Runoff from a project area shall not be discharged into the waters of the commonwealth without means to prevent sedimentation.
- (8) Sedimentation in the runoff water shall be trapped and filtered until the disturbed area is stabilized by the use of debris basins, sediment basins, silt traps, or similar measures.
- (9) Sediment barriers shall be properly installed with silt fencing trenched and hay bales staked.
- (10) Tire cleaning areas constructed of AASHTO No. 1 stone and at least 50 feet in length shall be provided at each point of access to the site and individual lots (once internal streets are constructed).
- (11) During construction activities, necessary measures for dust control must be exercised.
- (12) It shall be the responsibility of each person, corporation or other entity performing grading and/or building activities to install and maintain erosion and sedimentation controls until the site is stabilized. In the event any mud and/or debris is transported from the site onto a public roadway, the debris shall be

removed and the roadway swept and/or washed as deemed necessary by the Township at the owner's expense.

- B. Design of energy dissipation for high volume and/or high velocity discharge from storm sewer pipes and channels shall be in accordance with Hydraulic Engineering Circular No. 14, "Hydraulic Design of Energy Dissipaters for Culverts and Channels" as published by Department of Transportation, FHA, when deemed necessary by the Township Engineer, and as approved by the Bucks Conservation District.
- C. Design of Reno mattress and gabions shall be in accordance with any of the following publications:
 - (1) "Flexible Linings In Reno Mattress and Gabions for Canals and Canalized Water Courses" (as amended) published by Maccaferri.
 - (2) "Flexible Gabion Structures In Earth Retaining Works" (as amended) published by Maccaferri.
 - (3) Any other similar technical publication as prepared by a manufacturer or which has been prepared based on engineering study.
- D. Improvements shall be made to drainage channels, roadside swales, and areas of shallow concentrated or sheet flow to eliminate existing erosion.

§ 140-41. Water supply, distribution systems and fire protection.

- A. Water supply. All lots and leased units in a subdivision or land development shall be provided with adequate water supply by means of one of the following methods:
 - (1) Connection to a centralized or public water supply.
 - (2) On-lot water supply.
- B. Public and centralized water supply and distribution systems:
 - (1) All buildings requiring water service located within 150 feet of the right-of-way of a public water main shall be required to make connection to said public water main and pay applicable connection fees and rental rates to the authority having ownership of the public water main, in the following instances:
 - (a) All new construction requiring water supply.
 - (b) All new building lots.
 - (c) All existing structures wherein the structure is enlarged or changed in use to require increased water capacity. This does not include residential additions which do not increase the number of dwelling units.
 - (d) All conversions of buildings from a principal residential use to a principal nonresidential use.
 - (2) All residential subdivisions of 15 lots or more; and all residential subdivisions of five lots or more with a density greater than 0.75 dwelling units per acre, shall be

required to be provided with public or centralized water supply and distribution systems, designed and constructed in accordance with specifications of the Hilltown Township Water and Sewer Authority. **[Amended 2-9-1998 by Ord. No. 98-8; 5-10-1999 by Ord. No. 99-4]**

- (3) All centralized water supply and distribution systems shall be offered for dedication to the Township and/or appropriate water authority having jurisdiction in the area of subdivision. In the event Township and authority refuse acceptance, ownership and operation shall be maintained by a homeowners' association in a manner acceptable to the Township.
- (4) Water quality requirements for a proposed centralized water system shall conform to applicable standards of the Pennsylvania Department of Environmental Protection and Bucks County Department of Health.
- (5) Water mains shall be constructed by the developer in such a manner as to make adequate water service available to each lot, building or dwelling unit within the subdivision. A minimum pressure of 35 pounds per square inch 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 of the Pennsylvania Department of Environmental Protection, and, when applicable, the Delaware River Basin Commission.
- (6) The system shall also be designed with adequate capacity and appropriately spaced fire hydrants for firefighting purposes as determined by the Township. Hydrant locations shall be reviewed by the Fire Marshal and Fire Company servicing the area, and approved by the Township.
- (7) Water impact study. A water impact study pursuant to § 140-22 shall be required for all centralized water supply and distribution systems wherein a new water supply source is proposed to be developed.

C. Individual on-lot wells.

- (1) Where individual on-lot wells are proposed within a new subdivision or land development, wells shall be drilled, installed, and tested for adequate water supply to serve the proposed use prior to issuance of occupancy permits in accordance with Subsection C(2) through (4). Where existing wells are proposed to be abandoned, well closure must be in accordance with DEP well abandonment procedures.
- (2) Well certification.
 - (a) The well yield shall be determined by a pumping test of not less than four hours' duration conducted at a rate of not less than 150% of the intended long-term withdrawal from the well. The four-hour test shall be conducted at a constant pumping rate that shall not deviate greater than plus 5% during the test.
 - (b) In the event the well does not yield a minimum of six gpm, the proposed water system shall be designed to be able to provide sufficient storage via oversize tanks and/or storage in the well bore for the length of time it

would take for the expected peak demand to empty a standard pressure tank being supplied by a well pumping six gpm.

- (c) All well drillers shall, upon completion of the well, provide the Township with a copy of the report submitted to the Commonwealth of Pennsylvania and sufficient data and documentation to verify compliance with Subsection C(1).
- (d) A minimum of one water sample shall be collected for the following tests in Subsection C(2)(d)[1] through [9] (except as noted). Samples must be collected 10 minutes prior to the end of the pump test. All test results must meet established maximum contaminant levels (MCLs) for Pennsylvania. Water samples must be tested by a state certified water laboratory.
 - [1] Coliforms. A minimum of three water samples shall be collected during the pump test for analysis of coliform bacteria. The first sample shall be collected 15 minutes prior to the end of the test with the remaining two samples collected at five-minute intervals.
 - [2] pH.
 - [3] Iron.
 - [4] Nitrates.
 - [5] Total dissolved solids.
 - [6] TCE, PCE, and 1-1-1 trichlorethane.
 - [7] Detergents.
 - [8] Benzene, toluene, xylene.
 - [9] Total petroleum hydrocarbons.
- (3) Well construction. Each well shall be provided with a watertight casing. The minimum length of the casing to be 40 feet or 10 feet into bedrock, whichever is greater. The material of the casing shall be steel with a weight of 18.97 pounds per linear foot. All joints between sections of casing shall be made by continuous welding. Where a pump section or discharge pipes enter or leave a well through the side of the casing, the circle of contact shall be watertight. All casing shall extend at least 18 inches above final grade. The annular space between the earth and outside of the casing shall be filled with cement grout or Bentonite to a distance of at least six feet below the ground surface. Unconsolidated or carbonate water bearing formations will require special consideration.
- (4) Permit required.
 - (a) Prior to commencement of well drilling operation, owner shall be required to make application to, and receive approval from, Hilltown Township.
 - (b) Issuance of a permit to drill well shall not be made until payment of a permit fee in the amount established by resolution of the Board of Supervisors.

§ 140-42. Sanitary sewage disposal.

- A. The developer shall install the most effective type of sanitary disposal consistent with the Township's official plan for sewage facilities prepared in accordance with the Pennsylvania Sewage Facilities Act (Act 537), 35 P.S. § 750.1 et seq., the Township Sewage Facilities Plan, and Chapter 71 of the Pennsylvania Department of Environmental Protection Regulations, for the subdivision or development.
- B. Connection to public sanitary sewer system shall be required where such a system is proposed by the Township's official plan for sewage facilities, and where such a system can feasibly be provided to the proposed subdivision.
- C. When connection to public sewer is proposed, the applicant shall insure that sufficient capacity is legally available to the Township and Sewer Authority to serve all of the proposed lots or units of occupancy within the site. If the Township and/or the Sewer Authority does not have sufficient capacity contractually with the Pennridge Wastewater Treatment Authority or other treatment facility, the Township shall not be required to approve a final subdivision or land development plan. If the applicant is unwilling to grant an extension of time within which the Township may consider the application, the Township shall deny approval of the final plan due to unavailability of sewage disposal service.
- D. In subdivision/land developments where connection to public sewage system is not proposed, on-lot sewage disposal systems shall be installed by the property owner in accordance with the Pennsylvania Sewage Facilities Act, Chapter 73 of DEP Regulations and the requirements of applicable Township regulations.
- E. Sanitary sewer systems shall be located and/or designed to prevent flood damage and to eliminate infiltration of floodwaters into the system, or discharges from the system into floodwaters.
- F. On-lot sewage disposal systems. **[Amended 5-23-2005 by Ord. No. 2005-1]**
 - (1) The owner shall provide for sewage disposal on an individual lot basis according to the rules, regulations, terms, and definitions, and conditions of the individual sewage disposal system application and certification procedure for Bucks County, Pennsylvania, adopted by the Bucks County Board of Commissioners on March 24, 1971, and any amendments made thereto.
 - (2) On-lot sewage disposal facilities must comply with the provisions of Chapters 71 and 73, Administration of Sewage Facilities Program, Pennsylvania Sewage Facilities Act (Act of January 24, 1966), P.L. 1535, No. 537 as amended (35 P.S. § 750.1). The proposed facilities must be deemed satisfactory by the Bucks County Department of Health and a permit for on-lot disposal be issued. A soil testing plan/report and statement of site suitability prepared by a licensed professional engineer or soil scientist must be submitted with the preliminary plan.
 - (3) The developer shall provide the type of sanitary sewage disposal facility consistent with existing physical, geographical and geological conditions. All lots shall be provided with an on-site sanitary sewage disposal system of the type and design which shall, as a minimum requirement, meet the design standards of the

Pennsylvania Department of Environmental Protection and/or the Bucks County Department of Health, which systems shall be approved by the Pennsylvania Department of Environmental Protection and/or the Bucks County Department of Health.

- (4) Each owner or occupant of a dwelling unit with on-lot facilities shall be provided by the developer with a plan of the system and an instruction manual for the use and proper maintenance of the system.
 - (5) The dimensioned location of the on-lot wastewater treatment system (includes the footprint of the proposed system and all system components) as well as any isolation distances required by the Pennsylvania Department of Environmental Protection shall be shown on the preliminary and final plan submission. The on-lot wastewater treatment system must be installed where shown on the plan.
 - (6) On-site wastewater system shall not be located within a floodplain as defined by Chapter 160, Zoning.
 - (7) The area reserved for the on-lot wastewater system must be fenced and protected from any disturbance during all phases of construction.
 - (8) All test sites for on-lot wastewater disposal shall be shown on the grading plan whether used or not used for the final wastewater disposal design. A soils report shall be provided to the Township for all wastewater test sites.
- G. The developer shall be responsible for the completion of the appropriate planning module for land development components as required by the Department of Environmental Protection, including alternatives analysis and feasibility studies. (Refer to § 140-20E of this chapter.)
- H. All final plans shall contain a notice regarding sewage disposal systems. (Refer to sample in Appendix B²⁶).
- (1) On-lot sewage disposal. All subdivision and land development plans shall contain a plan note specifying that approval of the plan does not guarantee permit issuance for sewage disposal.
 - (2) Public or centralized sewers. All subdivision and land development plans shall contain a plan note specifying that connection to public sewer is required.
- I. Design standards and specifications for public and centralized sanitary sewer systems shall conform to requirements of the applicable servicing municipal authority.

§ 140-43. Utilities.

- A. Easements for utilities shall have a minimum width of 20 feet.
- B. To the fullest extent possible, easements for public utilities shall be centered on or adjacent to rear or side lot lines.

26. Editor's Note: Appendix B is included as an attachment to this chapter.

- C. Telephone, electric, television, cable, and such other utilities shall be installed underground and shall be provided within right-of-way easements to be dedicated for such utilities, and in accordance with plans approved by the Board of Supervisors and the applicable utility company. Underground installation of the utility distribution and service lines shall be completed prior to street paving, curb and sidewalk installation.

§ 140-44. Monuments and markers.

- A. Any existing monument, iron pipe, pin, or marker determined and identified to be existing or found on property corners are to remain undisturbed. **[Amended 5-24-2004 by Ord. No. 2004-4]**
- B. Permanent stone or concrete monuments shall be accurately placed by a registered surveyor at the intersection of all lines forming angles and at changes in directions of lines in the boundary (perimeter) of the property subdivided; and at all corners of lots within the subdivision. Monuments shall be premanufactured and not field constructed.
- (1) Monuments shall be a minimum 24 inches in length.
 - (2) Monuments less than 24 inches in length may only be utilized when obstructions are encountered and use is approved by the Township.
- C. All streets shall be monumented on the ultimate right-of-way lines, at the following locations:
- (1) At least two monuments at each intersection.
 - (2) At changes in direction of street lines, excluding curb arcs at intersection.
 - (3) At each end of each curved street line, excluding curb arcs at intersection.
 - (4) Where one of the above locations along the street line is a point common to a property corner, the concrete monument shall be installed in lieu of an iron pin.
 - (5) At intermediate points, wherever topographical or conditions make it impossible to sight between two otherwise required monuments.
 - (6) At such other places along the lines of streets as may be determined by the Township Engineer to be necessary so that any street may be readily defined in the future.
- D. All monuments shall be placed so that the scored point shall coincide exactly with the point of intersection of the line being monumented.
- E. Monuments shall be set with their top level at the finished grade of the surrounding ground, except as follows:
- (1) Monuments which are placed within the lines of existing or proposed sidewalks shall be so located that their tops will not be affected by lateral movement of the sidewalks.
 - (2) Where sidewalks are existing, a stone point (a four inch square chisel cut in the sidewalk with a drill hole in the center) may be substituted for a monument.

Where bituminous paving is existing, a railroad spike may be substituted for a monument or iron pin where required.

- F. Permanent reference marker pins of 1/2 inch O.D. solid iron rod, at least 24 inches long, shall be set at the following points:
- (1) At all points where lot lines intersect curves, either front or rear.
 - (2) At all angles in property lines of lots.
 - (3) At all points where easements intersect property lines.
 - (4) At all other changes in direction of easement boundaries not located within future lawns.
- G. All outboundary monuments shall be installed and certified as to their accuracy and conformance to plan information by the responsible surveyor prior to plan recordation.
- H. All property pins and monuments shall be installed and certified as to their accuracy and conformance to plan information by the responsible surveyor prior to issuance of a building permit for the subject lot. In the event it is determined by the Township that installation prior to construction start is not practical due to future grading operations, temporary wood stake corners shall be set by a licensed surveyor to permit stakeout inspection of proposed construction activities relative to required setbacks. Permanent property pins and monuments shall then be required to be installed prior to issuance of a use and occupancy permit for the parcel.
- I. All monuments along right-of-way being dedicated to the Township, and pins delineating easements being granted to the Township, shall be installed and certified as to their accuracy and conformance to plan information by the responsible surveyor. Installation and certification shall be provided prior to execution and acceptance of public improvements.
- J. Any preexisting or new property markers/monuments of a property under construction, or properties surrounding the subject property under construction, which are disturbed by construction activity are required to be reset and recertified by a licensed surveyor. Property owner and/or developer of the property under construction resulting in the disturbance shall be held responsible for proper replacement and recertification of disturbed property markers/monuments.

§ 140-45. Parking facilities.

- A. Off-street parking facilities shall be provided in compliance with the parking requirements of Chapter 160, Zoning, and the regulations contained herein.
- B. Angled or perpendicular parking shall not be permitted along public streets.
- C. General parking lot standards.
- (1) Parking shall not be permitted along driveways which serve as the entrance(s) or exit(s) to parking areas.

- (2) Parking areas shall be set back from boundary lines and ultimate right-of-way lines in compliance with the requirements of Chapter 160, Zoning. In any case not regulated by zoning, parking areas shall not be located closer than 15 feet from any tract boundary line or ultimate right-of-way line. These setback areas shall be landscaped in accordance with the requirements of § 140-37 of this chapter.
- (3) Where the edge of an existing parking area is located close to a street, driveway, or other parking area and the property is proposed for subdivision and/or land development, a minimum separation of 10 feet shall be provided between these features where feasible. This spacing shall consist of a raised landscape area, preferably curbed, with planting in conformance with § 140-37 herein.
- (4) Dead-ended parking areas shall be discouraged when the required parking capacity can be accommodated in a layout that permits more convenient vehicular movements. However, extraneous through-traffic flow should be avoided.
 - (a) Up to 30 parking spaces may also be located in a dead-ended parking area if there is no more desirable alternative feasible, and sufficient backup areas are provided for the end stalls.
 - (b) More than 30 parking spaces may be located in a dead-ended parking area only if a turnaround area is provided at the closed end, suitable for passenger car turning.
- (5) Handicapped accessible parking stalls shall be installed in all parking lots as close and convenient to building entrances as is reasonable. The specific number and location of handicapped stalls shall be determined by the Board of Supervisors in accordance with current standards and with the advice of the Township Planning Commission and Engineer.
- (6) All signage for parking facilities shall be as specified within § 140-28L.
- (7) All parking lots shall be provided with adequate lighting to assure safe maneuverability of vehicles, and to promote safety for pedestrians. Lighting shall be so arranged that no glare affects abutting residences or streets.
- (8) All nonresidential parking facilities, and all multifamily residential parking facilities and access driveways, shall be paved. Minimum requirements for residential and institutional parking facilities shall be eight inches of 3A modified stone, 1 1/2 inches of Superpave binder, and 1 1/2 inches of Superpave wearing course material. Commercial and industrial parking facility design requirements shall be subject to approval by the Township Engineer based upon expected traffic loads. Driveway entrances must be paved in accordance with the same requirements. **[Amended 12-10-2018 by Ord. No. 2018-004]**
- (9) Outdoor garbage collection facilities must be screened from view by landscaping and/or fencing.
- (10) Parking facilities must be screened in such a manner that vehicle headlights are not intrusive to adjacent residential properties. Grading to recess the parking

facility, raised berms, landscaping and fencing are acceptable methods to screen the parking facility.

- (11) Adequate means for pedestrian access between buildings (on the site) and to and through the parking facility (and to the street sidewalk, where applicable) must be provided. **[Added 12-10-2018 by Ord. No. 2018-004]**
- (12) Parking area design must accommodate access and circulation for fire trucks and other emergency vehicles, and the largest delivery truck anticipated for the proposed use. **[Added 12-10-2018 by Ord. No. 2018-004]**

D. Residential parking lots. **[Amended 12-10-2018 by Ord. No. 2018-004]**

- (1) Parallel rows of parking spaces, which are not separated by a driveway, shall be separated by a planting strip a minimum of 10 feet wide.
- (2) A single row of parking spaces located parallel to and between two driveways shall be separated from one of the driveways by a planting strip a minimum of five feet wide.
- (3) Parking lots shall be divided into sections of not more than 20 cars each, with the sections separated by planting strips a minimum of 10 feet wide.
- (4) The parking area shall landscaped in accordance with § 140-37 of this chapter.

E. Nonresidential parking lots.

- (1) Parking lots with a capacity of 15 to 100 cars shall require a planting strip a minimum of 10 feet wide, landscaped in accordance with § 140-37 of this chapter, around the entire perimeter except where buildings, driveways, and walkways are located. **[Amended 12-10-2018 by Ord. No. 2018-004]**
- (2) Parking lots for more than 100 cars shall be divided into sections by planting strips a minimum of 10 feet wide. **[Amended 12-10-2018 by Ord. No. 2018-004]**
 - (a) These planting strips shall be located parallel to the rows of parking, to serve the following purposes:
 - [1] To separate main access (entrance-exit) driveways from rows of parking spaces.
 - [2] To separate other major driveways from rows of parking spaces (service drives, general internal circulation).
 - [3] To separate large parking areas into smaller units at intervals of not more than four rows of parking stalls with each unit capacity not greater than 100 cars.
 - [4] Refer to Appendix C²⁷ for an illustration of appropriate locations and use of these planting strips.

27. Editor's Note: Appendix C is included as an attachment to this chapter.

- (b) The ends of rows of parking shall be marked as islands by means of painted lines or the use of different paving materials such as paving blocks, bricks, or round stones.
 - [1] Each row of spaces shall contain marked end islands equal in size to one parking space.
 - [2] Parking shall be prohibited on these islands.
 - [3] The first parking space abutting the end of each island shall be reserved and marked for handicapped parking at the end of the row closest to the building unless more convenient locations are possible and reasonable. Ramps shall be provided at convenient intervals for access between parking surface and sidewalks.
- (c) For parking areas with an ultimate capacity greater than 500 cars, the requirements of Subsection E(2)(a) above may be modified by the Board of Supervisors to provide separation into units at intervals of six rows of parking stalls, with each unit capacity not greater than 150 cars.
- (d) The applicant may request the Township to permit an alternative design which achieves the purposes of this parking area requirements as well or better than the requirements herein. The final decision to permit an alternative design shall be made by the Board of Supervisors.
- (3) The parking area shall be landscaped in accordance with § 140-37 of this chapter. **[Amended 12-10-2018 by Ord. No. 2018-004]**
- (4) Additional planting is encouraged and may include a variety of ornamental trees, shrubs, and ground covers, chosen from the list of plant materials in § 140-37, provided that:
 - (a) At the ends of planting strips at driveway intersections, drivers' visibility shall be maintained by limiting planting for the end 35 feet.
 - (b) At the ends of planting strips between rows of parking spaces, visibility shall be maintained by limiting planting for the end 20 feet.
 - (c) Limiting planting shall mean:
 - [1] Not more than one shade or canopy tree within the area.
 - [2] No shrubs or ground cover plants exceeding two feet in height.
 - [3] No evergreen trees.
- (5) The specific purposes to be served by these requirements are:
 - (a) To add visual character and improve the appearance of large parking areas by reducing their massiveness into smaller units.
 - (b) To provide shade for parked cars.
 - (c) To reduce random vehicular flow across parking areas.

- (d) To permit a high level of visibility for these uses (stores, offices) for which visibility is an important factor.
 - (e) To facilitate snow removal and storm drainage, and to conserve energy in construction and resurfacing operations, by permitting relatively large units of paving surface, not obstructed by numerous, small, barrier island areas.
 - (6) Nonresidential parking facilities must be located or designed in such a manner that they are visibly secluded from eye level to adjacent residential properties.
- F. Driveways/access aisles. The following requirements apply to all driveways/access aisles within all sites proposed for land development, as well as to other sites proposed for development which will provide parking capacity for 50 or more cars:
- (1) A smooth transition shall be provided between the driveway section required for access to a public street and the driveway(s) required for internal site circulation.
 - (2) The width of entrance and exit drives shall be:
 - (a) A minimum of 12 feet for one-way use only;
 - (b) A minimum of 24 feet for two-way use;
 - (c) A maximum of 35 feet at the street line and 54 feet at the curbline.
 - (3) Storefront driveways in shopping centers shall have a minimum paved width of 35 feet, to allow one lane in each direction and a dropoff/pickup lane along the sidewalks.
 - (4) Driveways along other nonresidential buildings shall have a minimum paved width of 26 feet, except where a dropoff/pickup lane is proposed, the width shall be 35 feet. Wherever feasible, internal circulation driveways shall extend from access drives in locations which permit and encourage entering traffic to turn and enter the parking aisles without first traveling along a building-front driveway. This feature is intended to reduce the volume of vehicular traffic along building front driveway to make it safer for pedestrian traffic. Refer Appendix C for illustration of this concept.
- G. Parking space and driveway dimensions.

- (1) Parking space and parking aisle driveway dimensions shall be in compliance with the following standards:

Angle of Parking	Parking space		Aisle Width	
	Depth (feet)	Width (feet)	One-Way (feet)	Two-Way (feet)
90°	19	9.5	20	24
60°	21	10	18	20
45°	19	10	15	18

- (2) Where appropriate, parallel parking may be provided utilizing a stall width of eight feet and a minimum length of 22 feet.
- (3) Where vehicles may overhang a planting strip or other landscaped area provided in compliance with this chapter, the depth of the row of parking spaces may be reduced up to three feet, provided the planting strip or other landscaped area is increased an equal amount.
- (4) A minimum of 20 feet of open space shall be provided between the outside wall of any multiple-family dwelling or nonresidential building and any parking space to provide access for firefighting equipment, unless waived by the Township.
- (5) All paved parking stalls must be delineated with four-inch-wide line striping along their entire length. When curb is not installed along perimeter of parking areas and paving is not required, parking stall locations must be delineated with concrete tire stops, bollards, or by other means acceptable to the Township.

§ 140-46. Alleys.

- A. Alleys may be permitted upon approval of the Board of Supervisors in townhouse developments as a means of providing direct off-street parking and access for narrow lots.
- B. Alleys are intended to provide access to the rear of residential lots for services and on-lot parking.
- C. Frontage on an alley shall not be construed to satisfy the requirements of Chapter 160, Zoning, for frontage on a street.
- D. No parking shall be provided for, or permitted within, the cartway of the alley.
- E. Street systems which contain alleys shall be designed to discourage through traffic on the alleys.
- F. Any portion of an alley located between two points of ingress and egress shall provide rear access to no more than 50 dwelling units.
- G. Alleys may only intersect secondary or primary streets.
- H. Alley length shall not exceed a distance of 660 feet as measured between two points of ingress and egress.
- I. Alleys shall be centered on a rear or side lot line and shall be designed with a twenty-foot-wide easement and a paved cartway width of 12 feet. Except where specifically approved by the Board of Supervisors, all alleys shall be designed for one-way traffic. Where two-way traffic is permitted by the Board of Supervisors, a cartway width of 20 feet shall be provided.
- J. Parking shall be limited to a distance not to exceed 30 feet from the alley center line.
- K. Alley construction must be in accordance with street construction standards of § 140-29F.

- L. Alleys not accepted for dedication to the Township shall provide permanent easement rights of access to all properties served by the alley and adequate funds or financial guarantees to insure snow plowing, maintenance, and repair by property owners served by the alley.

§ 140-47. Recreational facilities. [Amended 5-10-1999 by Ord. No. 99-4]

- A. Hilltown Township requires the public dedication of land suitable for the use intended; and upon agreement with the applicant or developer, the construction of recreational facilities, payment of fees in lieu thereof, private reservation of land, or a combination, for park or recreation purposes as a condition precedent to final plan approval; or as the governing body selects and prefers for developments of 25 lots or more.
- B. General requirements.
- (1) For all residential subdivisions of 25 or more dwelling units, recreational facilities shall be provided by the developer.
 - (2) Recreation facilities shall be constructed on recreation land within detached clustered subdivisions and performance standard developments.
 - (3) Recreation facilities shall be readily accessible to all development residents; or in the case of recreation facilities dedicated to the Township, shall be easily and safely accessible to the general public. At least one side of the recreation area shall abut a street for a minimum distance of 50 feet for access of emergency and maintenance vehicles, and parking facilities where deemed necessary by the Township.
 - (4) The configuration of recreation areas must be able to accommodate recreation activities proposed by the development plans. Required minimum area shall not include narrow or irregular pieces of land which are remnants from plotting and/or street and parking areas.
 - (5) Recreation areas shall not be traversed by utility easements unless said utilities are placed underground and no part of them or their supportive equipment protrudes above ground level.
 - (6) Active recreation areas shall be located such that the use of recreational facilities will not be a nuisance to the residents of nearby dwelling units. Adequate buffering/fencing shall be constructed to separate recreational facilities from private properties.
 - (7) The developer shall be required to improve the recreation land so that it is usable for the intended activity, including necessary facilities and equipment. Proposed improvements, including facilities and equipment, shall be acceptable to Hilltown Township.
 - (8) A public water fountain shall be installed within active recreation areas.
 - (9) Hilltown Township may, but shall not be required to, accept any portion(s) of the recreational land/facilities provided. Recreational facilities not dedicated to or

accepted by Hilltown Township shall be owned and maintained by a homeowners' association or other method acceptable to the Township.

- (10) Proposed recreation areas and facilities may be reviewed by the Hilltown Township Park and Recreation Board pursuant to § 140-12 of this chapter as deemed necessary by Board of Supervisors.

C. Minimum recreation facility requirements.

- (1) The following table lists facilities required by this section:

Total Number of Lots/ Dwelling Units	Number of Play fields		Number of Tot Lots ¹		Number of Basketball or Tennis Courts
25 to 49	1	and	1	and	0
50 to 99	2	and	2	and	0
100 to 149	3	and	3	and	1
150 to 199	4	and	4	and	2
200 to 249	5	and	5	and	2
250 to 299	6	and	6	and	3
300 to 349	7	and	7	and	3
350 to 400	8	and	8	and	4

NOTES:

¹ Where more than one tot lot is required, tot lots may be combined to provide a larger structure with additional play events, when approved by the Township.

- (2) In addition, for over 300 lots/dwelling units, the applicant shall install one swimming pool.

D. Tot lot requirements.

- (1) Use of tot lots shall be limited to daylight hours only; no lighting shall be installed.
- (2) Low maintenance play equipment and structures shall be included and confined by a gated fence, a minimum of three feet high. The gate shall be self-closing and self-latching.
- (3) Tot lot shall include a coordinated commercial "play structure" with a minimum of 10 play events designed to serve a minimum of 20 children aged 12 and under. All equipment shall be installed over a resilient safety surface and shall conform to safety guidelines established by the International Play Equipment Manufacturers Association (IPEMA).

- (4) Sitting areas, including benches, shall be provided for the convenience of persons supervising the children.
- (5) Shade trees shall be provided for sitting and play areas; gazebo or picnic-type shelters may be used in addition to shade trees.
- (6) Where a tot lot is placed adjacent to a playfield, practical measures, such as fencing and orientation of facilities, shall be used to reduce hazards, especially from balls, frisbees, or other flying objects.
- (7) Minimum dimensional standards shall be as follows:
 - (a) Minimum area: 2,500 square feet within the fenced area.
 - (b) Minimum horizontal dimension: 35 feet.
 - (c) Minimum setbacks:
 - [1] From lot lines: 10 feet.
 - [2] From the ultimate right-of-way of local streets: 25 feet.
 - [3] From the ultimate right-of-way of collector/arterial streets: 50 feet.
 - (d) A landscaped buffer shall be provided between the proposed tot lot and any proposed or existing dwelling located within 100 feet of the tot lot.
- (8) Locations: at convenient, centralized intervals, requiring not longer than a 1,000 feet walk from any dwelling unit.

E. Playfield requirements.

- (1) Playfields shall be used only during daylight hours; no lighting shall be installed.
- (2) Playfields are intended for informal, neighborhood use. Playfields shall not be used for formalized programs such as Little League Baseball, Soccer, or Midget Football unless located, designed, and intended for use by the entire community.
- (3) Playfields shall consist of a lawn area, unobstructed by trees, shrubs, benches, and other playground equipment. Trees and shrubs shall be installed along the perimeter of a playfield to define its limits, enhance its appearance, and filter noise generated by activities.
- (4) Playfields shall be gently sloped, not less than one-percent nor more than two-percent grade, and shall be well-drained so that they are suitable for use in good weather.
- (5) Playfields must be fenced unless waived by the Township.
- (6) Sitting areas must be provided along the perimeter unless waived by the Township.
- (7) Minimum dimensional standards shall be as follows:
 - (a) Minimum area: 25,000 square feet.

- (b) Minimal horizontal dimension: 150 feet.
- (c) Minimum setbacks to the edge of a playfield.
 - [1] From any dwelling unit: 100 feet.
 - [2] From any property line: 50 feet.
 - [3] From the ultimate right-of-way of local streets: 50 feet.
 - [4] From the ultimate right-of-way of collector/arterial streets: 100 feet.
- (8) Locations: at convenient, centralized intervals.

F. Basketball and tennis court requirements.

- (1) Courts shall be constructed in accordance with specifications approved by the Township Engineer, and shall be oriented in a north-south direction.
- (2) Minimum dimensional standards shall be as follows:
 - (a) Court areas shall be of standard size. (Basketball courts shall be at least 50 feet by 84 feet with a minimum of five feet clearance on all sides; tennis courts shall be at least 36 feet by 78 feet with 12 feet clearance on both sides and 21 feet clearance on both ends.)
 - (b) Minimum setbacks to the edge of paving:
 - [1] From any dwelling unit: 125 feet.
 - [2] From any property line: 50 feet.
 - [3] From the ultimate right-of-way of local streets: 50 feet.
 - [4] From the ultimate right-of-way of collector/arterial streets: 100 feet.
- (3) Tennis courts shall be fenced around the entire perimeter with minimum ten-foot-high fencing.
- (4) Basketball courts shall be fenced with a minimum six-foot-high fencing when the edge of pavement is less than 30 feet from an area with a downward slope exceeding 8%.
- (5) Lighting may be provided for nighttime use of courts, so arranged that no glare affects abutting residences or streets, on a demand-activated basis until no later than 10:00 p.m.
- (6) Locations: at convenient, centralized intervals.

G. Swimming pool requirements.

- (1) Minimum pool surface area shall be 3,000 square feet (i.e., 40 feet by 75 feet).
- (2) A toddler's pool shall be provided.
- (3) The pool shall be surrounded by a paved, nonslip surface, a minimum of eight feet wide.

- (4) Lawn area of not less than 4,000 square feet shall be provided around the pool, at a slope not exceeding 6%.
 - (5) A permanent building shall be provided for bathrooms and lifeguard/supervisor room.
 - (6) The entire facility shall be surrounded by a minimum six-foot-high fence with a lockable gate.
 - (7) Minimum setback to edge of paving, pool building, and perimeter fencing shall be as follows:
 - (a) From any dwelling unit: 200 feet.
 - (b) From any property line: 100 feet.
 - (c) From any street right-of-way: 100 feet.
 - (8) Lighting may be provided for nighttime use, so arranged that no glare affects abutting residences or streets, until no later than 10:00 p.m.
- H. Consolidation of facilities. Applicants are required to provide the numbers and types of facilities as required in this section, spaced for convenient access by the residents. However, applicants are encouraged to consolidate several facilities in fewer locations to better serve the residents' needs in the following possible ways:
- (1) By locating all required tennis or basketball courts in one area, thereby restricting noise and light to one area, and precluding the need to search the neighborhood for a free court.
 - (2) By combining two 25,000 square feet playfields into one fifty-thousand-square-foot area to permit larger fields for softball, football, soccer, or other fields sports, while maintaining the neighborhood use character.
 - (3) By creating one or more park-like facilities rather than simply several sets of scattered facilities.
 - (4) By locating some tot lots in combined areas while retaining others on individual sites to guarantee short walking distances to tot lots.

§ 140-48. Lighting.

- A. Lighting shall be provided along public streets, within parking facilities and recreational facilities as required by the Township Board of Supervisors. Glare shall be controlled in accordance with nuisance standards of Chapter 160, Zoning.
- B. Lighting plan shall be prepared in accordance with § 140-17I.
- C. Suggested values for average horizontal footcandles (HFC) of roadway illumination for midblock segments are:
 - (1) Commercial areas (high pedestrian activity): 2.0 HFC (22 lux).
 - (2) Intermediate areas (moderate pedestrian traffic): 1.4 HFC (15 lux).

(3) Residential areas (low pedestrian activity): 1.0 HFC (11 lux).

- D. Typically 5,800 lumen lights spaced at 250 feet will establish an average illumination of 1.5 HFC pending mounting height and obstructions such as street trees.
- E. Illumination within intersection areas (considered all pavement within the inner crosswalk lines) should be equal to the sum of the recommended levels of the two intersecting streets as listed in the following table:

Predominant Land Use	Arterial Route	Collector Street~	Local Street
Single-family area	2.0 HFC	1.6 HFC	1.4 HFC
Multiple-family area	2.8 HFC	2.3 HFC	2.0 HFC

- F. Intensity of illumination for parking facilities and recreational facilities shall be determined by Hilltown Township on a case by case basis pending actual needs to accommodate the facility.
- G. Lighting shall be installed at developer's expense. The developer shall also be responsible for all costs involved in lighting public facilities/streets until such time that public facilities/streets are accepted or condemned as public facilities/streets by the Township.
- H. Within major subdivisions, individual driveway lampposts shall be installed at the ultimate right-of-way line on all single-family dwelling lots.

§ 140-49. Easements.

- A. Easements for storm sewer, sanitary sewer, utilities and drainage shall be a minimum 20 feet wide.
- B. Easements for site access and driveways shall be a minimum 25 feet wide.
- C. To the fullest extent possible, easements shall be adjacent to or centered on rear and side lot lines.
- D. Nothing shall be permitted to be constructed, placed, planted, set or put within the area of any easement that will interfere with the intended use of the easement, the facilities for which the easement was established, or maintenance of the easement and/or facilities.
- E. Driveways shall be centered within access easements unless topographic conditions do not permit same.
- F. No easement or right-of-way for any purpose whatsoever shall be recited or described in any deed unless the same has been shown on an approved subdivision or land development plan.

ARTICLE VI

Required Improvements and General Standards**§ 140-50. Intent.**

- A. The required land improvements shall be designed, furnished, and installed by the developer in accordance with the provisions of these regulations, the "Improvements Construction Standards" of the Township as adopted by this chapter as Appendix A,²⁸ which shall be considered a part hereof, and other codes of the Township. They shall be installed before the final plan is approved, or in lieu thereof, financial security shall be posted and agreements to install improvements shall be approved concurrent with the approval of final plans.
- B. The developer shall dedicate all land required for rights-of-way and easements within the subdivision and land development, and furnish and install all improvements to provide a complete and coordinated system of streets and utilities for the neighborhood, in accordance with the Township Comprehensive Plan, the Township Official Map, Chapter 160, Zoning, this chapter and neighboring approved developments.

§ 140-51. Required improvements.

All improvements shall be dedicated without cost to the Township as required by this chapter and/or as stipulated in the improvements agreement and in a manner approved by the Township consistent with sound construction methods. This includes:

- A. Grading:
 - (1) Grading of roadways and street rights-of-way and grading of slopes adjacent to roadways and street rights-of-way.
 - (2) Grading of all drainage swales on public or private property and grading of individual lots, to establish positive drainage away from buildings and eliminate low spots.
 - (3) Implementation and maintenance of soil erosion control and sedimentation control facilities.
 - (4) Replacement of topsoil and vegetative restoration in disturbed areas not stabilized with building, paving or other nonvegetative ground cover.
 - (5) Removal of temporary soil erosion and sedimentation control facilities when they are no longer required.
- B. Street or road subbase, base and paving.
- C. Curbs and gutters.
- D. Sidewalks, crosswalks, pathways and bike paths.
- E. Underground facilities for electric, telephone and television cable lines.

28. Editor's Note: Appendix A is included as an attachment to this chapter.

- F. Storm sewers and drainage facilities.
- G. Public sanitary sewer system.
- H. Public or centralized water supply and distribution system, including but not limited to wells, pumping equipment, water laterals, submains, storage tanks and equipment systems (if required).
- I. Street name signs at all street intersections and official traffic control signs and markings.
- J. Permanent monuments and lot pins.
- K. Fire hydrants.
- L. Street trees, landscaping.
- M. Open space improvements and/or recreational facilities, buffer or screen plantings.
- N. Street lights.

§ 140-52. Construction of facilities.

- A. The developer shall construct and install, at no expense to the Township, the improvements specified in this chapter. Construction and installation of such facilities and utilities shall be subject to inspection by appropriate Township, public agency or public utility officials during the progress of the work and shall be in conformance with the Improvements Construction Standards contained in Appendix A.
- B. During the construction and installation of all facilities and utilities required by this chapter, the developer shall insure that access to the job site from a public road shall be kept clear and free of all obstructions and otherwise in a passable condition to all areas of the job site for emergency, fire, and police vehicles. In the event of a dispute, passable access for the foregoing purposes shall be determined by the Township Engineer.
- C. No utility trench, including, but not limited to, trenches for sanitary sewer, storm sewer, waterlines, electric service, or gas shall be left open at the end of the work day unless the trench is covered with steel plate or enclosed by an eight-foot-high chain link fence. [Amended 5-10-1999 by Ord. No. 99-4]

§ 140-53. General standards.

The following principles of subdivision and land development, general requirements and the minimum standards of design, shall be observed by the developer in all instances:

- A. It is the developer's responsibility to comply with all applicable plans, ordinances, statutes, regulations, etc., of Hilltown Township, Bucks County, Commonwealth of Pennsylvania, and United States of America.
- B. Proposed subdivisions and land development shall be coordinated with existing nearby development so that the area as a whole may develop harmoniously. Provision shall be

made to assure that the street patterns included in a proposed subdivision shall complement existing or proposed streets shown on the current official Township Street and Road Map, and on nearby approved developments.

C. Standards incorporated in this chapter. In those cases where precise design standards are not specified in this chapter, or other ordinance adopted by Hilltown Township, design standards of the following organizations shall govern where applicable.

- (1) Roads and streets. Pennsylvania Department of Transportation, American Association of State Highway and Transportation Officials, Institute of Transportation Engineers, Transportation Research Board, U.S. Department of Transportation, Federal Highway Administration, and Hilltown Township.
- (2) Sanitary sewer. Pennsylvania Department of Environmental Protection, Bucks County Department of Health, and servicing municipal authority.
- (3) Water. Pennsylvania Department of Environmental Protection, Bucks County Department of Health, Delaware River Basin Commission, and servicing municipal authority.
- (4) Soil and erosion control. Bucks County Soil Conservation District and Department of Environmental Protection, U.S. Department of Agriculture Soil Conservation Service, and Hilltown Township.
- (5) General engineering. American Society of Civil Engineers, Army Corps of Engineers, Federal Emergency Management Association, and Hilltown Township Engineer.

§ 140-54. Completion of improvements.

No plat shall be finally approved unless the streets shown on such plat have been improved as required by this chapter, and any walkways, curbs, gutters, street lights, fire hydrants, trees, water mains, sanitary sewers, storm sewers and other improvements as may be required by this chapter have been installed in accordance with this chapter.

§ 140-55. Guaranties to complete improvements and financial security.

- A. In lieu of the completion of any improvements required as a condition for the final approval of a plat, including improvements or fees required pursuant to 53 P.S. § 10509(i) of the Municipalities Planning Code, this chapter shall provide for the deposit with the municipality of financial security in an amount sufficient to cover the costs of such improvements or common amenities, including, but not limited to, roads, stormwater detention and/or retention basins and other related drainage facilities, recreational facilities, open space improvements, or buffer or screen plantings which may be required.
- B. When requested by the developer, the governing body shall furnish the developer with a signed copy of a resolution or letter of contingent approval indicating approval of the final plat contingent upon the developer obtaining satisfactory financial security, which must be presented to the Township within 90 days. The resolution or letter of

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 governing body.

- C. Without limitation as to the types of financial security which the Township may approve, which approval shall not be unreasonably withheld, federal or commonwealth chartered lending institution irrevocable letters of credit and restrictive or escrow accounts in such lending institutions shall be deemed acceptable financial security for the purposes of this section. Such financial security shall be posted with a bonding company or federal or commonwealth chartered lending institution chosen by the party posting the financial security, provided that said bonding company or lending institution is authorized to conduct such business within the commonwealth. Such security shall provide for, and secure to the public, the completion of any improvements fixed in the formal action or accompanying agreement for completion of such improvements.
- D. Amount of financial security. The amount of financial security shall be equal to 110% of the estimated cost of the required improvements for which financial security is to be posted. The cost of the required improvements shall be estimated as of 90 days following the date scheduled for the completion of said improvements. Annually, the municipality may adjust the amount of the financial security by comparing the actual cost of the improvements which 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 rescheduled date of completion. Subsequent to such said adjustment, the municipality may require the developer to post additional security in order to assure that the financial security equals 110%.
- E. Basis for establishing amount of security.
 - (1) 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 this commonwealth and certified by such engineer to be a fair and reasonable estimate of such cost. The municipality, upon the recommendation of the municipal engineer, may refuse to accept such estimate for good cause shown. If the applicant or developer and the municipality are unable to agree upon an estimate, then the estimate shall be recalculated and recertified by another professional engineer licensed as such in this commonwealth and chosen mutually by the municipality and the applicant or developer. The estimate certified by the third engineer shall be presumed fair and reasonable and shall be the final estimate. In the event that a third engineer is so chosen, fees for the services of said engineer shall be paid equally by the municipality and the applicant or developer.
 - (2) If the party posting the financial security 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% for each one-year period beyond the first anniversary date from posting of financial security or to an amount not exceeding 110% of the cost of completing the required improvements as reestablished on or about the expiration of the preceding one-year period by using the above bidding procedure or as established

by the Township Engineer. In the case where development is projected over a period of years, the Supervisors (or the planning agency) may authorize submission of final plans by section or stages of development, subject to such requirements or guaranties as to improvements in future sections or stages of development as it finds essential for the protection of any finally approved section of the subdivision or land development.

- F. Dispute over amount of financial security. Whenever a dispute may arise between an applicant or developer and the Township in that neither party can reach an accord or the amount of financial security to be posted, the procedures set forth in 53 P.S. § 10509(g) of the Pennsylvania Municipalities Planning Code shall be employed.
- G. Contracts. As a condition of final plan approval for all subdivisions or land developments, the applicant or developer shall enter into a written agreement with the Township in a manner and form approved by the Township Solicitor, where they shall agree to:
- (1) Construct or cause to be constructed, at their own expense, all streets, curbs, sidewalks, fire hydrants, street lights, drainage facilities, street signs, monuments, capped sewers, parks and other improvements shown on said final plan when required to do so by the Board of Supervisors in accordance with the final plans, as finally approved, and in strict accordance with the standards and specifications of the Township.
 - (2) Maintain, at their own cost, said streets, curbs, sidewalks, drainage facilities, street signs, parks, monuments, fire hydrants, streetlighting, capped sewers and other improvements until the same are accepted or condemned by the Township for public use, and for a period of 18 months thereafter, to repair and reconstruct the same or any part of one of them when such repair or reconstruction shall be specified by the Board of Supervisors as necessary by reason of faulty construction, workmanship or materials and at or before acceptance of such improvements by the Township. Maintain weeds and grass within the development on future street right-of-way and individual lots at a height not to exceed 12 inches and free of noxious weeds as defined by § 140-26D of this chapter until acceptance of dedication of public improvements by the Township. **[Amended 2-25-2013 by Ord. No. 2013-1]**
 - (3) Install or cause to be installed, at their own expense and without any cost to the Township for any part of such installation, street lighting facilities on all streets within and abutting the subdivision or land development if proposed to be dedicated to the Township, as required by this section.
 - (4) Obtain the easements and releases required when any street, drainage facility or other improvement wherein a subdivision abuts or traverses lands of persons other than the person holding legal title to the lands of the subdivision, at his own cost, and obtain from the owner of lands so abutted or traversed full releases from all damages which may change in grade, construction or otherwise of the street, drainage facility or other improvement, and such releases shall inure to the benefit not only of the owner of the subdivision, but to the Township as well.

- (5) Promptly reimburse to the Township reasonable attorneys' and engineers' fees in accordance with this chapter.
- (6) Construct or cause to be constructed, at their expense, road improvements along the frontage of the tract in accordance with this chapter.
- (7) Additional conditions as may be determined to be necessary by the Township Solicitor.

§ 140-56. Completion of improvements.

A. A partial completion and release of financial security.

- (1) As the work of installing the required improvements proceeds, the party posting the financial security may request the Township Supervisors to release or authorize the release, from time to time, of such portions of the financial security necessary for payment to the contractor or contractors performing the work.
- (2) Any such request shall be in writing, addressed to the Supervisors, and the Supervisors shall have 45 days from receipt of such request within which to allow the Township Engineer to certify, in writing, to the Supervisors that such portion of the work upon the improvements has been completed in accordance with the approved plans.
- (3) Upon such certification, the Supervisors shall authorize release by the bonding company or lending institution of an amount as estimated by the Township Engineer fairly representing the value of the improvements completed, or, if the Supervisors fail to act within said forty-five-day period, the governing body shall be deemed to have approved the release of funds as requested.
- (4) The Supervisors shall, prior to final release at the time of completion and certification by its engineer, require retention of 10% of the estimated cost of the aforesaid improvements for purposes of securing the maintenance bond on said improvements.
- (5) If the required financial security of 100 plus 10% is secured in separate accounts and the specified 10% remains secured for the life of the security agreement and the construction period or until dedication, then the 10% specified above shall not be retained from the requested partial release.

B. Completion of improvements and release from financial security.

- (1) When the developer has completed all of the necessary and appropriate improvements, the developer shall notify the Township, in writing, by certified or registered mail, of the completion of the aforesaid improvements and shall send a copy thereof to the Township Engineer.
- (2) The Township Supervisors shall, within 10 days after receipt of such notice, direct and authorize the Township Engineer to inspect all of the aforesaid improvements. The Township Engineer shall, thereupon, file a report, in writing, with the Supervisors and shall promptly mail a copy of the same to the developer by certified or registered mail. The report shall be made and mailed within 30

days after receipt by the Township Engineer of the aforesaid authorization from the Supervisors. The report shall be detailed and shall indicate approval or rejection of said improvements, either in whole or in part, and if said improvements or any portion thereof shall not be approved or shall be rejected by the Township Engineer, said report shall contain a statement of reasons for such nonapproval or rejection.

- (3) The Township Supervisors shall notify the developer, within 15 days of receipt of the Township Engineer's report, in writing, by certified or registered mail, of the action of said Township Supervisors with relation thereto.
- (4) If the Township Supervisors or Township Engineer fail to comply with the time limitation provisions contained herein, all improvements will be deemed to have been approved and the developer shall be released from all liability, pursuant to the performance guaranty bond or other security agreement.
- (5) If any portion of said improvements shall not be approved, or shall be rejected by the Township Supervisors, the developer shall proceed to complete the same and, upon completion, the same procedure or notification, as outlined herein, shall be followed.
- (6) Upon satisfactory completion of all the necessary and appropriate improvements as approved by the Township Engineer and receipt by the Supervisors of the appropriate letter of certification of completion of said improvements, the Supervisors shall release or authorize to be released the balance of the financial security, minus the 10% as specified above. The 10% shall be retained until such time as the developer establishes additional financial security to ensure the structural integrity and functioning of the specified improvements as specified in § 140-57 herein.

§ 140-57. Maintenance guarantees and financial security.

- A. Where the Supervisors accept dedication of all or some of the required improvements following completion, the Supervisors shall require the posting of financial security as a maintenance guaranty to secure the structural integrity of said 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 18 months from the date of acceptance of dedication. Said financial security shall be of the same type as otherwise required in this section with regard to installation of such improvements, and the amount of the financial security shall not exceed 15% of the actual cost of installation of said improvements.
- B. To secure release from the maintenance guaranty and financial security, the developer shall notify the Township Supervisors by certified or registered mail 90 days or as otherwise specified in the guaranty prior to the expiration date of said maintenance guaranty and request an inspection and written report by the Township Engineer as to the structural integrity and functioning of the specified improvements.

- C. Upon receipt of said report and approval of the Engineer of the structural integrity and functioning of said improvements, the Township Supervisors shall release or authorize release of the maintenance guaranty financial security.
- D. If the specified improvements are not found acceptable to the Township Engineer, the developer shall correct the same to the satisfaction of the Township Engineer and Supervisors before the maintenance guaranty financial security is released.

§ 140-58. Remedies to effect completion of improvements.

In the event that any improvements which may be required have not been installed as provided in this section or in accord with the approved final plan, the Supervisors are hereby granted the power to enforce any corporate bond or other security by appropriate legal and equitable remedies. If proceeds of such bond or other security are insufficient to pay the cost of installing or making repairs or corrections to all the improvements covered by said security, the repairs or corrections to all the improvements covered by said security, the Supervisors may, at their option, install part of such improvements in all or part of the subdivision or land development and may institute appropriate legal or equitable action to recover the monies necessary to complete the remainder of improvements. All of the proceeds, whether resulting from the security or from any legal or equitable action brought against the developer, or both, shall be used solely for the installation of the improvements covered by such security and not for any other purpose.

§ 140-58.1. PennDOT highway occupancy permits and condition statements. [Added 10-27-2014 by Ord. No. 2014-3]

Whenever, as part of a subdivision or land development application, an applicant is required to obtain a PennDot Highway Occupancy Permit ("HOP") and PennDot requires the Township to be an applicant or co-applicant for the HOP or to sign a condition statement, the Township shall not sign either unless the applicant has paid a Stormwater Capital Contribution to the Township calculated as follows:

- A. If the stormwater facilities are to be owned and maintained by the Township or a private entity, the deposit shall cover the estimated costs for maintenance, repair, and replacement required pursuant Chapter 134, Stormwater Management, as amended, § 134-44 and inspections required pursuant to § 134-45 for a period of 10 years. The Township Engineer will establish the estimated costs upon review of information submitted by the applicant.
- B. The amount of the deposit to the fund shall be converted to present worth of the annual series of payments. The Township Engineer shall determine the present worth equivalents, which shall be subject to the approval of the Board of Supervisors.

ARTICLE VII

Mandatory Dedication of Recreation Land
[Amended 5-10-1999 by Ord. No. 99-4]**§ 140-59. Purposes; fee requirements.**

Recreation land shall be defined as usable area that can be developed for playgrounds or tot lots, neighborhood parks, or community parks for active outdoor recreation. All residential subdivision or land development plans shall provide for suitable and adequate recreation land and/or fees as set forth in this chapter in order to fulfill the following purposes:

- A. Insure adequate recreational areas and facilities to serve future residents of the Township.
- B. Maintain compliance with recreation standards as recommended by the Hilltown Township Park and Recreation Comprehensive Plan as adopted by the Hilltown Township Board of Supervisors.
- C. Minimize overuse of, and excessive demand for, existing recreational areas and facilities by future residents.
- D. Allow for orderly acquisition and development of recreational areas to serve new residents.
- E. Ensure that dedicated recreation land is suitable for the intended use.

§ 140-60. Dedication requirements.

- A. All residential subdivision or land development plan submissions to the Township shall be required to provide for public dedication of land suitable for park and/or recreation use in accordance with the provisions of this chapter.
- B. A minimum of 0.0327 acres or 1,422 square feet of suitable recreation land shall be provided per dwelling unit within all residential subdivision or land developments, and in accordance with provisions of § 140-47 of this chapter, unless the applicant agrees to a fee-in-lieu-of as outlined in § 140-63. This requirement is based on the following: a goal of providing 10.5 acres of recreation land per 1,000 population in accordance with the standards of the National Park and Recreation Association as reflected by the Township Comprehensive Park and Recreation Plan; and an average household size of 3.11 persons per household as determined by the U.S. Census of 1990.
- C. This recreation land requirement shall in no way diminish the requirement for open space where an open space requirement is set by Chapter 160, Zoning.

§ 140-61. Criteria for determining location and suitability.

- A. Site(s) must be easily and safely accessible, have good ingress and egress and have access to a public road.
- B. Site(s) must have suitable topography for the development as a particular type of recreation area.

- C. Size and shape of the site(s) must be suitable for the development as a recreation area.
- D. Site(s) must meet the minimum size with respect to usable acreage as recommended by the Park and Recreation Comprehensive Plan for Hilltown Township.
- E. Sites designated for recreation land shall not contain lands with natural resources, land that is to be permanently protected and undeveloped in accordance with § 160-28, Environmental performance standards, of Chapter 160, Zoning, stormwater detention facilities, or lands designated for any other purpose.
- F. The recreational activities and/or facilities for which the area is intended shall be specified on the Record Plan. **[Amended 12-10-2018 by Ord. No. 2018-004]**
- G. Recreation areas shall not be traversed by utility easements unless said utilities are placed underground and no part of them or their supportive equipment protrudes above ground level.
- H. The configuration of the recreation area must be able to accommodate recreation activities proposed by the development plans. The required areas shall not include narrow or irregular pieces which are remnants from lotting and/or street and parking areas.
- I. On-site improvements shall be commensurate with the adjacent on-site development improvements, including but not limited to grading, curb, sidewalks, and utilities.
- J. Open space which is required to be set aside as part of a cluster development, performance subdivision, or other use which requires open space shall be provided in addition to the recreation land required by this article. Where both open space and recreational land are required, the requirements for mandatory dedication of recreation land shall be met in addition to the requirements for open space.

§ 140-62. Ownership/dedication to Township.

- A. The Hilltown Township Planning Commission and Park and Recreation Board will provide recommendations on any proposed recreation land dedication and any proposed assessment of recreation fees in lieu of land dedication.
- B. If the Board of Supervisors determines that recreation land dedication would be in the public interest, such recreation land shall be owned and maintained by an entity that the Board of Supervisors determines is acceptable to ensure proper long-term oversight and maintenance of the land. This may be any of, but not limited to, the following, providing such entity agrees to accept such land for permanent recreation purposes:
 - (1) Retention by the owner of the development if such dwelling units are to be rented, subject to restrictions acceptable to the Township Solicitor which shall ensure the perpetual dedication of the land for recreational use.
 - (2) Dedication to a formal homeowner or condominium association, with such agreement subject to approval of the Board of Supervisors, after review by the Township. If any entity responsible for such recreation land should dissolve or become inactive or decide that it no longer wishes to be responsible for such

land, it shall offer such land at no cost to the Township or to another entity that the Township so designates for continued use as recreation land.

- (3) Dedication to an established state, county or regional organization acceptable to the Board of Supervisors.
 - (4) Dedication to Hilltown Township.
- C. If the Board of Supervisors deems it to be in the public interest to accept dedication of land for recreational purposes, such acceptance shall be by adoption of a resolution of the Board of Supervisors and acceptance of a deed of dedication from the developer. Acceptance of dedication of recreational land by the Township shall occur following a formal offer by the developer with title insurance and other information and conditions as required by the Township.
- D. Recreation land shall include deed restrictions to permanently restrict its use for recreation and to prohibit the construction of buildings on the land, except building for noncommercial recreation or to support maintenance of the land.

§ 140-63. Fee in lieu of dedication.

Where (upon agreement with the applicant or developer) it is determined that the dedication of all or any portion of land area required for recreational purposes is not feasible under the criteria set forth in the section, the Township shall require the applicant or developer to pay a fee in lieu of dedication of any such land or to construct recreational facilities in lieu of recreation land dedication to the Township as follows:

- A. The fee shall be equal to the fair market value of the land otherwise required to be dedicated and improved for recreational use as established by separate resolution of the Board of Supervisors.
- B. Limitations on use of fees:
 - (1) Any recreation fees collected under this section shall be placed within an interest-bearing "Recreation Fee Account" which shall function as a capital reserve fund and shall be accounted for separately from other Township funds.
 - (2) To ensure that the lands and facilities are accessible to the residents of the development that paid fees toward their costs, the "Recreation Fee District Map" (see Appendix) designates service areas for neighborhood parks and one Township-wide service area for the Township community park. Any such fees collected under this subsection shall only be expended within the same "Recreation Fee District" as the subdivision and land development that contributed the fee if the fee is used for neighborhood parks. Fees collected from any district may be expended for the Township-wide community park.
 - (3) All fees and interest within the Recreation Fee Account shall only be used for acquisition of recreation land, development of, and capital improvement to, public recreational facilities, landscaping of recreation land, engineering, legal, planning, architecture, landscape architecture and the payment of debt directly resulting

from such expenditures. Such fees specifically shall not be used for maintenance, routine repairs, operating expenses or recreational programs.

- C. Fees required under this section shall be paid prior to the recording of the applicable final plan or as building permits are issued with appropriate guarantee given, as determined by the Board of Supervisors.
- D. If such fees are paid in installments or prior to the issuance of each building permit, then, for the purpose of determining limits for the time within such funds are required to be expended under state law, such time limit shall begin when the total fees related to the final approval are paid in full, and not from the date of payment of any portion of such fees. Upon request, the Township shall refund such fee, plus interest accumulated thereon from the date of payment, if the Township has failed to utilize the fee paid for the purposes set forth in this section within three years.

ARTICLE VIII

Amendments; Enforcement

§ 140-64. Enactment of amendments.

- A. Proposals for amendment, supplement, change, modification or repeal may be initiated by the governing body or by the Planning Commission.
- B. In case of an amendment other than that prepared by the Planning Commission, the governing body shall submit each such amendment to the Planning Commission for recommendations at least 30 days prior to the date fixed for the public hearing on such proposed amendment. At least 30 days prior to the hearing on the amendment, the municipality shall also submit the proposed amendment to the Bucks County Planning Commission for recommendations.
- C. Within 30 days after adoption, the governing body shall forward a certified copy of any amendment to this chapter to the Bucks County Planning Commission.

§ 140-65. Amendment hearings.

- A. Before voting on the enactment of an amendment, the governing body shall hold a public hearing. No amendment shall become effective until after such hearing at which parties in interest and citizens shall have an opportunity to be heard.
- B. Notice shall be given once each week for two successive weeks, the first notice being not more than 30 days, and the second notice not less than seven days in advance of such hearings and shall be published in a newspaper of general circulation in the municipality. Such notice shall state the time and place of the hearing and shall include either the full text of the proposed amendment, or the title and a brief summary, prepared by the Municipal Solicitor and setting forth all the provisions in reasonable detail. If the full text is not included:
 - (1) A copy shall be supplied to a newspaper of general circulation in the municipality at the time the public notice is published.

- (2) An attested copy of the proposed ordinance shall be filed in the County Law Library or other county office designated by the County Commissioners.

§ 140-66. Remedies; violations and penalties.

A. Preventative remedies. In addition to the right of the Township to enforce a violation of this chapter by means of an action in equity in the Court of Common Pleas of Bucks County, and other rights the Township may have at law, including actions to recover damages and to prevent illegal occupancy of a building, structure, or premises, the Township may:

- (1) 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 chapter. This authority to deny such a permit or approval shall apply to any of the following applicants:
 - (a) The owner of record at the time of such violation.
 - (b) The vendee or lessee of the owner of record at the time of such violation without regard as to whether such vendee or lessee had actual or constructive knowledge of the violation.
 - (c) 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 violations.
 - (d) The vendee or lessee of the current owner of record who acquired the property subsequent to the time of violation without regard as to whether such vendee or lessee had actual or constructive knowledge of the violation.
- (2) As an additional condition for issuance of a permit or the granting of approval to any such owner, current owner, vendee, or lessee for the development of real property which was subdivided in violation of this chapter, 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 property.
- (3) Any person, partnership or corporation, or the members of such partnership or the officers of such corporation, who or which, being the owner or agent of the owner of any lot, tract or parcel of land, shall:
 - (a) Lay out, construct, open and/or dedicate any street, sanitary sewer, storm sewer, water main or other improvement for public use, travel or other purposes or for the common use of occupants of buildings abutting thereon;
or
 - (b) Sell, transfer or agree or enter into an agreement to sell or transfer any land in a subdivision or land development, whether by reference to or by use of a plan of such subdivision or land development or otherwise; or
 - (c) Erect any building or buildings which constitute a land development thereon; or

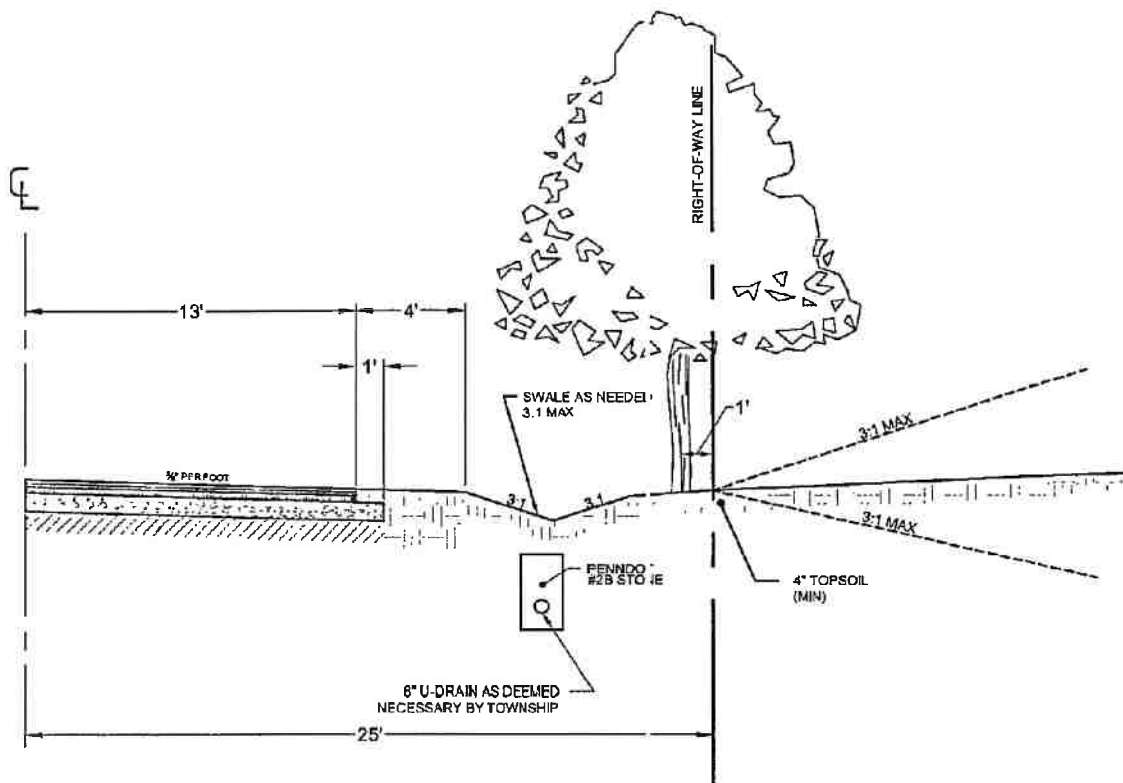
- (d) Commence site grading or construction of improvements prior to recording of a final plan unless such grading or construction is for the sole purpose of installing improvements as prescribed in § 140-51 herein unless and until a final plan has been prepared in full compliance with the provisions of this chapter and has been recorded as provided herein, or who or which in any way is in violation of or violates any of the provisions of this chapter, shall be subject to the penalties and remedies set forth in Subsection B hereof.
- B. Enforcement remedies. Any person, partnership or corporation who or which has violated the provisions of this chapter, upon being found liable therefor in a civil enforcement proceeding commenced by the municipality in District Justice Court, shall pay a judgment of \$500, plus all court costs, including reasonable attorney fees incurred by the municipality as a result thereof. 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.

SUBDIVISION AND LAND DEVELOPMENT

140 Attachment 1

Township of Hilltown

Appendix A
Construction Details
[Amended 2-25-2013 by Ord. No. 2013-1]



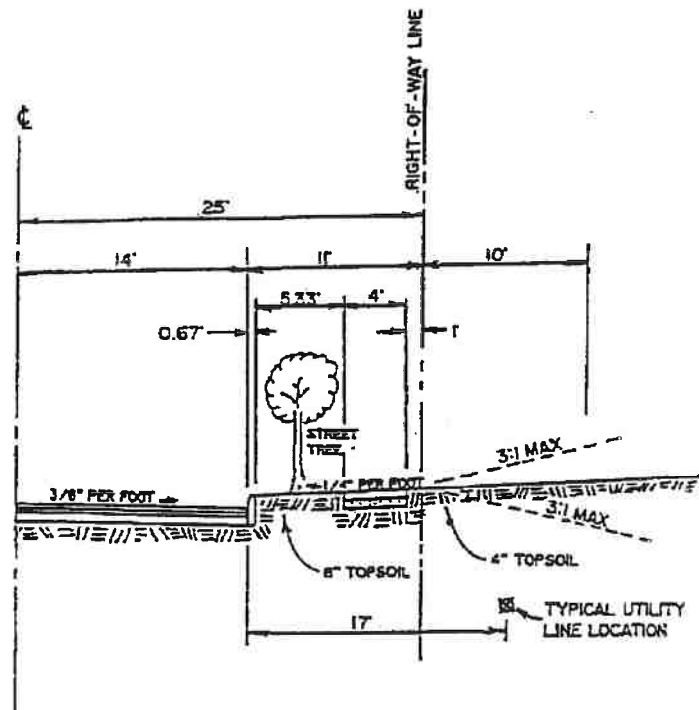
TYPICAL ROADWAY HALF-SECTION
50 FEET RIGHT-OF-WAY WITH 26 FEET WIDE CARTWAY, WITHOUT CURB
(NTS)

NOTE: MINIMUM REQUIREMENTS FOR PAVEMENT

1. WEARING: 1.5" 9.5mm SUPERPAVE WEARING COURSE
- BINDER: 2" 19mm SUPERPAVE BINDER COURSE
- BASE: 5" 25mm SUPERPAVE BASE COURSE
- SUBBASE: 6" 3A MODIFIED STONE

A-1

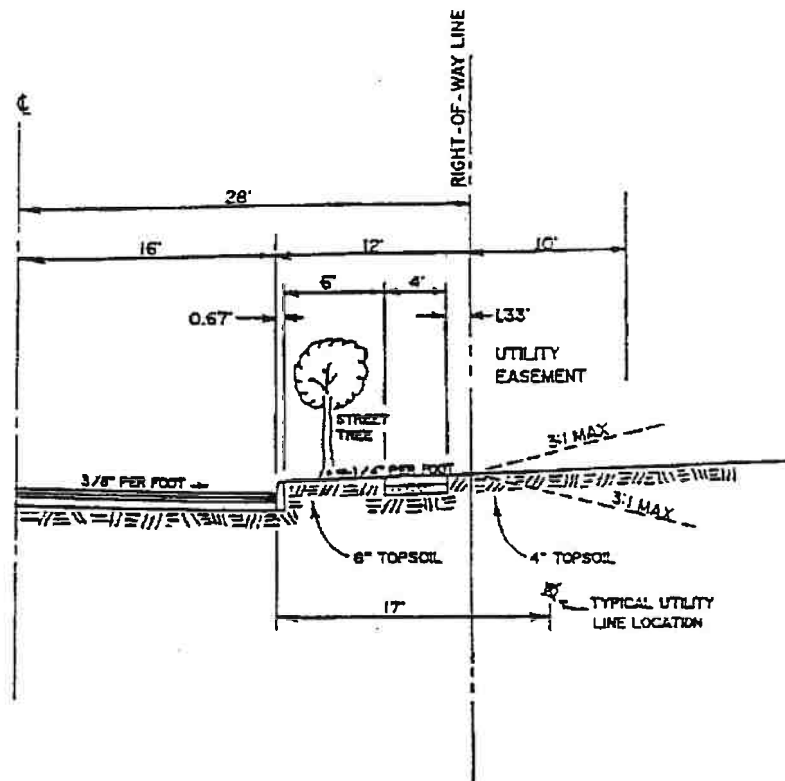
HILLTOWN CODE



TYPICAL ROADWAY HALF-SECTION

50 FEET RIGHT-OF-WAY WITH 28 FEET WIDE CARTWAY, WITH CURB AND SIDEWALK

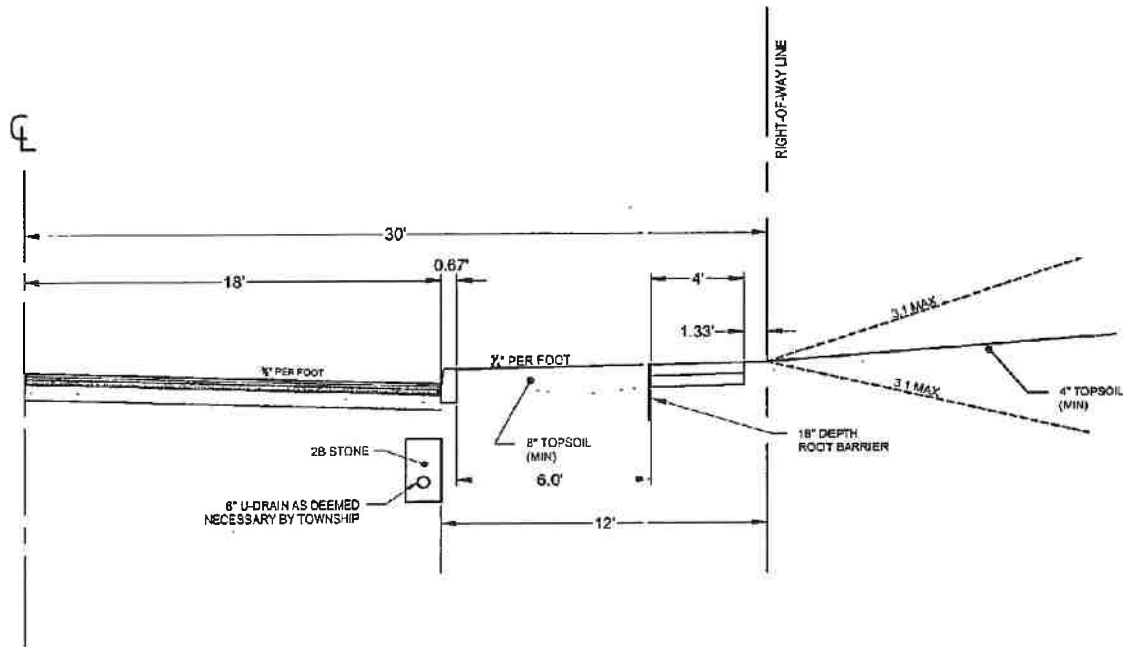
SUBDIVISION AND LAND DEVELOPMENT



TYPICAL ROADWAY HALF-SECTION

56 FEET RIGHT-OF-WAY WITH 32 FEET WIDE CARTWAY, WITH CURB AND SIDEWALK

HILLTOWN CODE



(NTS)

TYPICAL ROADWAY HALF-SECTION

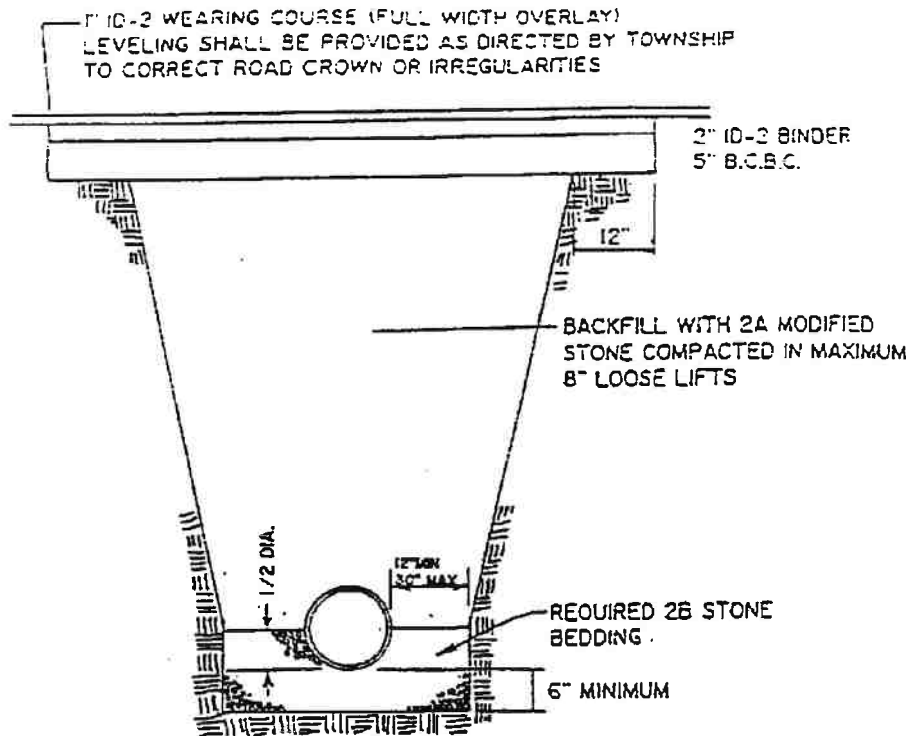
60 FEET RIGHT-OF-WAY WITH 36 FEET WIDE CARRIAGEWAY, WITH CURB AND SIDEWALK

NOTE: MINIMUM REQUIREMENTS FOR PAVEMENT

1. WEARING: 1.5" 9.5mm SUPERPAVE WEARING COURSE
- BINDER: 2" 19mm SUPERPAVE BINDER COURSE
- BASE: 5" 25mm SUPERPAVE BASE COURSE
- SUBBASE: 6" 3A MODIFIED STONE

A-4

SUBDIVISION AND LAND DEVELOPMENT



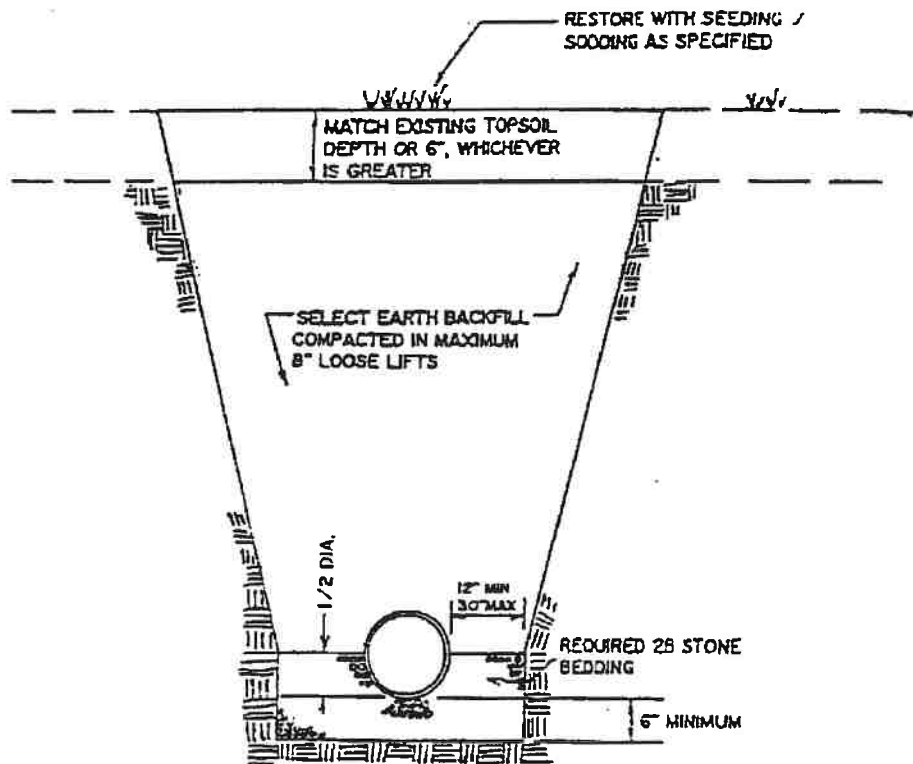
Notes:

1. Developer/Contractor shall be responsible for proper implementation of safety requirements in conformance to all Federal and State Department of Labor and Occupational Safety and Hazard Administration Regulations.
2. Backfill for new road construction may be select earth backfill when suitable material is available as determined by the Township.
3. Full depth 2A stone backfill shall be required for all storm sewer, sanitary sewer and utility trenching when edge of trench is within 15 feet of existing roadway edge of paving; and for all trenching within area of roadway widening.
4. Roadway crown shall be 3/8 inch per foot.
5. 3 inch temporary patch of BCBC shall be provided and maintained for less than 30 days prior to final restoration of existing roadway or driveway. Temporary patch shall be removed with final restoration performed no more than 90 days from date of sewer installation providing testing has been satisfactorily accomplished and no settlement has occurred.

STORM SEWER BEDDING DETAIL

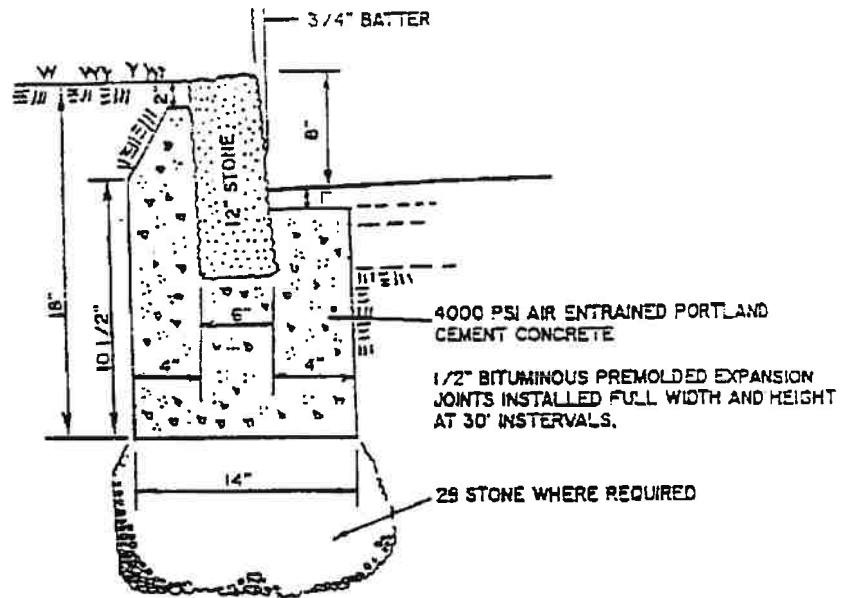
(WITHIN RIGHT-OF-WAY, BENEATH ALL EXISTING ROADWAYS AND DRIVEWAYS, PUBLIC OR PRIVATE)

HILLTOWN CODE



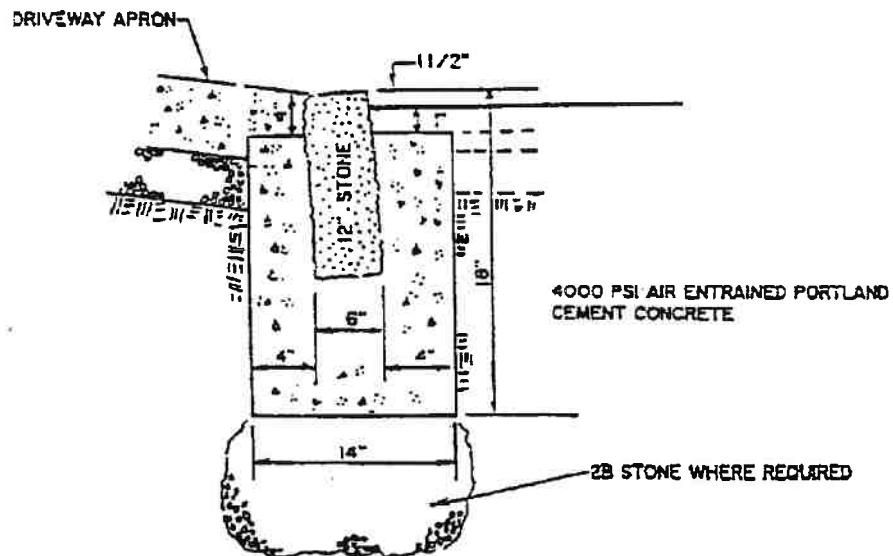
STORM SEWER BEDDING DETAIL
(EARTHEN AREA)

SUBDIVISION AND LAND DEVELOPMENT



BELGIAN BLOCK CURB DETAIL

NTS



BELGIAN BLOCK DEPRESSED CURB DETAIL

NTS

SUBDIVISION AND LAND DEVELOPMENT

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Township of Hilltown

Appendix B Plan Notification

Where applicable, the following notices shall be included on the subdivision and/or land development plan:

1. Notice of Pennsylvania Department of Transportation (PennDOT) state highway access permit requirements.

Driveway access to a state highway shall be authorized only by highway occupancy permit issued by the Pennsylvania Department of Transportation as required pursuant to Section 420 of the Act of June 1, 1945 (P.L. 1242, No. 428), known as the "State Highway Law."¹ Building permits shall not be issued until said highway occupancy permit has been issued.

Approval of this plan does not represent any guarantee or assurance by Hilltown Township that a highway occupancy permit will be issued by the Pennsylvania Department of Transportation.

2. Notice for on-lot sewage permits.

The planning module for land development has been approved by the Pennsylvania Department of Environmental Protection and the Bucks County Department of Health as to the subdivision plan. However, the septic system permit has not been issued for the lot(s) upon which new building(s) are proposed. Prior to issuance of a building permit, a septic system permit shall be obtained and presented to the Zoning Officer for each new building.

3. Notice for on-lot water supplies.

The lots or building(s) in this development are planned to be served with water by means of individual wells constructed, owned and operated by the owner of the lot. No well water supply or quality testing has been conducted to verify suitability of individual wells for this purpose. It is possible that any or all of these lots do not have adequate soils or geology to provide an adequate volume or quality of on-site water. The lot well must be drilled and water supplies tested for volume and quality in accordance with Township requirements prior to occupancy of any building.

¹Editor's Note: See 36 P.S. § 670-101 et seq.

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4. Notice for floodplain identification.

The grant of a permit or approval of a subdivision and/or land development plan in the identified floodplain area shall not constitute a representation, guarantee, or warranty of any kind by the Township or by any official, consultant, or employee thereof of the practicability or safety of the proposed use, and the owners hereby agree and acknowledge that such permits or approvals shall not create any liability upon the Township, its officials, employees, or consultants.

5. Notice of use of floodplain soils for floodplain delineation.

Floodplain delineation is based on floodplain soils and not a detailed engineering study. No construction is permitted within areas mapped as floodplain soils, nor within 50 feet of top of bank unless a detailed study as prepared by a licensed engineer is submitted to the Township for review to verify extent of floodplain boundary.

6. Notice of potential wetlands based on hydric soils.

No disturbance to hydric soils including construction, regrading, and filling activity is permitted unless a wetland study and delineation is conducted to verify existence or nonexistence of wetlands, and not until applicable permits have been received from the Township, Bucks Conservation District, Army Corps of Engineers, and DEP.

7. Notices for drainage facilities and easements.

- A. All drainage easements shown on this plan shall be maintained in a grassed or otherwise improved condition, in accordance with the grades and designs shown on the approved development plans for this project. All these easements shall be kept free of all obstruction, including but not limited to such obstructions as fill, temporary or permanent structures, and plants (other than grass). The maintenance of all such easements shall be the responsibility of the lot owner on which the easement exists.
- B. Drainage easements shall allow passage of stormwater in underground storm sewer piping and associated structures, and/or allow passage of stormwater over the surface of the ground and shall allow access across the area for purposes of maintenance of the storm conveyance systems.
- C. Existing roadside gutters or swales shall not be obstructed by driveways or other fill or structures.

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8. Notice regarding maintenance of public streets during construction activity.

Mud sediment and/or debris tracked from the site onto public cartway shall be immediately removed by brooming and/or mechanical means to the satisfaction of the Township. Use of a backhoe bucket to scrape roadway surface is prohibited. Where mud and/or sediment is causing slick and/or hazardous conditions, roadway surface shall be immediately pressure washed to remove condition. All sediment laden water must be filtered in a manner satisfactory to the Bucks Conservation District before entering storm sewers and/or drainage channels.

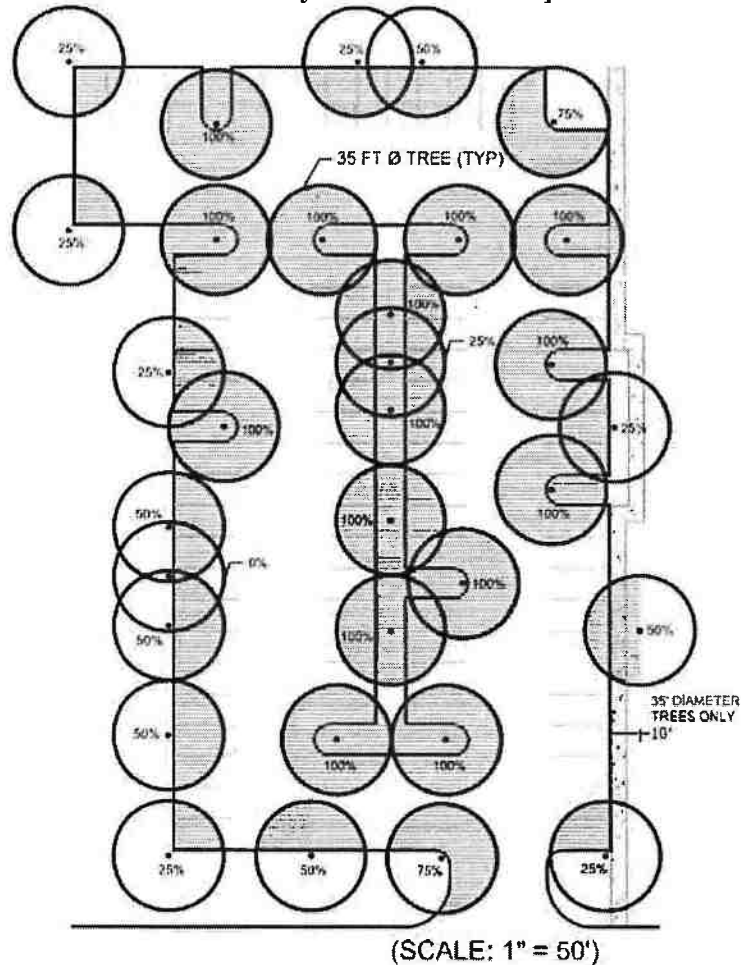
9. Notice for minor subdivision plans.

Pursuant to § 140-10 of the Hilltown Township Subdivision Ordinance, any additional subdivision of this tract submitted within five years of the date of approval of this plan shall be deemed to be a major subdivision for the purposes of the Subdivision Ordinance and shall follow the procedure applying thereto.

SUBDIVISION AND LAND DEVELOPMENT

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Township of Hilltown
Appendix C
Parking Lots Tree Coverage
[Amended 5-23-2011 by Ord. No. 2011-7]



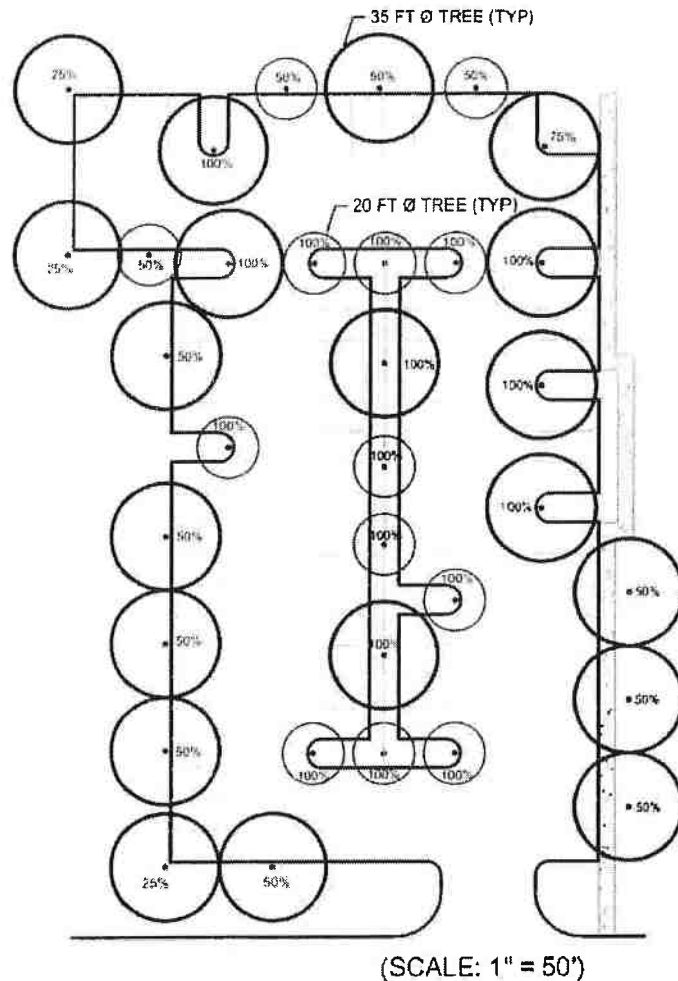
GENERAL NOTES:

1. THIS DIAGRAM IS INTENDED TO REFLECT THE MANNER IN WHICH SHADE IS CREDITED. IT IS NOT AN ILLUSTRATION OF 50% COVERAGE. (SHADE COVERAGE SHOWN IS 64%)
2. TREES MAY RECEIVE 25%, 50%, 75% OR 100% CREDIT AS SHOWN.
3. SHADE OVERLAP IS NOT COUNTED TWICE.
4. TREES MUST BE 2 FT MINIMUM BEHIND FACE OF CURB OR ASPHALT EDGE (WHERE NO CURB IS PRESENT).
5. WHEN A SIDEWALK IS PRESENT, A 35' TREE PLACED 10 FT BEHIND FACE OF CURB MAY PROVIDE UP TO 50% SHADING.

PARKING LOT TREE COVERAGE

EXHIBIT A - SHADE DIAGRAM

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LANDSCAPE SCHEDULE:

SMALL TREES (20 FT Ø CROWN)

0	TREES @ 25% SHADING	(79 SQ.FT. EA.)
3	TREES @ 50% SHADING	(157 SQ.FT. EA.)
0	TREES @ 75% SHADING	(236 SQ.FT. EA.)
10	TREES @ 100% SHADING	(314 SQ.FT. EA.)

MEDIUM TO LARGE TREES (35 FT Ø CROWN)

3	TREES @ 25% SHADING	(240 SQ.FT. EA.)
9	TREES @ 50% SHADING	(481 SQ.FT. EA.)
1	TREES @ 75% SHADING	(722 SQ.FT. EA.)
7	TREES @ 100% SHADING	(962 SQ.FT. EA.)

COVERAGE CALCULATION

TOTAL TREE SHADE =	16,116 SQ.FT.
TOTAL PAVED AREA =	32,232 SQ.FT.
PERCENT OF SHADE COVERAGE =	50%

GENERAL NOTES:

1. 24 FT MINIMUM AISLE WIDTH.
2. 10' x 20' MINIMUM PARKING STALL DIMENSION.
3. TREES MUST BE 2 FT MINIMUM BEHIND FACE OF CURB OR ASPHALT EDGE (WHERE NO CURB IS PRESENT).
4. WHEN A SIDEWALK IS PRESENT, A 35' TREE PLACED 10 FT BEHIND FACE OF CURB MAY PROVIDE UP TO 50% SHADING.

PARKING LOT TREE COVERAGE

EXHIBIT B - 50% COVERAGE

SUBDIVISION AND LAND DEVELOPMENT

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Township of Hilltown

Appendix D As-Built Drawing Requirements

1. General.

- A. The following requirements listed within 1 through 6 shall be considered minimum standards. Additional detail and information may be required by the Township depending on amount of detail needed.
- B. All individual sheets of as-built plans shall be signed and sealed by the responsible licensed professional land surveyor.
- C. Storm sewer, sanitary sewer, and utility as-built information shall all be included on same plan and profile views. Independent plan sets for each shall not be permitted unless specifically requested by the Township.
- D. Proof set of plans shall be submitted to the Township for review of completeness prior to preparation of final drawings. "Proof plan" shall be titled as such. Final drawings shall consist of two sets of reproducible Mylars and two sets of opaque blue line prints of all plan sheets.
- E. Final as-built plan set shall include a reproducible Mylar sheet of the detention basin as-built.
- F. All plan sheets shall include a standard Act 38 notification requirement for location of underground utilities prior to excavation.

2. Detention basins.

- A. As-built plan for detention basins shall be prepared on standard 24 inches by 36 inches plan sheets.
- B. Plan shall be prepared at a scale of one inch equals 50 feet or at design plan scale (if larger).
- C. As-built plan shall include but not be limited to the following:
 - (1) Contours at one-foot intervals.

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- (2) Spot elevations on the top of berm along interior and exterior edges at twenty-five-foot intervals.
- (3) Spot elevations on the top of berm and spillway crest at all four corners of the spillway; and spot elevations centrally on interior and exterior edge of the spillway.
- (4) Stage/storage calculations must be included on the plan.
- (5) Size, type, length, inverts and slope of outfall pipe.
- (6) Top of structure elevation and all associated inverts/sizes of weirs and orifices on same.
- (7) Inverts of all storm sewer pipes discharging into the basin.
- (8) As-built information on constructed swales which discharge into the basin shall be furnished upon request, as required by the Township.

3. Storm sewer.

A. Drafting standards.

- (1) Plan size must be standard 24 inch by 36 inch plan sheets.
- (2) Plan shall be prepared utilizing standard plan and profile paper.
- (3) Horizontal scale must be one inch equals 50 feet and vertical scale must be one inch equals five feet, or at design plan scales (if larger).
- (4) Plan view:
 - a. Plan view shall delineate all right-of-way and easement boundaries and all property corners that intersect same.
 - b. Center line stationing shall be included along all streets.
 - c. All roadways, curbing, and sidewalk shall be shown and dimensioned.
 - d. All lot numbers shall be labeled.

B. Storm sewer as-built information shall include but not be limited to the following:

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- (1) Grate and manhole rim elevations.
- (2) Pipe sizes, types, lengths, and slopes.
- (3) Inverts of all inlets, manholes, and endwalls.
- (4) Types of endwalls shall be identified (i.e., “FES,” “DW,” “D,” etc.).
- (5) Location of all sump pump/roof drain tie-ins.
- (6) Invert of storm sewer at sanitary sewer and utility crossings.

4. Sanitary sewer.

- A. Drafting standards shall be the same as listed for storm sewer above.
- B. Sanitary sewer as-built information shall include but not be limited to:
 - (1) Manhole rim elevations and inverts (including drop inverts).
 - (2) Pipes, sizes, lengths, slopes and types.
 - (3) Location and stationing of all laterals.
 - (4) Location and inverts of all lateral connections. (Inverts may be interpolated from as-built manhole invert information. Lateral location shall be determined from video inspection log.)
 - (5) Location and as-built inverts of all cleanouts located at the right-of-way boundary.
 - (6) Invert of sanitary sewer at storm sewer and utility crossings.

5. Water system.

- A. As-built information shall be prepared in accordance with prevailing standards and requirements of the applicable authority.
- B. At a minimum, Township as-built drawings shall include the following on plan and profile views: location, size, and type of water mains, fire hydrants, water valve boxes, laterals, tees, bends, etc.

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6. Streets.

- A. Spot elevations shall be shown at each 0+50 station increment and at intersections of street center lines.
- B. Offset distances from the design center line to the constructed curbline or edge of road shall be indicated at each 0+50 station for both sides of the street.

7. Miscellaneous.

- A. Location of all conduit crossings for underground utilities through easements and right-of-way must be shown.
- B. Set of design plans for gas service installation shall be submitted to the Township with as-built plans. Design plans shall be used for general reference only and shall not be referred to for purpose of as-built information.

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Appendix E

Basin Berm Construction Requirements [Amended 5-22-2000 by Ord. No. 2000-6]

1. Site preparation. Areas under the embankment and any structural works shall be cleared, grubbed, and the topsoil stripped to remove the trees, vegetation, roots or other objectionable material. In order to facilitate clean-out and restoration, the pool area will be cleared of all brush and excess trees.
2. Cut-off trench. A cut-off trench will be excavated along the center line dam on earth fill embankments. The minimum depth shall be two feet. The cut-off trench shall extend up both abutments to the riser crest elevation. The minimum bottom width shall be eight feet but wide enough to permit operation of compaction equipment. The side slopes shall be no steeper than 1:1. Compaction requirements shall be the same as those for the embankment. The trench shall be kept free from standing water during the backfilling operations.
3. Embankment. The fill material shall be taken from selected borrow areas. It shall be free of roots, woody vegetation, oversized stones, rocks or other objectionable material. Areas on which fill is to be placed shall be scarified prior to placement of fill.

The fill material should contain sufficient moisture so that it can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction.

Fill material will be placed in six- to eight-inch layers and shall be continuous over the entire length of the fill. Fill material must be compacted to a minimum of 95% of Modified Proctor Density as established by ASTM D-1557. Compaction testing by a certified soils engineer/geologist must be completed as directed by the Township Engineer to verify adequate compaction has been achieved.

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Township of Hilltown

Appendix F¹
Bucks County Wetland Plant List

The following plant list represents common wetland species found in Bucks County. These species are reliable indicators of wetlands when found dominating a site (e.g., comprising more than 50% of the vegetation).

This list was derived from a larger regional list of wetland plants located in the northeastern United States compiled by the U.S. Fish and Wildlife Service. The selections for this Bucks County list were made with the assistance of several regional experts: Dr. Ann Rhoads, Director of Botany, Morris Arboretum; Dr. Ernest Schuyler, Associate Curator, Academy of Natural Sciences; Dr. David Benner, Professor of Botany, Delaware Valley College; and Edward Perry, Assistant Supervisor, U.S. Fish and Wildlife Service at State College.

(See next page for list)

¹Editor's Note: Appendixes G and H, which originally accompanied this ordinance, are on file in the Township offices.

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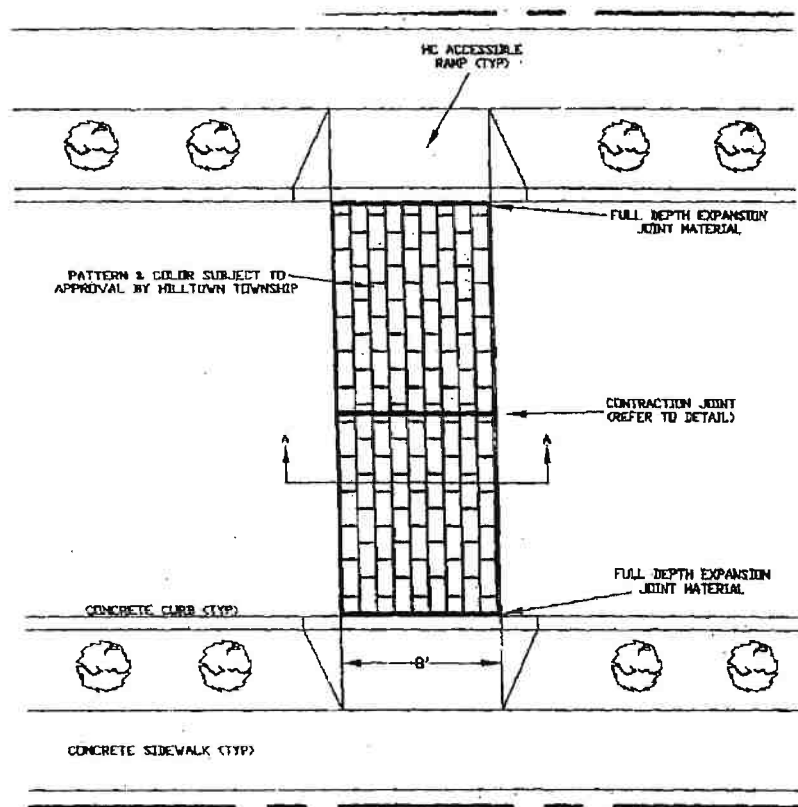
SCIENTIFIC NAME	COMMON NAME
1. <i>Acer negundo</i> L.	Box Elder
2. <i>Acer saccharinum</i> L.	Silver Maple
3. <i>Acorus calamus</i> L.	Sweetflag
4. <i>Agrostis alba</i> L.	Redtop
5. <i>Ajisma subcordatum</i> Raf.	Subcordate Waterplantain
6. <i>Alnus serrulata</i> (Ait.) Willd.	Hazel Alder
7. <i>Amaranthus cannabinus</i> (L.) Sauer	Tidmarsh Waterhemp
8. <i>Amorpha fruticosa</i> L.	Dull-Leaf Indigo
9. <i>Andropogon gerardii</i> Vroman	Big Bluestem
10. <i>Andropogon glomeratus</i> (Waft.) B.S.R.	Bushybeard Bluestem
11. <i>Andropogon virginicus</i> L.	Broomsedge Bluestem
12. <i>Arisaema triphyllum</i> (L.) Schott	Indian Jack-in-the-Pulpit
13. <i>Aronia arbutifolia</i> (L.) Ell.	Red Chokecherry
14. <i>Aronia melanocarpa</i> (Michx.) Ell.	Black Chokecherry
15. <i>Asclepias incarnata</i> L.	Swamp Milkweed
16. <i>Aster umbellatus</i> Mill.	Flatop Aster
17. <i>Betula nigra</i> L.	River Birch
18. <i>Bidens</i> (all species)	Beggarticks
19. <i>Boehmeria cylindrica</i> (L.) SW.	Smallspike False-Nettle
20. <i>Calamagrostis canadensis</i> (Michx.) Beauv.	Bluejoint Reedgrass
21. <i>Calamagrostis cinnoides</i> (Muhl.) Barton	Hairyseed Reedgrass
22. <i>Caltha palustris</i> L.	Marsh Marigold
23. <i>Cardamine bulbosa</i> (Schreb.) B.S.P.	Bulb Bittercress
24. <i>Cardamine pensylvanica</i> Muhl. ex Willd.	Pennsylvania Bittercress
25. <i>Carex</i> (all species)	Sedge
26. <i>Cephalanthus occidentalis</i> L.	Common Buttonbush
27. <i>Chelone glabra</i> L.	White Turtlehead
28. <i>Chrysosplenium americanum</i> Schweinitz	Golden Saxifrage
29. <i>Cicuta bulbifera</i> L.	Poison Waterhemlock
30. <i>Cicuta maculata</i> L.	Common Waterhemlock
31. <i>Cinna arundinacea</i> L.	Strout Woodreed
32. <i>Clethra alnifolia</i> L.	Summersweet Clethra
33. <i>Conium maculatum</i> L.	Poison Hemlock
34. <i>Cornus amomum</i> Mill.	Silky Dogwood
35. <i>Cyperus</i> (all species)	Flatsedge
36. <i>Decodon verticillatus</i> (L.) Ell.	Water Willow
37. <i>Dulichium arundinaceum</i> (L.) Britt.	Three-Way-Sedge
38. <i>Echinochloa walteri</i> (Pursh) A. Helle	Walter Millet

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39.	<i>Eleocharis</i> (all species)	Spikerush
40.	<i>Epilobium coloratum</i> Biehler	Purpleleaf Willowweed
41.	<i>Equisetum fluviale</i> L.	Water Horsetail
42.	<i>Equisetum hyemale</i> L.	Scouringrush Horsetail
43.	<i>Eragrostis hypnoides</i> (Lam.) B.S-P	Teal Lovegrass
44.	<i>Eragrostis pectinacea</i> (Michx.) Nees	Carolina Lovegrass
45.	<i>Eupatoriadelphus dubius</i> (all species)	Joe-Pye Weed
46.	<i>Eupatorium perfoliatum</i> L.	Boneset
47.	<i>Eupatorium pilosum</i> Walter	Hairy Thoroughwort
48.	<i>Euthamia graminifolia</i> (L.) Nutt.	Grass-Leaved Goldenrod
49.	<i>Fraxinus nigra</i> Marshall	Black Ash
50.	<i>Fraxinus pennsylvanica</i> Marshall	Green Ash
51.	<i>Galium obtusum</i> Bigel.	Slutleaf Bedstraw
52.	<i>Galium parisiense</i> L.	Wall Bedstraw
53.	<i>Galium tinctorium</i> L.	Dye Bedstraw
54.	<i>Glyceria</i> (all species)	Mannagrass
55.	<i>Helenium autumnale</i> L.	Common Sneezeweed
56.	<i>Heteranthera reniformis</i> R. & P.	Roundleaf Mudplantain
57.	<i>Hibiscus moscheutos</i> L.	Rose Mallow
58.	<i>Hydrophyllum virginianum</i> L.	Virginia Waterleaf
59.	<i>Hypericum mutilum</i> L.	Dwarf St. Johnswort
60.	<i>Ilex verticillata</i> (L.) A. Gray	Winterberry
61.	<i>Impatiens capensis</i> Meerb.	Spotted Touch-Me-Not
62.	<i>Impatiens pallida</i> Nutt.	Pale Touch-Me-Not
63.	<i>Iris pseudacorus</i> L.	Yellow Iris
64.	<i>Iris versicolor</i> L.	Blueflag Iris
65.	<i>Juncus</i> (all species)	Rush
66.	<i>Laportea canadensis</i> (L.) Wedd.	Canada Woodnettle
67.	<i>Leersia oryzoides</i> (L.) Swartz	Rice Cutgrass
68.	<i>Leersia virginica</i> Willd.	Whitegrass
69.	<i>Leucothoe racemosa</i> (L.) Gray	Swamp Leucothoe
70.	<i>Lindera benzoin</i> (L.) Blume	Spicebush
71.	<i>Liquidambar styraciflua</i> L.	Sweetgum
72.	<i>Ludwigia</i> (all species)	Seed-Box
73.	<i>Lycopus</i> (all species)	Bugleweed
74.	<i>Lyonia ligustrina</i> (L.) DC.	Male-Berry
75.	<i>Lysimachia</i> (all species)	Loosestrife
76.	<i>Lythrum salicaria</i> L.	Purple Loosestrife
77.	<i>Magnolia virginiana</i> L.	Sweetbay
78.	<i>Mentha X piperita</i> L.	Peppermint
79.	<i>Mertensia virginica</i> (L.) Pers.	Virginia Bluebells
80.	<i>Mimulus ringens</i> L.	Monkey-Flower
81.	<i>Myosotis scorpioides</i> L.	True Forget-Me-Not
82.	<i>Nasturtium officinale</i> R. Br.	Watercress
83.	<i>Nuphar luteum</i> (L.) Sibth. & J.E. Smith	European Cowlily
84.	<i>Onoclea sensibilis</i> L.	Sensitive Fern
85.	<i>Osmunda</i> (all species)	Fern
86.	<i>Panicum longifolium</i> Torr.	Long-Leaved Panic-Grass
87.	<i>Panicum rigidulum</i> Bosc. ex Nees.	Redtop Panicum
88.	<i>Peltandra virginica</i> (L.) Kunth.	Arrow-Arum
89.	<i>Phalaris arundinacea</i> L.	Reed Canarygrass
90.	<i>Phragmites australis</i> (Cav.) Trin. ex Steud.	Giant Cane
91.	<i>Polygonum amphibium</i> L.	Water Knotweed
92.	<i>Polygonum arifolium</i> L.	Halberdleaf Tearthumb

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93.	<i>Polygonum hydropiper</i> L.	Marshpepper Knotweed
94.	<i>Polygonum hydropiperoides</i> Michx.	Swamp Knotweed
95.	<i>Polygonum pennsylvanicum</i> L.	Pennsylvania Smartweed
96.	<i>Polygonum punctatum</i> Ell.	Dotted Smartweed
97.	<i>Polygonum sagittatum</i> L.	Arrow-Leaved Tearthumb
98.	<i>Polygonum scandens</i> L.	Hedge Combind
99.	<i>Pontederia cordata</i> L.	Pickereelweed
100.	<i>Quercus bicolor</i> Willd.	Swamp White Oak
101.	<i>Quercus palustris</i> Muench.	Pin Oak
102.	<i>Quercus phellos</i> L.	Willow Oak
103.	<i>Ranunculus sceleratus</i> L.	Celeryleaf Buttercup
104.	<i>Ranunculus septentrionalis</i> Poir.	Swamp Buttercup
105.	<i>Rhododendron viscosum</i> (L.) Torr.	Swamp Azalea
106.	<i>Rhynchospora capitellata</i> (Michx.) VAN	False Bog Rush
107.	<i>Rorippa palustris</i> (L.) Besser	Marsh Yellowgrass
108.	<i>Rorippa sylvestris</i> (L.) Besser	Creeping Yellowgrass
109.	<i>Rosa palustris</i> Marshall	Swamp Rose
110.	<i>Sagittaria</i> (all species)	Arrowhead
111.	<i>Salix</i> (all species)	Willow
112.	<i>Saururus cernuus</i> L.	Lizard's Tail
113.	<i>Scirpus</i> (all species)	Bulrush
114.	<i>Scutellaria integrifolia</i> L.	Rough Skullcap
115.	<i>Scutellaria lateriflora</i> L.	Blue Skullcap
116.	<i>Sium suave</i> Walt.	Common Waterparsnip
117.	<i>Smilax hispida</i> Muhl.	Bristly Greenbriar
118.	<i>Sparganium</i> (all species)	Burreed
119.	<i>Spiraea latifolia</i> (Ait.) Borkh.	Broadleaf Meadowsweet
120.	<i>Spiraea tomentosa</i> L.	Spiraea
121.	<i>Symplocarpus foetidus</i> (L.) Nutt.	Hardhack
122.	<i>Thelypteris thelypteroides</i> (Michx.) J. Holub	Common Skunkcabbage
123.	<i>Triadenum virginicum</i> (L.) Raf.	Marsh Fern
124.	<i>Typha angustifolia</i> L.	Marsh St. Johnswort
125.	<i>Typha latifolia</i> L.	Narrow-Leaved Cattail
126.	<i>Ulmus americana</i> L.	Common Cattail
127.	<i>Ulmus rubra</i> Muhl.	American Elm
128.	<i>Vaccinium corymbosum</i> L.	Slippery Elm
129.	<i>Vaccinium macrocarpon</i> Ait.	Highbush Blueberry
130.	<i>Verbena hastata</i> L.	Large Cranberry
131.	<i>Viburnum dentatum</i> L.	Blue Verbena
132.	<i>Viburnum recognitum</i> Fernald	Arrow-Wood
133.	<i>Woodwardia areolata</i> (L.) T. Moore	Arrow-Wood
134.	<i>Zizania aquatica</i> L.	Netted Chainfern
		Annual Wildrice



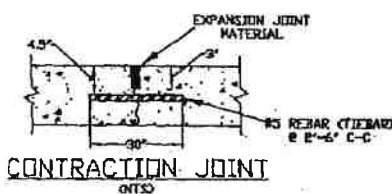
PLAN

RIGHT-OF-WAY (TYP)

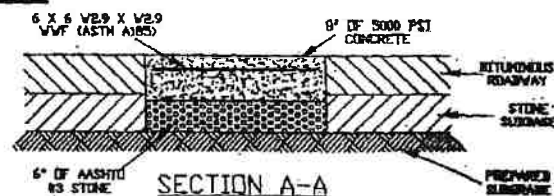
PATTERNED CONCRETE CROSSWALK (NTS)

NOTES:

1. CONCRETE SHALL BE 5000 PSI (28-DAY STRENGTH) W/ FIBRASOL II MULTIPLUS FIBERS, (1 LB. PER CUBIC YARD)
2. PATTERN MUST BE APPROVED BY HILLTOWN TOWNSHIP.
3. COLOR OF CONCRETE STAIN FOR CROSSWALK MUST BE APPROVED BY HILLTOWN TOWNSHIP.
4. NO VEHICULAR TRAFFIC IS PERMITTED OVER CROSSWALK FOR A MINIMUM OF 7 DAYS FOLLOWING INSTALLATION.
5. EDGE OF EXISTING BITUMINOUS ROADWAY MUST BE SAWCUT TO PROVIDE A STRAIGHT, CLEAN EDGE PRIOR TO INSTALLATION OF CROSSWALK.
6. WHERE CROSSWALK ENCRUSCHES, BELGIAN BLOCK CURB RESIDUAL BLOCK FOUNDATION MUST BE REMOVED BY WAY OF SAWCUT TO PROVIDE A CLEAN, STRAIGHT EDGE FOR EXPANSION MATERIAL.
7. CONCRETE MUST BE INSTALLED IN ACCORDANCE WITH ACI 308R-99 & 306R-88 (R1997) SPECIFICATIONS FOR HOT WEATHER & COLD WEATHER CONCRETE INSTALLATION.
8. WELDED WIRE FABRIC MUST BE PLACED, 2.5 INCHES FROM THE FINISHED SURFACE.
9. ALL MATERIALS AND INSTALLATION MUST CONFORM TO PENNDOT PUBLICATION 409, LATEST EDITION.
10. IF ADDITIONAL CONCRETE WORKABILITY IS NECESSARY A 'CATEXOL 1000' WATER REDUCER OR SUPERPLASTICIZER SHALL BE UTILIZED. ADDITION OF MIXING WATER IS NOT PERMITTED.



CONTRACTION JOINT
(NTS)



SECTION A-A



SUBDIVISION AND LAND DEVELOPMENT

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Township of Hilltown

APPENDIX H Concrete Specifications

1. Concrete must be class AA, 4,000 PSI (28-day strength), except as otherwise identified in this Ordinance.
2. Public sidewalk and driveway aprons (located within the right-of-way) must be installed in accordance with American Concrete Institute (ACI) 306R-88 specifications for cold weather concrete installation. Cold weather is defined as a period of more than three consecutive days where average daily temperature is forecast to be less than 40 degrees (F) and where air temperature is forecast to be less than 50 degrees (F) for more than 12 hours.
3. Mixing water is not permitted to be added to the batch after concrete is dispatched from the plant. Concrete batch ticket must be submitted to the inspector at time of pour and must identify concrete strength and slump. Concrete that has been supplemented with additional mixing water will be rejected.
4. No additives are permitted after the concrete is dispatched from the plant.
5. Air-entrained admixtures are not permitted for concrete placed during non "cold weather" conditions and where freezing temperature [32 degrees (F) or less] are not expected during the curing period.
6. Water reducing admixtures are not permitted for concrete placed during "cold weather" conditions, as they also act as retarding admixtures. Use of water reducing admixtures must be approved by the Township Engineer.
7. Superplasticizing admixtures are not permitted for concrete placed during "cold weather" conditions, as they also act as retarding admixtures. Use of superplasticizing admixtures must be approved by the Township Engineer.
8. Set-retarding admixtures are not permitted for concrete placed during "cold weather" conditions. Use of set-retarding admixtures must be approved by the Township Engineer. Set-retarding admixtures must be added to the mixing water at the batch plant. Set-retarding admixture content may never exceed 0.10% by weight of cement (1.5 ounces per 100 pounds of cementitious material) in the concrete mix and may only be utilized during hot weather conditions. [greater than 85 degrees (F)].
9. Set-accelerating admixtures (such as calcium chloride) must be approved by the Township Engineer; and shall only be used with 5,000 PSI (28-day strength) concrete (in lieu of 4,000 PSI). Set-accelerating admixtures are only permitted for use during "cold weather" conditions. If approved by the Township Engineer, accelerator may not exceed 2% by weight of cement in the batch and must be added to the mixing water at

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the plant. Addition of accelerator to the batch after dispatch from the plant is not permitted. Use of accelerators with sulfate-resistant cement is prohibited. Calcium chloride (or other "chloride" additives) may not be used in reinforced concrete.

10. Cold weather concrete installation:

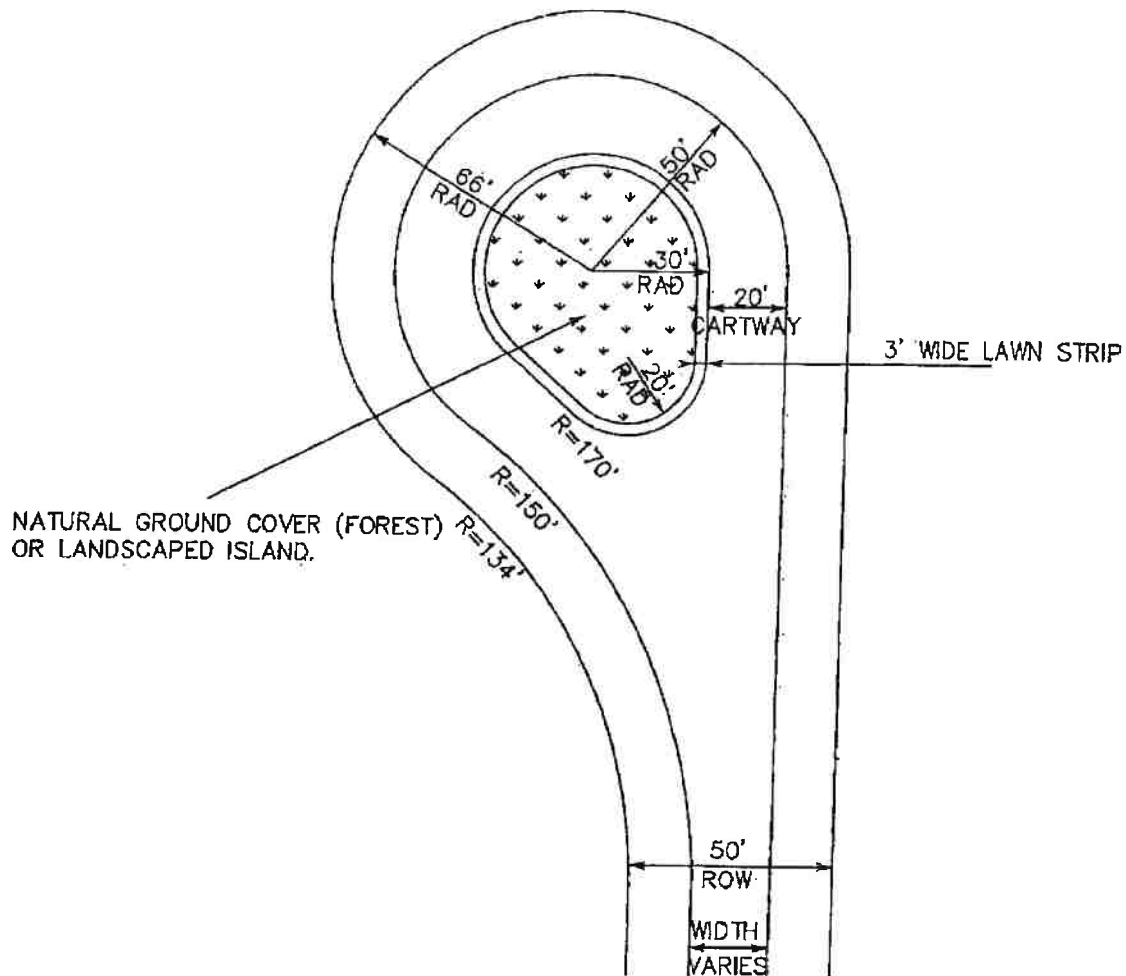
- A. Concrete installed during cold-weather conditions must be 51000 PSI (28-day strength).
- B. Concrete may not be installed when air temperature is less than 35 degrees (F).
- C. Concrete may not be set on frozen ground, snow or ice. Ground temperature must be at least 35 degrees (F) and stone subbase and embedded reinforcement (welded wire fabric, reinforcing bars, etc.) must be protected from freezing for at least 24 hours prior to placement.
- D. All concrete must be air-entrained for "cold weather" placement. Air entrainment shall be 4% to 7% of the concrete volume,
- E. Concrete must be protected from freezing with insulating blankets, enclosure, or heaters. Concrete must be sufficiently protected to maintain a temperature of at least 50 degrees (F) for the entire protection period. Concrete protection (insulating blankets, etc.) must remain in place for a minimum of three (3) days after placement (protection period). Maximum permitted drop in concrete temperature over the 24-hour period following the end of the protection period shall be 50 degrees (F).
- F. Concrete must be placed and properly finished in sufficient time to maintain a minimum surface temperature of 55 degrees (F) at time of placement of temperature protection (insulating blankets).
- G. Mixing temperature of concrete (at the plant) must be at least 60 degrees (F). Temperature of concrete at time of placement will be measured by the Township Inspector and must be at least 55 degrees (F), otherwise concrete will be rejected.
- H. Mixing water is not permitted to be added to the batch to improve workability after concrete is dispatched from the plant.

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APPENDIX I



PERMANENT CUL-DE-SAC
TURNAROUND BULB WITH
LANDSCAPED ISLAND

NOT TO SCALE

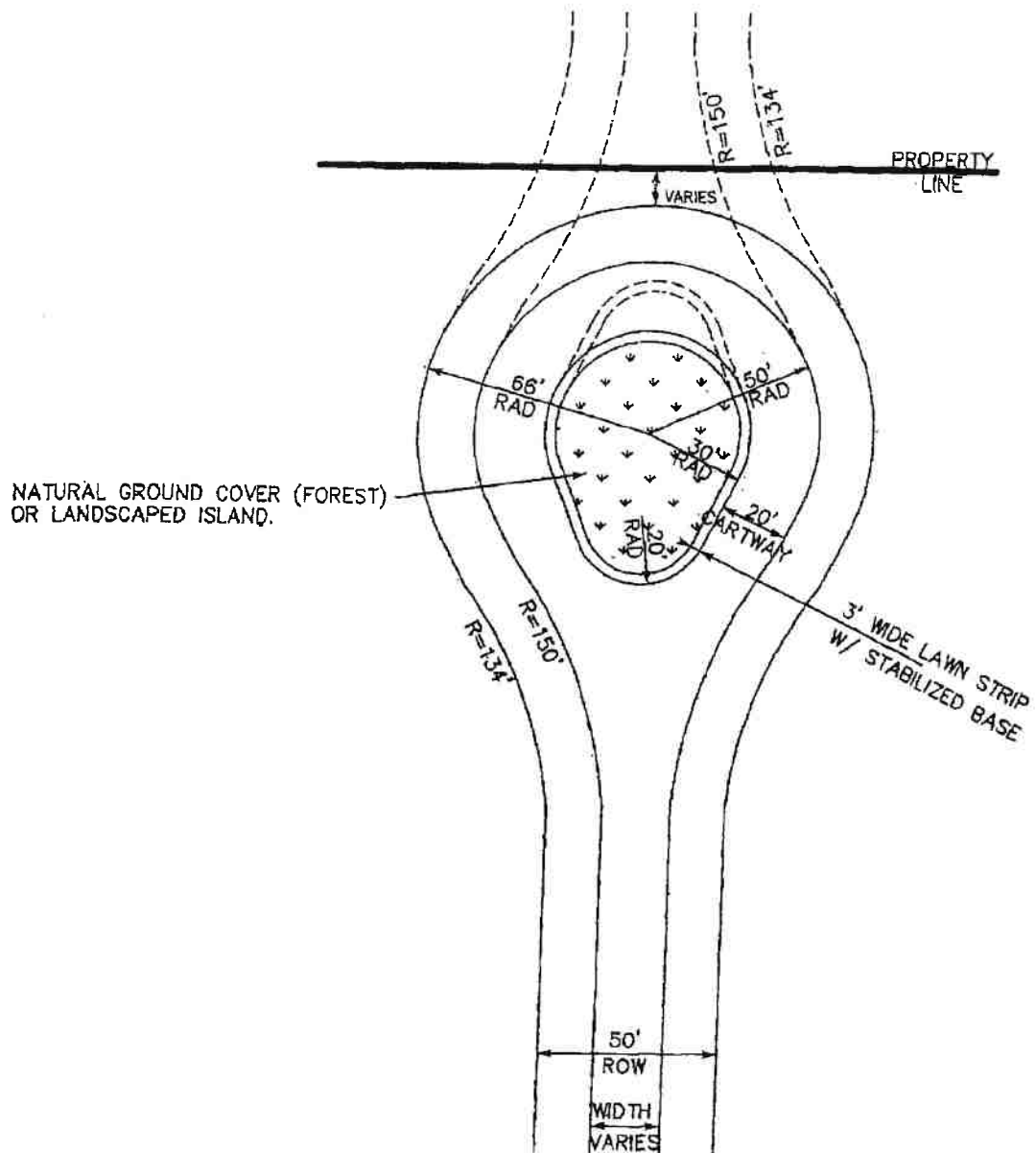


SUBDIVISION AND LAND DEVELOPMENT

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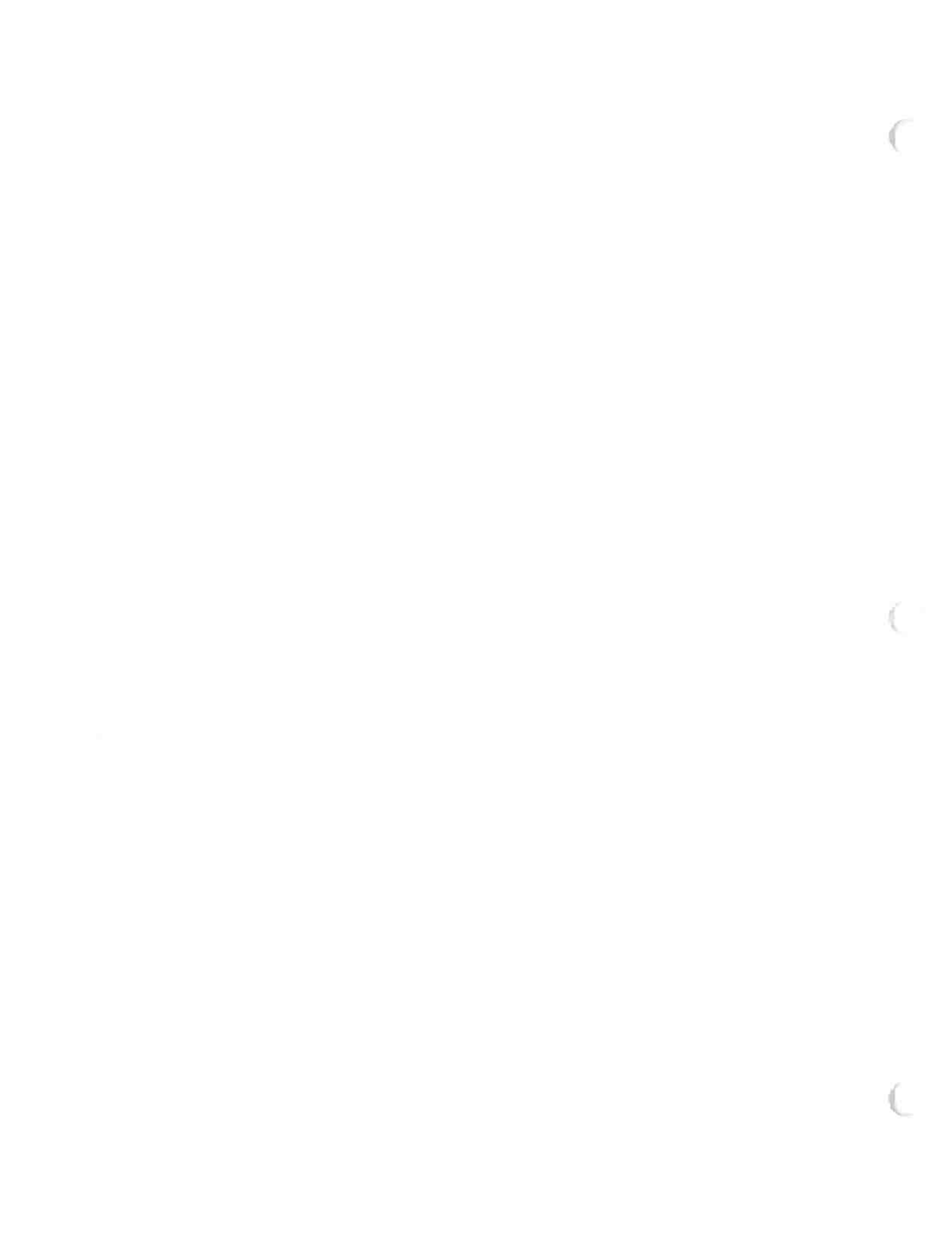
Township of Hilltown

APPENDIX J



TEMPORARY CUL-DE-SAC
TURNAROUND BULB WITH
LANDSCAPED ISLAND

NOT TO SCALE



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Appendix K
Plant Materials List

[Added 5-23-2011 by Ord. No. 2011-7; amended 12-10-2018 by Ord No. 2018-004]

MEDIUM TO LARGE DECIDUOUS TREES⁽¹⁾

(Three inches minimum trunk diameter at installation)

Botanical Name	Common Name	Mature Height (feet)	Street Tree Use	Comments
Acer nigrum	Black maple	50-60	Y	
Acer rubrum	Red maple	40-60	Y	
Acer saccharinum	Silver maple	80-100	N	
Acer saccharum	Sugar maple	60-75	N	
Aesculus hippocastanum	Horsechestnut	60-70	N	Native species only
Aesculus x carnea	Red Horsechestnut	35-50	N	Hybrid (A.pavia & A. hippocastanum)
Betula alleghaniensis	Yellow birch	60-80	N	
Betula lenta	Sweet birch	60-80	N	
Betula nigra	River birch	45-55	N	
Betula populifolia	Gray birch	40-50	N	
Carya tomentosa	Mockernut hickory	50-70	N	
Carya cordiformis	Bitternut hickory	50-70	N	
Carya glabra	Pignut hickory	50-70	N	
Carya ovata	Shagbark hickory	50-70	N	
Cladrastis kentukea	American Yellowwood	30-50	Y	
Fagus grandifolia	American beech	50-70	N	
Ginkgo biloba	Ginkgo	50-70	Y	Use male only, Not native
Gleditsia tricanthos	Honeylocust	40-60	Y	Thornless variety only (i.e. v. Inermis)
Gymnocladus dioica	Kentucky coffeetree	50-60	Y	Not native to area (use male only)
Juglans nigra	Black walnut	50-70	N	
Larix laricina	Eastern larch (Tamarack)	30-50	N	Native only in central PA
Liquidambar styraciflua ⁽²⁾	Sweet gum	50-75	Y	Refer foot note ⁽²⁾

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Botanical Name	Common Name	Mature Height (feet)	Street Tree Use	Comments
<i>Liriodendron tulipifera</i>	Tulip tree	75-100	N	
<i>Magnolia acuminata</i>	Cucumbertree	50-70	N	
<i>Metasequoia glyptostroboides</i>	Dawn redwood	65-85	N	Not native
<i>Nyssa sylvatica</i>	Black gum	40-70	N	
<i>Ostrya virginiana</i>	American hophornbeam	30-40	Y	
<i>Platanus occidentalis</i>	American sycamore	75-100	N	
<i>Platanus x acerifolia</i>	London planetree	70-80	Y	Hybrid (<i>P. orientalis</i> & <i>P. occidentalis</i>), Not native
<i>Populus deltoides</i>	Eastern cottonwood	75-100	N	
<i>Populus tremuloides</i>	Quaking aspen	40-60	N	
<i>Prunus serotina</i>	Black cherry	50-80	N	
<i>Quercus acutissima</i>	Sawtooth oak	40-50	N	
<i>Quercus alba</i>	White oak	50-100	N	
<i>Quercus bicolor</i>	Swamp white oak	60-80	N	
<i>Quercus coccinea</i>	Scarlet oak	70-90	Y	
<i>Quercus ilicifolia</i>	Bear oak	60-80	N	
<i>Quercus imbricaria</i>	Shingle oak	40-65	N	
<i>Quercus macrocarpa</i>	Bur oak	70-90	Y	
<i>Quercus montana</i>	Chestnut oak	40-75	N	
<i>Quercus muehlenbergii</i>	Chinkapin oak	60-80	Y	
<i>Quercus palustris</i> ⁽³⁾	Pin oak	60-75	N	Refer foot note ⁽³⁾
<i>Quercus phellos</i>	Willow oak	55-75	N	
<i>Quercus robur</i>	English oak	60-80	Y	
<i>Quercus rubra</i>	Red oak	60-80	Y	
<i>Quercus shumardii</i>	Shumard oak	60-80	Y	
<i>Quercus velutina</i>	Black oak	60-80	Y	
<i>Salix nigra</i>	Black willow	60-80	N	
<i>Sassafras albidum</i>	Sassafras	30-50	N	
<i>Taxodium distichum</i>	Bald cypress	60-80	N	Not native to area
<i>Tilia americana</i>	Basswood (American linden)	50-70	Y	
<i>Tilia cordata</i>	Littleleaf linden	60-80	Y	
<i>Tilia tomentosa</i>	Silver linden	50-70	Y	
<i>Ulmus Americana</i> (disease resistant varieties)	American elm	70-90	Y	Disease resistant varieties only

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Botanical Name	Common Name	Mature Height (feet)	Street Tree Use	Comments
Ulmus rubra	Slippery elm	45-55	N	

(1) General notes:

- a. Medium to large deciduous trees shall not be utilized where potential conflict may exist with overhead electric facilities.
- b. Trees identified with “Y” within the street tree use column may be utilized as street trees where there is no potential conflict with overhead electric facilities.

(2) Only seedless cultivars permitted when utilized as a street tree or planted adjacent to parking lots, sidewalks, pedestrian paths and drainage structures.

(3) Quercus palustris (pin oak) has drooping branches and should not be installed adjacent to parking lots, sidewalks, or pedestrian paths unless the cultivar “Green pillar” is planted.

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SMALL DECIDUOUS TREES⁽¹⁾

(Two and one-half inches minimum caliper at installation)

Botanical Name	Common Name	Mature Height (feet)	Street Tree Use	Comments
Acer buergeranum	Trident Maple	20-30	Y	Not native
Acer ginnala	Amur maple	15-20	Y	Not native
Acer griseum	Paperbark maple	25-35	Y	Not native
Acer negundo	Box elder	30-40	N	
Acer tataricum	Tatarian maple	15-25	N	Not native
Alnus serrulata	Smooth alder	12-20	N	
Amelanchier (species & varieties)	Serviceberry	15-30	Y	Use tree form
Asima triloba	Pawpaw	6-30	N	
Capinus caroliniana	American hornbeam	20-35	Y	
Carpinus betulus	European hornbeam	35-40	N	Not native
Castanea pumila	Allegheny chinkapin	20-25	N	
Celtis occidentalis	Common hackberry	25-30	N	
Cercis canadensis	Eastern redbud	25-30	Y	
Chionanthus virginicus	White fringetree	15-25	N	
Cornus alternifolia	Pagoda dogwood	20-30	N	
Cornus florida	Flowering dogwood	20-30	N	
Cornus kousa	Kousa dogwood	20-30	N	Use tree form, Not native
Cornus mas	Cornelia dogwood	20-30	N	Not native
Cornus racemosa	Gray dogwood	20-30	N	
Crataegus viridis	Green hawthorn	20-30	N	Use tree form
Crataegus crus-galli	Cockspur hawthorn (thornless)	15-20	N	Use tree form (Thornless variety only)
Crataegus laevigata	English hawthorn	15-20	N	Use tree form
Crataegus phaenopyrum	Washington hawthorn (thornless)	20-30	N	Use tree form
Crataegus punctata	Dotted hawthorn	20-25	Y	Use tree form
Diospyros virginiana	Common persimmon	30-40	Y	
Hamamelis virginiana	Witch hazel	15-25	N	
Magnolia stellata	Star magnolia	10-20	N	Use tree form, Not native
Magnolia virginiana	Sweetbay magnolia	15-25	Y	Use tree form
Malus (species & varieties) ⁽²⁾	Flowering crabapple	15-30	Y	Disease resistant cultivars only. Refer footnote ⁽²⁾
Prunus okame	Okame cherry	20-25	Y	Use tree form, Not native
Prunus pensylvanica	Pin cherry	25-40	N	Use tree form
Prunus serrulata	Oriental cherry	20-25	N	Not native. Use tree form

SUBDIVISION AND LAND DEVELOPMENT

Botanical Name	Common Name	Mature Height (feet)	Street Tree Use	Comments
<i>Prunus virginiana</i>	Choke cherry	20-30	Y	Use tree form
<i>Syringa reticulata</i>	Japanese tree lilac	20-30	Y	Not native. Use tree form

(1) General notes:

- a. Small deciduous trees may be utilized for street tree installation only where medium to large trees may conflict with overhead electric facilities.
- b. Trees identified with “Y” within the street tree use column may be utilized as street trees.

(2) *Malus* (flowering crabapple) has fruit and should not be installed adjacent to parking lots, sidewalks, pedestrian paths, or drainage structures.

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EVERGREEN TREES

(Six feet minimum height at installation)

Botanical Name	Common Name	Mature Height (feet)	Street Tree Use	Comments
<i>Abies balsamea</i>	Balsam fir	60-80	N	
<i>Chamaecyparis thyoides</i>	Atlantic white cedar	50-70	N	
<i>Ilex opaca</i>	American holly	30-40	N	
<i>Juniperus virginiana</i>	Eastern red cedar	30-60	N	
<i>Picea abies</i>	Norway spruce	60-80	N	Naturalized
<i>Picea glauca</i>	White spruce	40-60	N	
<i>Picea omorika</i>	Serbian spruce	50-60	N	Not native
<i>Picea pungens</i>	Blue spruce	50-75	N	Not native to area
<i>Picea rubens</i>	Red spruce	60-80	N	
<i>Pinus echinata</i>	Shortleaf pine	70-90	N	
<i>Pinus resinosa</i>	Red pine	70-90	N	
<i>Pinus rigida</i>	Pitch pine	40-60	N	
<i>Pinus strobus</i>	Eastern white pine	100-140	N	
<i>Pinus virginiana</i>	Virginia pine	30-50	N	
<i>Pseudotsuga menziesli</i>	Douglas fir	40-60	N	Not native to area
<i>Thuja occidentalis</i>	Eastern arborvitae	30-50	N	
<i>Tsuga canadensis</i>	Eastern hemlock	80-100	N	

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NATIVE SHRUBS

(Three feet minimum height at installation when used as buffer plantings)

Botanical Name	Common Name	Comments
<i>Alnus incana</i>	Speckled alder, mountain alder	
<i>Alnus serrulata</i>	smooth alder	
<i>Amelanchier arborea</i>	downy serviceberry, shadbush, Juneberry	
<i>Aronia arbutifolia</i>	red chokeberry	
<i>Aronia melanocarpa</i>	black chokeberry	
<i>Castanea pumila</i>	chinuapin	
<i>Ceanothus americanus</i>	New Jersey tea, red root	
<i>Cephalantus occidentalis</i>	buttonbush	
<i>Clethra alnifolia</i>	sweet pepper bush	
<i>Comptonia peregrina</i>	sweet fern	
<i>Cornus alternifolia</i>	pagoda dogwood	
<i>Cornus amomum</i>	silky dogwood	
<i>Cornus racemosa</i>	gray dogwood	
<i>Cornus sericea</i>	red-twig dogwood	
<i>Corylus americana</i>	American hazelnut	
<i>Corylus cornuta</i>	beaked hazelnut	
<i>Diervilla lonicera</i>	bush honeysuckle	
<i>Dirca palustris</i>	leatherwood	
<i>Epigae repens</i>	trailing arbutus	Evergreen
<i>Euonymus americana</i>	strawberry bush, brook euonymus	
<i>Gaultheria procumbens</i>	wintergreen, checkerberry	Evergreen
<i>Hamamelis virginiana</i>	Witch Hazel	
<i>Hydrangea arborescens</i>	wild hydrangea	
<i>Hypericum hypericoides</i> ssp. <i>Hypericoides</i>	St. Andrew's cross	
<i>Hypericum prolificum</i>	shrubby St. John's wart	
<i>Ilex glabra</i>	Inkberry	
<i>Ilex verticillata</i>	winterberry	
<i>Kalmia angustifolia</i>	sheep laurel	Evergreen
<i>Kalmia latifolia</i>	mountain laurel	Evergreen
<i>Lindera benzoin</i>	spicebush	
<i>Lyonia ligustrina</i>	male-berry	
<i>Myrica Pensylvanica</i>	Northern bayberry	
<i>Physocarpus opulifolius</i>	ninebark	Not Diablo variety
<i>Prunus virginiana</i>	chokecherry	
<i>Rhododendron arborescens</i>	smooth azalea	

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Botanical Name	Common Name	Comments
Rhododendron canadense	rhodora	
Rhododendron maximum	rosebay, great laurel	Evergreen
Rhododendron periclymenoides	pinxterbloom azalea	
Rhododendron prinophyllum	roseshell azalea	
Rhododendron viscosum	swamp azalea	
Rhus aromatica	fragrant sumac	
Rhus copallinum	dwarf sumac	
Rhus glabra	smooth sumac	
Rhus hirta	staghorn sumac	
Ribes cynosbati	prickly gooseberry	
Rosa blanda	smooth rose	
Rosa carolina	Carolina rose	
Rosa palustris	Swamp rose	
Rubus allegheniensis	Blackberry	
Rubus idaeus ssp.strigosus	red raspberry	
Rubus occidentalis	black raspberry	
Rubus odoratus	thimbleberry	
Salix bebbiana	Bebb willow, long-beaked willow	
Salix discolor	pussy willow	
Sambucus canadensis	elderberry, red-berried elder	
Spiraea alba	meadow sweet	
Spiraea tomentosa	steeplebush	
Staphylea trifolia	bladdernut	
Symphoricarpos albus	snowberry	
Taxus canadensis	Canada yew	Evergreen
Vaccinium aagustifolium	low-bush blueberry	
Vaccinium corymbosom	highbush blueberry	
Viburnum acerifolium	maple leaf viburnum	
Viburnum dentatum	southern arrowwood	
Viburnum lentago	black haw, nannyberry	
Viburnum nudum var. cassindoides	wild raisin	
Viburnum prunifolium	black haw, nanny berry	
Viburnum regonitum	Northern arrowwood	
Virurnum trilobum	highbush cranberry	