

WEST BRUNSWICK TOWNSHIP

*SCHUYLKILL COUNTY
PENNSYLVANIA*

***SUBDIVISION AND LAND
DEVELOPMENT ORDINANCE***

ORDINANCE NO. 2 OF 2009
ADOPTED JANUARY 7, 2009

AS AMENDED BY ORDINANCE NO. 2 OF 2017
ADOPTED MAY 3, 2017

WEST BRUNSWICK TOWNSHIP
*95 Municipal Road
Orwigsburg, PA 17961*

WEST BRUNSWICK TOWNSHIP
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ARTICLE I - GENERAL PROVISIONS

SECTION 1:01 AUTHORITY

An Ordinance providing for the regulation and control of the subdivision of lots and the development of land; the approval of plans, plots or replots of land laid out into building lots; standards for the design of streets, lots, easements, blocks and other improvements; certain minimum improvements and construction standards on all streets and required dedications; the administration of this Ordinance by the West Brunswick Township Planning Commission and the West Brunswick Township Supervisors; and penalties for the violation of this Ordinance.

SECTION 1:02 TITLE

This Ordinance shall be known and may be cited as "The West Brunswick Township Subdivision and Land Development Ordinance".

SECTION 1:03 PURPOSE

These regulations are adopted to protect, promote and create conditions favorable to the health, safety, convenience and general welfare of the citizens of West Brunswick Township by:

- 1:031 Ensuring that sites will be suitable for building purposes, human habitation, commercial and industrial operations and other uses for which land may be used.
- 1:032 Providing for the orderly, efficient, integrated and harmonious development of land within the Township.
- 1:033 Effectively coordinating the planning, design and construction of proposed transportation and community facilities with existing facilities within the Township.
- 1:034 Ensuring the conformance of subdivision and land development plans with the public improvement plans of the Township.
- 1:035 Providing for the efficient and orderly extension of community facilities and services.
- 1:036 Ensuring that all subdivision and land development applications are consistent with the goals, objectives and policies of the West Brunswick Township Comprehensive Plan and Zoning Ordinance.
- 1:037 Providing for adequate open spaces for traffic, recreation, light and air, and for proper distribution of population.
- 1:038 Assuring the equitable and just processing of subdivision and land development plans by providing uniform standards and procedures for observance by both the applicant and Township officials and preserving natural features and protecting sensitive environmental areas.

SECTION 1:04 APPLICABILITY

- 1:041 No subdivision or land development of any lot, tract or parcel of land shall be made, and no street, sanitary sewer, storm sewer, water main, gas, oil, or electric transmission line, or other improvements 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 thereon, except in accordance with this ordinance.

- 1:042 No lot in a proposed subdivision or land development may be sold, and no final permit to erect any building upon land in a subdivision or land development may be issued unless and until:
 - A. A Final Plan has been approved and recorded; and
 - B. Either,
 - 1. The Township has been assured by means of an Improvements Agreement acceptable to the Township Supervisors that the improvements will subsequently be installed, or
 - 2. The required improvements in connection therewith have been entirely completed.

- 1:043 The regulations of this Ordinance shall apply to any subdivision or land development.

- 1:044 This Ordinance is not intended to repeal, abrogate, annul or in any way impair or interfere with existing provisions of other laws or ordinances except those specifically repealed by this Ordinance, or with private restrictions placed upon property by deed, covenant or other private agreement.

SECTION 1:05 EXEMPTIONS

- 1:051 Agriculture - The subdivision by lease of land for agricultural purposes into parcels of more than ten (10) acres, not involving any new street or easement of access or residential dwelling shall be exempted from the regulations of this Ordinance.

- 1:052 Approved subdivisions
 - A. From the time an application for approval of a plat, whether preliminary or final, is duly filled as provided in this Ordinance, and while such application is pending approval or disapproval, no change or amendment of the Zoning Ordinance, this Ordinance or other governing ordinance shall affect the decision on such application adversely to the applicant and the applicant shall be entitled to a decision in accordance with the provisions of the governing ordinance on plans as they stood at the time the application was duly filed.

 - B. When an application for approval of a plat, 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 Ordinance, this Ordinance or any other governing ordinance shall be applied to affect adversely 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 (5) years from such approval.

- C. If Final Plan approval is preceded by Preliminary Plan approval, the five (5) year period shall be counted from the Preliminary Plan approval date.

SECTION 1:06 INTERPRETATION

The provisions of this Ordinance shall be interpreted and applied as minimum requirements for the promotion of the public health, safety, comfort, convenience and general welfare.

- 1:061 Where provisions, standards and specifications of this Ordinance conflict with those of any statute, ordinance or regulation, the more restrictive requirement shall apply, regardless of its source, unless specified to the contrary.

ARTICLE II - DEFINITIONS

SECTION 2:01 GENERAL INTERPRETATION

Unless otherwise stated hereafter, words and phrases within this ordinance shall have the meaning assigned in this Article. Terms not defined in this Article shall be interpreted according to common usage or as the context may imply. For the purpose of this Ordinance, certain terms and words have been defined and/or interpreted below:

- 2:011 Words used in the present tense shall include the future tense.
- 2:012 Words in the singular shall include the plural and words in the plural shall include the singular.
- 2:013 Words in the masculine gender include the feminine and the neuter.
- 2:014 The words "shall", "will", and "must" are mandatory.
- 2:015 The words "can" or "may" are permissive.
- 2:016 The word "person" includes an "individual", "company", "partnership", "corporation", "association" "unincorporated association", or other similar entities.
- 2:017 The words "used for" include "designed for", "arranged for", "intended for", "maintained for", or "occupied for".
- 2:018 The words "building" and "structure" shall be construed as if followed by the phrase "or part thereof."
- 2:019 The word "lot" shall include the terms "lot", "parcel", "site" and "tract".
- 2:020 The word "Township" shall refer to West Brunswick Township, Schuylkill County Pennsylvania.

SECTION 2:02 SPECIFIC TERMS

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| <u>Alley</u> | (See Service Street) |
| <u>Annexation</u> | The conveyance, sale or transfer of land from one parcel to an adjacent parcel for the sole purpose of increasing lot size or adjustment of lot boundaries, and not creating a separate new lot. |
| <u>Block</u> | A tract of land or a lot or group of lots, bounded by streets, public parks, railroad rights-of-way, water courses or bodies of water, boundary lines of the Township, or by any combination of the above. |
| <u>Board of Supervisors</u> | Board of Supervisors of the Township of West Brunswick, Schuylkill County, Pennsylvania. |
| <u>Building</u> | A structure enclosed within exterior walls or fire walls, built, erected and framed of component structural parts, comprised of any combination of building materials and which may be permanently affixed to the ground, designed for the enclosure and support of individuals, animals or property of any kind. |

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| <u>Building Setback</u> | The minimum distance a building or structure must be set back from the street right-of-way line (except the right-of-way of a service street). |
| <u>Cartway</u> | The portion of a street right-of-way, whether paved or unpaved, intended for vehicular use. |
| <u>Clear Sight Triangle</u> | An area of unobstructed vision at street and/or driveway intersections defined by lines of sight between points at a given distance from the intersections of the street and/or driveway center lines. |
| <u>Common Open Space</u> | A parcel or parcels of land or an area of water, or a combination of land and water, within the development site designed and intended for use or enjoyment of all residents of the development in which it is located. Land included within the right-of-way lines of streets or land on which stormwater detention facilities are located shall not be classified as common open space. Common open spaces shall not include required open areas between buildings and between buildings and street rights-of-way, driveways, parking areas and property lines in the development. No dwelling unit, residential accessory buildings, or parking areas may be located within common open spaces. |
| <u>Common Parking Area</u> | A parking facility other than those provided within the lot lines of a lot on which one single family detached dwelling, one single family semi-detached dwelling, or one townhouse is located. |
| <u>Community Sewage Disposal System</u> | A sewage disposal system which collects, treats and disposes of sewage from more than one (1) source by a system of pipes to a central treatment and disposal plant, generally serving a neighborhood area. |
| <u>Community Water Supply System</u> | A water supply system which transmits from a common source to more than one (1) dwelling, principal use, or lot. |
| <u>Comprehensive Plan</u> | The document entitled the West Brunswick Township Comprehensive Plan, or any part thereof, adopted by the West Brunswick Township Board of Supervisors. |

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| <u>Corner Lot</u> | A lot abutting two (2) or more intersecting public or private streets, or at the point of abrupt change of direction of a single street (an interior angle of less than one hundred thirty five (135) degrees). Any yard adjoining a street shall be designated the front yard and must meet the front yard requirements of the applicable zoning district, and the yard opposite that yard shall meet the side yard requirements of the applicable zoning district. In the case of a building to be placed on a corner lot such that the front of the building will not be parallel to the street line: yards shall be provided so that no portion of the building will be placed closer to the street than the front yard requirement of the applicable zoning district. No portion of the rear of the building will be placed closer to the lot line than the rear yard requirement of the applicable zoning district, and so that no portion of a side of a building will be placed closer to a lot line than the side yard requirement of the applicable zoning district. |
| <u>County</u> | The County of Schuylkill, Commonwealth of Pennsylvania. |
| <u>County Planning Commission</u> | The Planning Commission of the County of Schuylkill. |
| <u>Crosswalk (Interior Walk)</u> | A publicly or privately owned right-of-way for pedestrian use extending from a street into a block, or across a block to another street. |
| <u>DEP</u> | The Pennsylvania Department of Environmental Protection. |
| <u>Developer (Subdivider)</u> | 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. |
| <u>Development Plan</u> | The provisions for development of a planned residential, commercial, or industrial development, including a plat of subdivision, all covenants related to use or density of development, streets, ways and parking facilities, common open space and public facilities. The phrase "provisions of the development plan" when used in this ordinance shall mean the written and graphic materials referred to in this definition. |
| <u>Drainage Right-of-Way</u> | The lands required for the installation of storm sewers or drainage ditches, or required along a natural stream or water course for preserving the channel and providing for the flow of water therein to safeguard the public against flood damage. |
| <u>Dwelling</u> | A building or structure or portion thereof arranged, intended, designed or used as the living quarters for one or more families living independently of each other. Such buildings as hospitals, hotels, boarding, rooming, lodging houses, nursing homes, motels, group homes and institutional residences are not included in the definition of dwelling. The following are various types of dwellings. |

- A. Apartment Building - A building on a single lot arranged, intended or designed to be occupied as a residence for three or more families, and in which the dwelling units may be separated horizontally and/or vertically.
1. Garden Apartment - A building that includes three (3) or more dwelling units that are separated by only horizontal floors or by a combination of horizontal floors and vertical walls. This shall include buildings with a maximum height of three and one-half (3 1/2) stories or thirty-five (35) feet, whichever is less.
 2. Mid-Rise Apartment- An entirely residential building that includes three (3) or more dwelling units and that is higher than three and one-half (3 1/2) stories or thirty-five (35) feet, but is less than six (6) stories or forty-eight (48) feet.
- B. Manufactured Home or Mobile Home - A type of transportable (usually towed) manufactured home, meeting the definition of a single family dwelling intended for permanent occupancy contained in one unit, or in two 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. The term "manufactured home" specifically refers to a home built entirely in a protected environment under a federal code set by the US Department of Housing and Urban Development (HUD). Manufactured homes are not mobile homes; "Mobile home" describes factory-built homes produced prior to the 1976 HUD Code enactment
- C. "Modular" Home - A type of dwelling that meets a definition of single family detached dwelling, single family semi-detached dwelling, townhouse or low-rise apartment that is substantially but not wholly produced in two or more major sections off the site and then is assembled and completed on the site, and is supported structurally by its exterior walls and rests on a permanent foundation. Producers of modular homes must abide by state and local building codes. Housing units defined as Manufactured Homes or Mobile Homes are excluded from this definition.
- D. Single Family Detached Dwelling - A building arranged, intended or designed to be occupied exclusively as a residence for one family and having no common or party wall with an adjacent building.
- E. Single Family Semi-Detached Dwelling - A building arranged, intended or designed to be occupied exclusively as a residence for two families, one family living on each side of a common or party wall.
- F. Two-Family Detached Dwelling (Duplex) - A building arranged, designed or intended for occupancy of two (2) families living independent of each other in separate dwelling units that are separated by horizontal floors as opposed to vertical walls.

- G. Townhouse - A building containing three (3) to eight (8) single-family vertically attached dwelling units and not exceeding thirty-five (35) feet in height, with each dwelling unit being separated from another by a solid, fire resistant vertical party wall, and with each dwelling unit having its own individual separate access from the outside. Townhouses may include “quadplexes” or “patio homes” that meet this definition.
- H. Residential Conversion – The conversion of a single family dwelling to a two-family dwelling with the dwelling units one above the other, fully separated by a horizontal fire resistant floor, where each dwelling unit has its own separate outside access (ie; a “duplex-like structure”). There shall be no external alteration of the original single family dwelling except for the alterations which are necessary to provide each new dwelling unit with its own separate access.
- I. Duplex – A two-family detached building having two (2) dwelling units; one above the other, being fully separated by a horizontal fire resistant floor, and where each dwelling unit has its own separate outside access. For purposes of this Ordinance, a Duplex is a structure erected after the date of the Adoption of this Ordinance and which was expressly built as a duplex. The conversion of a single family dwelling into a duplex – like structure is a “Residential Conversion” (as defined in this Ordinance) and is further regulated in this Ordinance.

Easement

A grant by the property owner to the public, a corporation, a person, or group of persons, or another tract of land of a use of land for specified purposes.

Engineer

A licensed professional engineer registered by the Commonwealth of Pennsylvania.

Grade

The inclination with the horizontal, of a road, unimproved land, etc. including the level of the ground adjacent to the exterior walls of a building or structure, or adjacent to the base of a storage pile or sign which is generally expressed by stating the vertical rise or fall as a percentage of the horizontal distance.

Impervious

Not easily penetrated by water (i.e., roads, buildings, sidewalks, access drives, loading areas, parking areas, and paved recreation courts) excluding driveway, curb, sidewalk, planting strip, or barrier to an unchanneled motor vehicle entrance or exit.

Improvements

Those physical additions and changes to the land that may be necessary to produce usable and desirable lots.

Interior Lot

A lot other than a corner lot, the sides of which do not abut a street.

Land Development

Any of the following activities:

- (1) The improvement of one (1) lot or two (2) or more contiguous lots, tracts or parcels of land for any purpose involving:

- (a) A group of two (2) or more residential or nonresidential buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot or lots regardless of the number of occupants or tenure; or,
 - (b) The division or allocation of land or space, whether initially or cumulatively, between or among two (2) or more existing or prospective occupants by means of, or for the purpose of streets, common areas, leaseholds, condominiums, building groups or other features.
- (2) A subdivision of land.

The following shall be excluded from the definition of land development contained above:

- (1) The conversion of an existing single-family dwelling or single-family semi-detached dwelling into not more than (3) three residential units, unless such units are intended to be a condominium.
- (2) The addition of an accessory building, including farm buildings, on a lot or lots subordinate to an existing principal building.
- (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 sub-clause, 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 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 under a written lease, who has written authorization of the legal owner, or other persons having a proprietary interest in the land, shall be deemed to be a landowner for the purpose of this Ordinance.

Lot

A tract or parcel of land, regardless of size, held in single or joint ownership, not necessarily a lot or lots shown on a duly recorded map, which is occupied or capable of being occupied by one or more principal buildings, structures and accessory buildings, including such open spaces as are arranged, designed or required under this Ordinance. The term lot shall also mean parcel, plot, site or any similar term.

Lot Area (Gross)

The total area contained within the lot lines.

Lot Area (Net)

The remaining area of a lot after excluding the features defined in "Lot Size" from the gross lot area.

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| <u>Lot Depth</u> | The mean average horizontal distance between the front and the rear lot lines. |
| <u>Lot Line</u> | A line forming the front, rear or side boundary of a lot. |
| <u>Lot of Record</u> | A lot or parcel recorded in the office of the Recorder of Deeds of Schuylkill County, Pennsylvania. |
| <u>Lot Size</u> | <p>The remaining area of a lot after excluding the following features from the gross lot area.</p> <ol style="list-style-type: none"> 1. Areas within a street or other transportation right-of-way. 2. Areas comprising a stormwater management basin but not including stormwater management berms intended to serve individual lots. 3. In Zoning Districts that require a minimum lot size of two (2) acres, that portion or portions of the lot in which the following features individually or cumulatively represent fifty (50) percent of the gross lot area: areas within the 100 year flood plain; areas of slope in excess of twenty-five (25) percent; and all areas delineated as Wetlands. 4. In Zoning Districts that require a minimum lot size of one (1) acre, that portion or portions of the lot in which the following features individually or cumulatively represent twenty-five (25) percent of the gross lot area: areas within the 100 year flood plain; areas of slope in excess of twenty-five (25) percent; and all areas delineated as Wetlands. |
| <u>Lot Width</u> | The distance between side lot lines, determined by establishing the shortest straight-line distance at both the building setback line and the street line. In a case where the distance at the building setback line and the street line are not the same length, the shorter of the two distances shall be the lot width. The lot width shall be a continuous dimension and not be the sum of two or more separate dimensions. Also, lot width shall be the shortest straight-line distance; it shall not be measured on an arc. |
| <u>Maintenance Guarantee</u> | A guarantee by the subdivider that he shall maintain all improvements in good condition for a period of eighteen (18) months after completion of construction and installation of all such improvements. |
| <u>Marker</u> | A metal pin of at least five eighths of an inch (5/8") in diameter and at least twenty-four (24") in length. |
| <u>Mobile Home Lot</u> | A parcel of land in a mobile home park, improved with the necessary utility connections and other appurtenances necessary for the erection thereon of a single mobile home, which is leased by the park owner to the occupants of the mobile home erected on the lot. |
| <u>Mobile Home Park</u> | A parcel of land under single ownership that has been planned and improved for the placement of mobile homes for non-transient use, consisting of two or more mobile home lots. |

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| <u>Monument</u> | A stone or concrete monument with a flat top at least four inches (4") in diameter or square, containing a copper or brass dowel (1/4" drill hole), and at least twenty-four inches (24") in length (preferred thirty inches [30"] to thirty-six inches [36"]). It is recommended that the bottom sides or diameter to be at least two inches (2") greater than the top, to minimize movements caused by frost. |
| <u>Multiple Dwelling Building</u> | A building providing separate dwelling units for three or more families. |
| <u>Municipal Use</u> | A land use owned, conducted, and maintained by the Township or a Township Authority and including such uses as a library, park, playground, sewage treatment plant and administrative or equipment storage building. |
| <u>Municipality</u> | Township of West Brunswick, Schuylkill County, Pennsylvania. |
| <u>Non-Conforming Building, Lot, Structure or Use</u> | A building, lot, structure, or use which does not conform to the regulations of the zoning district in which it is located, either at the time of enactment of the Zoning Ordinance or as a result of subsequent amendments thereto, but which lawfully existed prior to the enactment of the Zoning Ordinance. Non-conforming structures include, but are not limited to, non-conforming signs, non-conforming buildings, and additions legally made to either. |
| <u>One Hundred Year Flood</u> | A flood that, on the average, is likely to occur once every one hundred (100) years, i.e., that has a one percent (1%) chance of occurring each year, although the flood may occur in any year. |
| <u>On-Lot Sewage Disposal System (Individual)</u> | A sewage disposal system which collects, treats and disposes of sewage or holds sewage from only one (1) dwelling, principal use, or lot. |
| <u>On-Lot Water Supply System</u> | A water supply system which transmits water from a source on the lot to one (1) dwelling, principal use, or lot. |
| <u>Open Space</u> | Unoccupied space open to the sky on which no principal or accessory buildings, structures or uses are permitted, and on the same lot with the principal use. |
| <u>Parking Space</u> | A space within a building or on a lot, used for the parking of a motor vehicle. |
| <u>PaMPC</u> | Pennsylvania Municipalities Planning Code |
| <u>Parcel</u> | (See Lot) |
| <u>Party Wall</u> | A fire-resistant common wall, floor, or ceiling separating two (2) or more dwelling units, buildings or uses which may be used or adapted for joint service between two buildings or parts thereof. |
| <u>Paved Area</u> | The area of a lot covered by paving. |

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| <u>Paving</u> | A surface comprised of asphalt, bituminous concrete and/or cementitious concrete or other similar materials that will not render a driveway, parking lot, or loading area unusable because of inclement weather conditions. |
| <u>Performance Guarantee</u> | Any security which may be accepted in lieu of a requirement that certain improvements be made before the Township gives Final approval to the plan, including performance bonds, escrow agreements, and any other collateral or surety agreements as defined in Section 8:04 herein. |
| <u>Plan</u> | The proposal for development, including a part of subdivision, all covenants, grants or easements and other conditions relating to use, location and bulk of buildings, density of development, common open space and public facilities. |
| <u>Plan, Final</u> | A complete and exact subdivision plan (and including all required supplementary data), prepared for official recording of a subdivision by statute, to define property rights and proposed streets and other improvements prepared by a Professional Land Surveyor. |
| <u>Plan, Major Street</u> | That element of the Township Comprehensive Plan, now or here after adopted, which shows the general location, alignment, and dimensions, and the identification and classification of existing and proposed major streets, highways, and other thoroughfares. |
| <u>Plan, Official</u> | The Comprehensive Development Plan and/or Master Plan and/or Future Land Use Plan and/or Ultimate Right-of-Way Plan and/or Official Map and/or Topographical Survey and/or other such plans, or portions thereof, as may have been adopted, pursuant to statute. |
| <u>Plan, Preliminary</u> | A tentative subdivision plan (and including all required supplementary data), of lesser detail than a final plan, showing approximate proposed street and lot layout as a basis for consideration prior to preparation of a final plan prepared by an Professional Land Surveyor. |
| <u>Plan, Record</u> | The copy of the Final Plan which contains the original endorsements of the County Planning Commission, the Township Planning Commission and the Township Supervisors, and which is intended to be recorded with the County Recorder of Deeds and prepared by a Professional Land Surveyor. |
| <u>Plan, Sketch</u> | An informal plan, not necessarily to exact scale, indicating salient existing features of a tract and its surroundings and the general lay out of a proposed subdivision prepared by the subdivider, an Engineer, a Professional Land Surveyor, or Land Planner. |

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| <u>Planned Residential Development</u> | An area of land controlled by a landowner, to be developed as a single entity for a number of dwelling units, or combination of residential and non-residential uses, the development plan for which does not correspond in lot size, bulk, type of dwelling, or use, density, or intensity, lot coverage and required open space to the regulations established in any one district created, from time to time, under the provisions of the Zoning Ordinance. |
| <u>Planning Commission</u> | Planning Commission of West Brunswick Township, Schuylkill County, Pennsylvania. |
| <u>Plat</u> | A map or plan of a subdivision or land development, whether preliminary or final. |
| <u>Premises</u> | A descriptive word to include all improvements, buildings, structures and land on or within a lot. |
| <u>Principal Building</u> | A building in which a principal use on a lot is carried on. |
| <u>Principal Use</u> | The main or primary purpose for which any land, structure or building is designed, arranged, or intended, and for which they may be occupied or maintained under the terms of the Zoning Ordinance. |
| <u>Professional</u> | Doctor, surgeon, dentist, architect, artist, accountant, insurance agent, real estate broker, teacher, engineer, lawyer, musician, surveyor, landscape architect, land planner, web site designer or any other type of licensed, certified, and/or degreed professional. |
| <u>Public Grounds</u> | Includes (1) Parks, playgrounds, trails, paths and other public areas. (2) Sites for schools, sewage treatment, refuse disposal and other publicly-owned or operated facilities. (3) Publicly owned or operated scenic or historic sites. |
| <u>Public Hearing</u> | A formal meeting held pursuant to public notice by the Supervisors, Planning Commission, Zoning Hearing Board or Municipal Authority intended to inform and obtain public comment prior to taking action in accordance with the PaMPC. |
| <u>Public Meeting</u> | A forum held pursuant to notice under the act of July 3, 1986 (P.L.388, No. 84), known as the "Sunshine Act." |
| <u>Public Notice</u> | Notice published once each week for two (2) consecutive weeks in a newspaper of general circulation within the Township. Such notice shall state the time and place of the hearing and the particular nature of the matter to be considered at the hearing. The first publication shall not be more than thirty (30) days and the second publication shall not be less than seven (7) days from the date of the hearing. |
| <u>Public Road</u> | A public thoroughfare, including a street, road, lane, alley, court, or similar term, which has been dedicated or deeded to the Township and accepted by it. |

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| <u>Reserve Strip</u> | A parcel of ground in separate ownership separating a street from other adjacent properties, or from another street, either proposed or existing. |
| <u>Reverse Frontage Lot</u> | A lot extending between and having frontage on two (2) generally parallel streets, (excluding service streets), with vehicular access solely from one street. |
| <u>Reverse Frontage Lots</u> | Lots which front on one (1) public street but provide vehicular access solely from another public street at the rear of the lot. |
| <u>Review</u> | Whenever the County Planning Commission and/or the Township Planning Commission possesses such jurisdiction, the action of "Review" shall also include "Review and Approval", or if necessary, "Review and Disapproval". |
| <u>Right-of-Way</u> | The total width of any land reserved or dedicated as a street, alley, crosswalk or for other public or semi-public purposes, including utilities. |
| <u>Roadway</u> | (See Street) |
| <u>Sanitary Landfill</u> | A land site on which engineering principles are utilized to bury deposits of solid waste without creating public health or safety hazards or nuisances. |
| <u>Sanitary Sewer System Public</u> | A sanitary sewage collection system in which sewage is carried from individual lots by a system of pipes to a wastewater treatment and disposal plant. |
| <u>Screen</u> | Vegetative material, fence, etc. planted or constructed to screen the buildings, structures and uses on the lot on which the screen is located from the view of people on adjoining properties. |
| <u>Service Street</u> | A minor right-of-way providing secondary vehicular access to the side or rear of two (2) or more properties, which is not the primary means of access to the properties. |
| <u>Septic Tank</u> | A watertight receptacle which receives sewage or industrial waste and is designed and constructed to provide for sludge storage, decomposition, separate solids from the liquid, through a period of detention before allowing the liquid to be discharged for further treatment and final disposal. |
| <u>Sight Distances</u> | The required length of roadway visible to the driver of a passenger vehicle at any given point on the roadway when the view is unobstructed by traffic. Sight distance measurement shall be made from a point ten (10) feet back from the edge of the road and at an elevation three and one half (3.5) feet above the centerline of the road surface. |
| <u>Special Exception</u> | The granting by the Zoning Hearing Board for permission to conduct a use permitted in a particular district, to undertake certain activities, to occupy or use land, buildings or structures for a specific purpose or in a certain manner in accordance with the Zoning Ordinance. |

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| <u>Street</u> | A public or private right-of-way, excluding driveways, intended as a means of vehicular and pedestrian travel, furnishing access to abutting properties. The word "street" includes thoroughfare, avenue, boulevard, court, drive, expressway, highway and similar terms. |
| <u>Street, Arterial</u> | A street serving a large volume of comparatively high-speed and long distance traffic [Average Daily Traffic five thousand (5,000) to nine thousand nine hundred and ninety-nine (9,999)]. |
| <u>Street, Cul-De-Sac</u> | A local street intersecting another street at one (1) end, and terminating in a vehicular turnaround at the other end. |
| <u>Street Frontage</u> | The lot dimension measured along the street line or right-of-way line of any one (1) street or highway abutting a lot. |
| <u>Street, Internal</u> | A local street used for circulation and access within a development involving residential, multi-residential, commercial and/or industrial land uses. |
| <u>Street Line</u> | The dividing line between a lot and the outside boundary of a public street or private street, road, or highway right-of-way legally open or officially mapped by a municipality or higher governmental authority, between a lot and the outside boundary of a street shown on a recorded subdivision or land development plan, or between a lot and a private street, road, or way over which the owners or tenants of two (2) or more lots held in single and separate ownership have a right-of-way. |
| <u>Street, Local</u> | A street used primarily to provide access to residential properties [Average Daily Traffic zero (0) to four hundred and ninety-nine (499)]. |
| <u>Street, Major Collector</u> | A street which, in addition to providing access to abutting properties, intercepts local streets and minor collector streets to give access to arterial streets [Average Daily Traffic one thousand (1,000) to four thousand, nine hundred, and ninety-nine (4,999)]. |
| <u>Street, Marginal Access</u> | A local street, parallel and adjacent to an arterial or collector street (but separating it by a reserve strip) which provides access to abutting properties and control of intersections. |
| <u>Street, Minor Collector</u> | A street which, in addition to providing access to abutting properties, intercepts local streets to provide a route serving fifty (50) or more dwelling units to give access to community facilities and/or arterial streets or other collector streets. Streets within an industrial or commercial development shall be considered minor collector streets [Average Daily Traffic five hundred (500) to nine hundred and ninety-nine (999)]. |
| <u>Street, Service (Alley)</u> | A local right-of-way providing secondary vehicular access to the side or rear of two (2) or more properties. |
| <u>Structure/Improvement</u> | Any man-made object having an ascertainable stationary location on or in land or water, whether or not affixed to the land. |
| <u>Subdivider</u> | (See <u>Developer</u>) |

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| <u>Subdivision</u> | The division or re-division of a lot, tract or parcel of land by means into two (2) 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 division by lease of land for agricultural purposes into parcels of more than ten (10) acres not involving any new street or easement of access, or residential dwelling, shall be exempted. The term subdivision shall refer, as appropriate in these regulations, to the process of subdividing land or to the land proposed to be subdivided. A subdivision also includes division over any period of time after the enactment of this ordinance of a parcel of land having frontage on an existing or proposed street into two (2) or more parcels having frontage on the existing or proposed street. The term subdivision shall also include any development of a parcel of land (for example, as an industrial park, a shopping center or a multiple dwelling project), which involves installation of streets and/or alleys, even though the streets and/or alleys might not be dedicated to public use and the parcel might not be divided immediately for purposes of conveyance, transfer, or sale, or even though the owner does not transfer legal or equitable title (for example, structures for rental purposes). |
| <u>Substantially Completed</u> | In the judgment of the municipal engineer, at least ninety percent (90%) (based on the cost of the required improvements for which financial security was posted pursuant to Section 8:04) 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. |
| <u>Surveyor</u> | A Professional Land Surveyor registered by the Commonwealth of Pennsylvania. |
| <u>Through Lot</u> | An interior lot having frontage on two (2) parallel or approximately parallel streets. |
| <u>Township</u> | West Brunswick Township, Schuylkill County, Pennsylvania. |
| <u>Variance</u> | A waiver, granted by the Zoning Hearing Board, from the terms and conditions of the Zoning Ordinance where literal enforcement would create unnecessary hardship and when granting of the waiver would not be contrary to the public interest. |
| <u>Water Supply System</u> | A system whether public or privately owned which is designed to transmit water from the source to users, in compliance with the requirements of the appropriate state agencies and the Township. |
| <u>Water Survey</u> | An inventory of the source, quantity, yield and use of groundwater and surface-water resources within a municipality. |

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| <u>Wetlands</u> | An area of ground exhibiting certain natural conditions which cause the same to be identified as wetlands as defined in applicable State and Federal laws and regulations setting forth criteria for the identification of wetlands and for the establishment of wetland limits. |
| <u>Wooded Area</u> | Any portion of a grove or stand of trees generally greater than six (6) inches in caliper, covering a land area greater than ten thousand (10,000) square feet. |
| <u>Yard</u> | The open space on the same lot with a building. The space shall be open and unobstructed from the ground upward, except as otherwise provided in the West Brunswick Township Zoning Ordinance, and not less in depth or width than the minimum required in each zoning district. |
| <u>Yard, Front</u> | An open space between an adjacent street right-of-way and a line drawn parallel thereto, at such distance there from as may be specified in the West Brunswick Township Zoning Ordinance for any zoning district, and extending for the full width of the lot. |
| <u>Yard, Rear</u> | An open space between the rear lot line and a line drawn parallel thereto, at such distance there from as may be specified in the West Brunswick Township Zoning Ordinance for any zoning district, and extending for the full width of the lot, except that in the case where the rear lot line is included in a service street, the rear yard shall be between the right-of-way line of the service street nearest the front yard of the lot and a line drawn parallel to such right-of-way line of the service street. |
| <u>Yard, Side</u> | An open space between the side lot line and a line drawn parallel thereto, at such distance there from as may be specified in the West Brunswick Township Zoning Ordinance for any zoning district, and extending from the front yard to the rear yard, except that in the case where the side lot line is included within a service street, the side yard shall be between the right-of-way line of the service street nearest the principal use or building on the lot and a line drawn parallel to such right-of-way line of the service street. |
| <u>Zoning Ordinance</u> | The most current West Brunswick Township Zoning Ordinance. |

ARTICLE III - APPLICATION PROCEDURES

SECTION 3:01 GENERAL PROCEDURES

- 3:011 This Article provides an overview of the general procedures for the application, submission, review and the approval of proposed subdivision plans or land development plans within West Brunswick Township.
- 3:012 All subdivision and land development plans within West Brunswick Township shall be reviewed by the West Brunswick Township Planning Commission, the Schuylkill County Planning Commission and other Township, State or County officials as deemed necessary, and shall be approved or disapproved by the West Brunswick Township Board of Supervisors in accordance with the procedures specified within this Article and within other Sections of this ordinance.
- 3:013 For all proposed subdivision and land development plans, except those that qualify as Minor Subdivisions or Revised Plans of Record, a Preliminary Plan and a Final Plan must be submitted to the Township for review and approval. Those plans exempted from this standard procedure shall comply with the procedures identified under Sections 3:04 or 3:07 of this ordinance.

SECTION 3:02 JURISDICTION

- 3:021 The West Brunswick Township Board of Supervisors shall have jurisdiction over subdivision and land development within the Township limits. In order to assist the Board of Supervisors in its consideration of subdivisions and land developments, the Board of Supervisors hereby decrees that the West Brunswick Township Planning Commission shall serve the following functions:
- A. All plans proposing subdivision or land development, upon submission to the Township shall be referred to the Planning Commission for review.
 - B. The Planning Commission shall make recommendations to the Board of Supervisors concerning approval, conditional approval, or disapproval of such plans.
 - C. The Planning Commission shall also make recommendations to the Board of Supervisors concerning the interpretation of this Ordinance.
- 3:022 The West Brunswick Township Board of Supervisors shall consider the recommendations offered by the Planning Commission prior to taking action on any proposed subdivision or land development plan.

SECTION 3:03 SKETCH PLAN APPLICATION AND REVIEW

- 3:031 Pre-Plan Consultation
- A. Prior to submission of a Sketch Plan, applicants for larger developments are encouraged to discuss their intent with the Zoning Officer and/or Township Planning Commission.

- B. The Township shall make available to developers copies of this Ordinance, the Zoning Ordinance, street maps, and other related ordinances, maps and information which may affect the development of the property under question, provided that the developer pay the customary charges for all requested documents.

3:032 Sketch Plan Submission

- A. Prior to the submission of a Preliminary Plan (or a Final Plan where a Preliminary Plan is not required), applicants are very strongly encouraged to submit a Sketch Plan. A Sketch Plan review allows an applicant to save substantial time and engineering costs by resolving issues concerning layout and Township regulations prior to detailed engineering.
- B. A Sketch Plan shall be considered as an unofficial submission to the Township for the purpose of informal review and discussion between the applicant and the Township. If a sketch plan is submitted an extra copy will be kept by the Planning Commission for reference.
- C. For maximum usefulness, Sketch Plans should contain the information specified in Section 4:01.

3:033 Sketch Plan Review

- A. The West Brunswick Township Planning Commission shall meet with the applicant and informally discuss the conceptual suitability of the proposed development, its relationship to existing streets and utilities, the proposed arrangement and density of the development, and the compatibility of the proposed Plan with the Comprehensive Plan.
- B. Based upon this meeting, the Planning Commission shall inform the applicant of apparent deficiencies in the plan, offer recommendations regarding changes or modifications or recommend the submission of a Preliminary Plan (or a Final Plan where a Preliminary Plan is not required). The Planning Commission shall take no formal action to either approve or disapprove a Sketch Plan.
- C. Due to the informal nature of a Sketch Plan application, the recommendation of the Planning Commission to submit a Preliminary Plan (or a Final Plan) shall not be deemed to constitute an approval.
- D. Neither the Planning Commission nor the Board of Supervisors shall be required to take any action with respect to a Sketch Plan Review.

SECTION 3:04 MINOR SUBDIVISION

3:041 Classification

- A. The proposed division of a parcel of land which adjoins an existing public street and does not involve the opening, widening, extension or improvement of any street or the installation of any public utility outside the frontage road, and includes all the contiguous land under one (1) ownership shall be considered a Minor Subdivision.
- B. A Minor Subdivision shall result in no more than two (2) residential lots; commercial or industrial uses shall not qualify as Minor Subdivisions.

- C. Where the purpose of the proposed plan is to annex a lot or parcel or multiple lots or parcels to an adjacent lot or parcel, the plan shall qualify as a Minor Subdivision.

3:042 Application

- A. A Final Plan complying with the submission requirements of Section 3:061 and the requirements of Section 4:03 shall be prepared for a Minor Subdivision.
- B. All submissions shall be accompanied by the proper application forms and review fees as determined by the Township.

3:043 Review and Approval

The review and approval of a Final Plan for a Minor Subdivision shall be in accordance with the provisions of Sections 3:062 and 3:063.

SECTION 3:05 PRELIMINARY PLAN APPLICATION AND REVIEW

3:051 Preliminary Plan Submission

- A. The applicant shall submit twelve (12) complete copies of the proposed Preliminary Plan to the West Brunswick Township Planning Commission. Plans must be submitted no less than twenty-one (21) days for an initial submission and fourteen (14) days for a revised submission prior to a regularly scheduled meeting of the West Brunswick Township Planning Commission.
- B. All submissions shall be accompanied by the proper application forms and review fees as determined by the Township.
- C. When required, the applicant shall be responsible for submitting the plan to the Schuylkill County Conservation District, the Pennsylvania Department of Environmental Protection and all other pertinent reviewing bodies, as specified by this Ordinance or required by law.
- D. No application shall be deemed filed and accepted for review until all supplementary data, reports, and studies as may be required under Articles IV and V have been received, application fees have been fully paid, and any other requirements for submission specified herein have been met.

3:052 Preliminary Plan Review

- A. The Township Engineer shall review the Preliminary Plan to determine its conformance to the Township Zoning Ordinance, the Subdivision and Land Development Ordinance, and any other pertinent Municipal Ordinance.

The Township Engineer may recommend changes, alterations or modifications, as he may deem necessary. The report of the Township Engineer shall be in writing and shall be submitted to the Township Planning Commission prior to the regularly scheduled or special meeting at which the Preliminary Plan is to be considered by the Township Planning Commission.

- B. When a Preliminary Plan has been officially accepted for review by the Township, the Township shall forward two (2) complete copies of the proposed Plan to the Schuylkill County Planning Commission for their review and comment. Failure of the Schuylkill County Planning Commission to act within the time allowed by law shall constitute a waiver of their right to review the Plan as submitted and the Township may officially act on the basis of such a waiver.
- C. When a Preliminary Plan has been officially accepted for review by the Township, such Plan shall be reviewed by the Township Planning Commission at its next regularly scheduled meeting, or at the discretion of the Planning Commission, at a special meeting. During the review of the Preliminary Plan, the Township Planning Commission shall consider any written reports of the Township Engineer, Township Solicitor, Township Zoning Officer, Township Code Enforcement Officer, the Schuylkill County Planning Commission, and other designated agencies or authorities, before rendering its decision on the proposed Preliminary Plan.
- D. Upon completion of its review, the Township Planning Commission shall promptly submit its recommendations to the Township Board of Supervisors for their consideration. This recommendation shall be forwarded to the Board of Supervisors within ninety (90) days from the date the Preliminary Plan was officially accepted for review by the Township.
- E. During the course of the Planning Commissions review of the Preliminary Plan and prior to any action by the Board of Supervisors within the required ninety (90) day period, the proposed Preliminary Plan may be revised by the applicant. Upon the submission of a revised Plan the applicant shall sign a statement withdrawing any previously submitted Plans from consideration and a new ninety (90) day time period for formal review and notification shall commence from the date of submission of the revised Plan. The revised Plans shall be submitted to the Planning Commission in accordance with Section 3:051.

3:053 Preliminary Plan Approval

- A. Following the review of the Preliminary Plan and any accompanying data by the Township Engineer, Township Solicitor, Township Zoning Officer, Township Code Enforcement Officer, Township Planning Commission, and the Schuylkill County Planning Commission, the Board of Supervisors shall approve, approve with conditions, or reject the proposed Preliminary Plan.
- B. Any Conditions required for approval must be clearly stated in writing. If rejected, the Township Board of Supervisors shall specify the reasons for rejection, including citation of, or reference to, the pertinent sections of this and/or other Township Ordinances.

- C. The Board of Supervisors shall notify the subdivider or his agent of the action taken by the Supervisors not later than ninety (90) days following the date of the regular meeting of the Planning Commission next following the date the Preliminary Plan is filed, provided that should the said next regularly scheduled meeting of the Planning Commission occur more than thirty (30) days following the filing of the Preliminary Plan, the said ninety (90) day period shall be measured from the thirtieth (30th) day following the day the Preliminary Plan has been filed. This review period may be extended by mutual agreement of the applicant and the Township.
- D. Approval or approval with conditions of a Preliminary Plan shall not constitute approval of the Final Plan. Rather, it shall be deemed an expression of approval of the layout shown on the Preliminary Plan as a guide to the preparation of the Final Plan. The Final Plan must also be reviewed and approved by the Township as outlined under Section 3:06 of this Ordinance.

If a plan is approved with conditions, the Applicant shall respond in writing to the Township accepting the conditions. If the applicant does not accept the conditions within the time specified by the Supervisors the conditional approval shall be voided.

SECTION 3:06 FINAL PLAN APPLICATION AND REVIEW

3:061 Final Plan Submission

- A. Within one (1) year of receiving approval or approval with conditions of a Preliminary Plan, the applicant shall submit to the Township Planning Commission twelve (12) complete copies of the Final Plan and all supplementary data as required within this Ordinance. Plans must be submitted for review no less than twenty-one (21) days for an initial submission and fourteen (14) days for a revised submission prior to the regularly scheduled meeting of the West Brunswick Township Planning Commission.
- B. All submissions shall be accompanied by the proper application forms and review fees as determined by the Township.
- C. When required, the applicant shall be responsible for submitting the plan to the Schuylkill County Conservation District, the Pennsylvania Department of Environmental Protection and all other pertinent reviewing body or bodies, as specified by this Ordinance or required by law.
- D. No application shall be deemed filed and accepted for review until any, and all, supplementary data, reports, and studies as may be required under Article IV through VII of this Ordinance (including revisions required during the Preliminary Plan review) have been received, application fees have been fully paid, and any other requirements for submission specified herein have been met.
- E. At the discretion of the Township, additional copies of the proposed Final Plan may be requested from the applicant for review and comment.

3:062 Final Plan Review

- A. The Township Engineer shall review the proposed Final Plan to determine its conformity to the Township Zoning Ordinance, (and) the Subdivision and Land Development Ordinance, and any other pertinent municipal Ordinance, The Township Engineer may recommend changes, alterations or modifications, as he may deem necessary. The report of the Township Engineer shall be in writing and shall be submitted to the Township Planning Commission prior to the regularly scheduled or special meeting at which the Final Plan is to be considered by the Township Planning Commission.
- B. The Township shall forward two (2) complete copies of the proposed Final Plan to the Schuylkill County Planning Commission for their review and comment. Failure of the Schuylkill County Planning Commission to act within the time allowed by law shall constitute a waiver of their right to review the Plan as submitted and the Township may officially act on the basis of such a waiver.
- C. When a Final Plan has been officially accepted for review by the Township, such Plan shall be reviewed by the West Brunswick Township Planning Commission at its next regularly scheduled meeting. During the review of the Final Plan, the Township Planning Commission shall consider any written reports of the Township Engineer, Township Solicitor, Township Zoning Officer, Township Code Enforcement Officer, the Schuylkill County Planning Commission, and other designated agencies or authorities, before rendering its final decision on the proposed Final Plan.
- D. Upon completion of its review, the Planning Commission shall promptly submit its recommendations to the West Brunswick Township Board of Supervisors for their consideration. This recommendation shall be forwarded to the Board of Supervisors within ninety (90) days from the date the Final Plan was officially accepted for review by the Township Planning Commission.
- E. During the course of the Planning Commissions review of the Final Plan and prior to any action by the Board of Supervisors within the required ninety (90) day period, the proposed Final Plan may be revised by the applicant as directed by the West Brunswick Township Planning Commission. Upon the submission of a revised plan the applicant shall sign a statement withdrawing any previously submitted plans from consideration and a new ninety (90) day time period for formal review and notification shall commence from the date of submission of the revised plan. The revised Plans shall be submitted to the Planning Commission in accordance with Section 3:061.

3:063 Final Plan Approval

- A. Following review of the proposed Final Plan and the accompanying data by the Township Engineer, Township Solicitor, Township Planning Commission, and the Schuylkill County Planning Commission, the Board of Supervisors shall approve, approve with conditions, or reject the Final Plan.

- B. Any Conditions required for approval must be clearly stated in writing. If the Plan is rejected, the Board shall specify the reasons for rejection, including citation of or reference to the pertinent Sections of this and other Township ordinances. Copies of the statement shall be forwarded to the applicant and all concerned parties no more than fifteen (15) days following the decision.

If a plan is approved with Conditions, the Applicant shall respond in writing to the Township accepting the conditions. If the applicant does not accept the conditions within the time specified by the Supervisors the conditional approval shall be voided.

- C. The Board of Supervisors shall notify the subdivider or his agent of the action taken by the Supervisors not later than ninety (90) days following the date of the regular meeting of the Planning Commission next following the date the Final Plan is filed, provided that should the said next regularly scheduled meeting of the Planning Commission occur more than thirty (30) days following the filing of the Final Plan, the said ninety (90) day period shall be measured from the thirtieth (30th) day following the day the Final Plan has been filed. This review period may be extended by mutual agreement of the applicant and the Township.
- D. All pertinent agreements, contracts, fees, deeds of dedication and contributions (e.g., traffic impact fees, recreation fees, and/or fees-in-lieu-of recreation land) shall be satisfactorily completed and/or executed by the applicant prior to municipal approval.

SECTION 3:07 REVISED PLAN OF RECORD

3:071 Any revision, replotting or re-subdivision of land which includes changes to a Recorded Plan shall be considered a subdivision and shall comply with all regulations within this Ordinance, except that lot lines may be changed from those on a Recorded Plan, provided that in making such changes:

- A. No lot or tract of land shall be created or sold that is smaller than the minimum dimensions required by the West Brunswick Township Zoning Ordinance.
- B. Easements or rights-of-way shall not be changed.
- C. Street locations and block sizes shall not be changed.
- D. No lot shall be created which does not abut an existing or proposed public street.
- E. Open space and recreational areas shall not be reduced.

3:072 In every case wherein lot lines are changed as permitted above, the applicant shall:

- A. Prepare and submit a Revised Plan of Record to the Township for review and approval. The Revised Plan of Record shall be submitted and prepared in accordance with the Final Plan requirements of Sections 3:061 and 4:03 of this Ordinance.
- B. The Revised Plan of Record shall specifically identify the previous Plan of Record superseded and shall also contain the recorded references.

- C. The review and approval of a Revised Plan of Record shall be in accordance with the provisions of Section 3:062 and 3:063.
- D. After the Revised Plan of Record has been approved by the Township, the applicant shall then record the new plan in accordance with this Ordinance.

SECTION 3:08 LAND DEVELOPMENT PLANS

- 3:081 A "Land Development Plan" shall comply with the standard review procedures of this Ordinance.
- 3:082 Occasionally situations involving only one (1) lot may arise whereby it is unclear whether or not a Land-Development Plan is required by the Ordinance. In this event the developer may present information regarding the development to the Planning Commission. The information shall be sufficient to illustrate the type and extent of the development and the potential impact of the proposal upon traffic, stormwater management, sewage disposal, water supply, and similar concerns. The Planning Commission shall review the information and make a recommendation to the Township Supervisors as to whether or not the Land Development procedures of this Ordinance should be followed. The Planning Commission may wish to consult the Township Engineer and Solicitor prior to making its recommendation. The Township Supervisors shall, after consideration of the Planning Commission's recommendation, make the final decision as to whether or not a Land Development Plan will be required.

SECTION 3:09 APPROVAL AND RECORDING OF PLANS

- 3:091 After the completion of the procedures required within this Ordinance the West Brunswick Township Planning Commission shall place their endorsements on at least twelve (12) copies of the Plan which is to be recorded. The Plans shall be dated and signed by at least a majority of the members on the Township Planning Commission.
- 3:092 After the completion of the procedures required within this Ordinance the West Brunswick Township Board of Supervisors shall place their endorsements on at least twelve (12) copies of the Plan which is to be recorded. The Plans shall be dated, sealed and signed by at least a majority of the Township Supervisors.
- 3:093 No changes, erasures, modifications or revisions shall be made to any Subdivision or Land Development Plan after the Plan has been approved by the Township.
- 3:094 After the Plan has been properly endorsed by the Township, the Township shall submit the Plans to the Schuylkill County Planning Commission for their endorsement. No Plan may be legally recorded unless it has been properly endorsed by the Township, the Schuylkill County Planning Commission and complies with all the recording requirements of the Schuylkill County Recorder of Deeds Office.
- 3:095 After the Plan has been properly endorsed by the Township and the Schuylkill County Planning Commission, the Township shall record the Plans with the Schuylkill County Recorder of Deeds within ninety (90) days of the date the Plans were endorsed by the Township. All costs related to actual recording fees, certified copies, administration time by the Township, etc., shall be paid for by the applicant from the application fees.
- 3:096 After the Plan has been recorded, the applicant may pick up a copy of same at the Township Office.

ARTICLE IV - PLAN REQUIREMENTS

SECTION 4:01 SKETCH PLANS

- 4:011 The scale and sheet size of the Sketch Plan of a subdivision shall be as required in Section 4:02 for Preliminary Plans. The Sketch Plan shall contain at least the following data, legibly drawn to scale but not necessarily showing precise dimensions:
- A. Tract boundaries.
 - B. North arrow.
 - C. Written and graphic scales.
 - D. Provide topographic data per USGS quadrangle maps, soils information per USDA mapping, floodplains per FEMA mapping, and wetlands per NWI mapping.
 - E. Proposed general street and lot layout.
 - F. A location map with sufficient information to enable the Planning Commission to locate the property.
 - G. General site data including acres of entire tract and number of proposed lots and Uniform Parcel Identification Number (i.e.; UPI).
 - H. General location of man made features (i.e., dwellings, driveways, septic systems, wells, etc.)
 - I. Project Name, drawing number, date, etc.

SECTION 4:02 PRELIMINARY PLANS

A Preliminary Plan application shall not be considered complete unless all provisions specified under Section 3:051 have been completed and all information required below has been provided.

- 4:021 The Preliminary Plan of a proposed Major Subdivision shall be clearly and legibly drawn to a minimum scale of one (1) inch equals fifty (50) feet with all dimensions shown in feet and hundredths of a foot except that:
- A. If the average size of the proposed lots in the subdivision are five (5) acres or larger, the plan shall be drawn to a minimum scale of one (1) inch equals one hundred (100) feet.
 - B. If the subdivision proposes lots with an average frontage of less than fifty (50) feet, the plan shall be drawn to a scale of one (1) inch equals twenty (20) feet.
- 4:022 The original drawing, and all submitted copies thereof, shall be made on sheets twenty-four (24) inches by thirty-six (36) inches.
- 4:023 If the Preliminary Plan requires more than one sheet, a key diagram showing relative locations of the remaining sections shall be drawn on each sheet.
- 4:024 The Preliminary Plan shall show:
- A. Name of proposed subdivision, or otherwise identifying title, drawing number and the Township.

- B. North arrow, graphic scale, written scale, and date, including the month, day and year that the original drawing was completed, and the month, day and year that the original drawing was revised, for each revision.
- C. Name and address of record owner (and subdivider).
- D. Name of Professional Land Surveyor responsible for the subdivision plan, or any part thereof.
- E. Names of all abutting subdivisions, if any, with the plan book and page numbers where recorded, and the names of owners of all adjacent unplatted land, if any, and the deed book and page numbers where recorded.
- F. A key map for the purpose of locating the property being subdivided, drawn to a scale of one (1) inch equals eight hundred (800) feet and showing the relation of the property, differentiated by tone or pattern, to adjoining property and to all streets, roads, municipal and zoning district boundaries and watercourses within one thousand (1000) feet of the subdivision. In addition, a scale and a north arrow shall be indicated.
- G. Total tract boundaries of the property being subdivided, showing bearings, distances, and a statement of total acreage of the property.
- H. Zoning data, including the following:
 1. Applicable lot area, width, lot coverage, height regulations and minimum yard requirements.
 2. Existing and proposed zoning district boundary lines.
- I. Contour lines at vertical intervals of no more than two (2) feet for land with an average natural slope of four (4) percent or less, and at intervals of no more than five (5) feet for land with an average natural slope exceeding four (4) percent. The contours shall be based upon a field survey or photogrammetric procedure at a scale of one (1) inch equals one hundred (100) feet or larger.
- J. Location and elevation of the datum to which contour elevations refer where reasonably practicable datum used shall be a known, established benchmark.
- K. Identification of any areas with slopes between fifteen (15) percent and twenty five (25) percent and slopes greater than twenty five (25) percent. Identification of slopes shall be in the form of shading or hatching.
- L. The complete Parcel Identification Number (from the Schuylkill County Tax Maps) for the tract being subdivided.
- M. All existing sewer lines, water lines, wells, fire hydrants, utility transmission lines, easements and rights of way, culverts, bridges, railroads, watercourses, flood plain areas based on a one hundred (100) year storm and other significant manmade or natural features within the proposed subdivision and within existing right of ways and other areas where pertinent and/or readily accessible of the proposed subdivision.
- N. Approximate locations and names of soil types.

- O. Areas of hydric soils, or soils with hydric components (see Schuylkill County Soil Survey) and wetlands located on the tract being subdivided along with notations regarding restrictions upon their use as well as the appropriate buffer zone as required under Section 5:103.
- P. All existing buildings or other structures, and the approximate location of all existing tree masses and/or individual trees over thirty-six (36) inches in diameter within the proposed subdivision.
- Q. All existing streets, including streets of record (recorded but not constructed), on or abutting the tract, including names, right-of-way widths, cartway (pavement) widths and approximate grades.
- R. All recording information if the property was previously subdivided.
- S. The full plan of the proposed development including:
 - 1. Location and width of all streets and rights-of-way with a statement of any conditions governing their use.
 - 2. Clear sight triangles at all intersections.
 - 3. Suggested street names and all public utility and private easement locations.
 - 4. Building reserve (setback) line, for all yards, and the proposed placement of each building.
 - 5. Lot lines with approximate dimensions.
 - 6. Approximate net and gross lot areas.
 - 7. A statement of intended use of all lots and parcels.
 - 8. Lot numbers and a statement of the total number of lots and parcels.
 - 9. Sanitary and/or storm sewers (and other drainage facilities), with the location, size, elevation and material of each indicated, and any proposed connections with existing facilities.
 - 10. Underground natural gas, electrical, telephone, cable TV and any other proposed utility lines and easements for such utilities.
 - 11. Well locations, including test wells required under Section 5:074, along with the following notation: "Any well intended to be utilized for an individual on-lot water supply for any lot shown on this plan shall be installed at the location indicated. Any deviation from this location must have prior approval of the Township".
 - 12. Parks, playgrounds and other areas dedicated or reserved for public use, with any conditions governing such use.
 - 13. Create a required 'legend' so all plans have consistency for ease of viewing.
 - 14. Proposed Easement for all utilities, stormwater pipes, detention facilities, etc.
- T. Topographic data shown in the plan shall comply with the following accuracy standards:

1. Ninety percent (90%) of the elevations determined from contour lines shown in the plans shall have an accuracy with respect to true elevation of one-half (1/2) contour interval and the remaining ten percent (10%) of such elevations shall be accurate within one (1) contour interval.
 2. Spot elevations shall be shown in the plan at high and low points and elsewhere; ninety percent (90%) of all spot elevations shown shall have an accuracy of at least one fourth (1/4) contour interval and the remaining ten percent (10%) shall be accurate within one-half (1/2) contour interval.
 3. Planimetric features shown in the plan shall be accurately positioned as follows:
 - a. outlines of tree masses, stream outlines, and similar features within five (5) feet of true position.
 - b. buildings, drainage structures, and similarly defined features, within two (2) feet of true position, except any feature which is used to define a setback, right-of-way, or street line, within one (1) foot of true position.
- U. Location of soil probe holes and soil percolation test holes as may be required by Section 4:04.
- V. A list of any waivers or modifications requested to the requirements of this Ordinance and any Variances or Special Exceptions granted by the Zoning Hearing Board.
- W. Street addresses for each lot shall be shown on the plan. Addresses shall conform to the requirements of the 911 emergency system and otherwise be consistent with the existing street address system in the Township.
- X. Plan should list any and all federal and state permits that are needed or have been secured for the project.
- 4:025 The Preliminary Plan shall be accompanied by the following supplementary data as applicable:
- A. Typical street cross-section drawing(s) for all proposed streets.
 - B. Tentative profiles along centerline of each proposed street shown on the Preliminary Plan. Such profiles shall show natural and finished grades drawn at a ten (10) to one (1) exaggeration following the scale of the original subdivision plan.
 - C. Profiles shall show all vertical curve data including length, elevations and minimum sight distance as required by Section 5:036. Profiles shall also show all existing and proposed utilities located within the road right-of-way including but not limited to water mains, storm sewer and sanitary sewer lines, with stationing, elevations (inverts and tops), lengths, slopes, material, sizes, etc., and all line crossings of other utilities.
 - D. Detail drawings and/or construction notations for the following, where applicable and at the sole discretion of the Township where deemed necessary by the Township.

1. Drainage swale cross-sections and construction materials.
 2. Pipe bedding materials.
 3. Storm drainage structures, including any detention basin outlet structure and emergency spillway.
 4. Sanitary sewer structures.
 5. Curb and sidewalk details.
 6. Landscaping details.
- E. If the submitted plans do not include all undeveloped adjacent or abutting lands owned by the same landowner or under the control of the same developer, then the Planning Commission may require that a Sketch Plan be submitted at an appropriate scale covering all holdings. The Sketch Plan should include a reasonable future street system to demonstrate that the proposed subdivision provides for the orderly development of any residual lands and/or does not adversely affect their potential development.
- F. Where deemed necessary by the Township, a plan for grading and stormwater management on the tract being subdivided shall be provided by the Applicant. The plan shall show all information required under Section 4:026 and shall meet all design requirements of Section 5:08; nor shall the plan unduly impact or adversely affect potential development of neighboring lands.
- G. Where a plan is required to include stormwater management a report shall be required per Section 5:0810.
- H. Where deemed necessary by the Township, an Erosion and Sedimentation Pollution Control Plan for the proposed development shall be provided by the Applicant. The plan shall provide all information required under Section 4:027 and shall meet all design requirements of Section 5:09.
- I. Preliminary designs of any bridges or culverts which may be required. Such designs shall meet all applicable requirements of the Pennsylvania Departments of Transportation and Environmental Protection; and/or any other agencies having jurisdiction.
- J. A Traffic Impact Study when required by Section 4:028.
- K. A Hydrogeologic Impact Study when required by Section 4:029.
- L. When required, six (6) completed copies of the appropriate Planning Modules for Land Development for submittal to the Pennsylvania Department of Environmental Protection (DEP). The Planning Modules must be reviewed and approved by DEP prior to municipal approval of the Final Plan.
- M. Copies of all applications/plans/reports as submitted to all outside agencies, including and not limited to Penn DOT, PA DEP, etc., for items such as highway occupancy permits, stream crossings, etc.
- N. Review and comment from the local fire chief/marshal on the proposed layout, when deemed necessary by the Township.
- 4:026 Stormwater Management Plan
- A. Stormwater Management Plans shall be prepared in accordance with the design requirements of Section 5:08.

- B. The following information shall be provided on the plans and /or in the calculations:
1. Existing and proposed storm drainage facilities or structures, including detention basins (with depth and capacity), swales, pipes (with sizes and materials), culverts and inlets.
 2. Watershed areas for each drainage structure or swale, and a plan showing their extent.
 3. Locations and widths of any proposed or existing stormwater easements.
 4. Intended design year standards for culverts, bridges, structures and other stormwater facilities.
 5. Locations of all known underground utilities.
 6. Entity proposed to be responsible to maintain/own any detention basin or other facilities to be located outside of public road rights-of-way.
 7. Existing contour lines.
 8. Proposed contour lines for lots, roads and drainage facilities.
 9. Stationing of any storm sewers, corresponding to profile stationing.
 10. Any other information required to be provided by Section 5:08 or otherwise pertinent to review of design or plans.

4:027 Erosion and Sedimentation Pollution Control Plans

- A. Erosion and Sedimentation Pollution Control Plans shall be in accordance with the requirements of Section 5:09.
- B. All proposed facilities and procedures shall comply with the regulations and standards of the County Conservation District and the Pennsylvania Department of Environmental Protection.
- C. The plan shall consist of drawings showing locations and types of all proposed measures along with a narrative describing their function, construction, maintenance and sequence of installation.
- D. In the event of plans that involve single family homes, the requirement for the design and approval of the required Erosion and Sedimentation Pollution Control Plan can be deferred until the actual Building Permit stage. The plans shall contain the following notation: "Erosion and Sedimentation Pollution Control Plans for individual homes shall be designed, submitted, and approved by the Conservation District before the release of any Building Permit."

4:028 Traffic Impact Study

- A. The submittal of a Traffic Impact Study will allow the Township to determine the safety & congestion of impacts of proposed major traffic generating uses.
- B. Applicants will be required to respond with reasonable proposals to resolve the negative impacts that their proposed uses will cause on the public.

- C. The submittal of a Preliminary Plan for any of the following uses may require the completion of a Traffic Impact Study and the submittal of the findings in a written report when deemed necessary by the West Brunswick Township Planning Commission:
1. Residential: Ten (10) or more dwelling units.
 2. Non-Residential: 2,000 sq. ft. or more of retail or commercial space, 5,000 or more sq. ft. of office space, school or institutional space, and 10,000 sq. ft. or more of industrial or warehouse space.
 3. Any non-residential land development occurring within one quarter of a mile of an intersection involving an arterial road or two collector roads.
 4. Whenever the Township determines that a proposed use will generate volumes or types of traffic that could negatively impact upon the existing street system within the Township.
 5. Wherever the Township determines that there is a clear, existing, substantial traffic problem within close proximity of the proposed project which would likely significantly worsened by the proposed project.
 6. Whenever a traffic impact study or other correspondence occurs with PennDOT, the Township shall be copied.
- D. The costs of completing the traffic impact study and of review by the Township shall be borne by the applicant.
- E. The Traffic Impact Study shall be prepared by a qualified Professional Traffic Engineer designated or approved by West Brunswick Township with verifiable experience in preparing such studies.
- F. The Traffic Impact Study shall address the following elements for the initial full build out year and the 10 year horizon year:
1. Study Area. The study area for the Traffic Study shall be based on engineering judgment and an understanding of existing traffic conditions at the site and shall represent the area which is likely to be affected by the development. Prior to initiation of the traffic impact study, the applicant's traffic engineer shall meet with the Township Engineer to establish the limits of the area to be studied. The AM peak study period is from 7:00 to 9:00 AM, the PM peak study period is from 4:00 to 6:00 PM, and the SAT peak period is from 11:00 AM to 1:00 PM. The site generated peak is specific to the use. Peak study periods may be adjusted by the Township Engineer as necessary.
 2. Project Description. All traffic impact studies shall include a description of the proposed development, its proposed access and the surrounding street system, its size and location of existing and proposed land uses and dwelling types. If a development is proposed to occur in stages, all stages shall be described and taken into account in the study;

3. Existing Traffic Conditions. The traffic volumes and levels of service during the four peak hour conditions (AM, PM, SAT and site generated) shall be presented for all streets and intersections in the study area for the initial full build out year and the 10 year horizon year. Traffic volumes shall be based upon actual traffic counts that occurred within the two prior years and not upon site estimates. More recent counts may be required should a significant change in traffic occurred after the counts have been taken. Schematic diagrams depicting peak hours(s) traffic volumes and turning movements shall be presented for roadways within the study area. Assessments of the relative balance between roadway volumes and capacities are to be described. The analysis shall be performed for existing conditions for the noted peak periods and hours. The existing roadway geometry, traffic conditions, speed limits, type of intersection control shall also be noted. The type and location for all crash/accident data reported to the police, reportable and non-reportable crash/accidents during the most recent three year period.
4. Expected Traffic Generation. The traffic impact study shall include an estimate of the traffic volumes expected to be generated by the use(s) and any future stages during the four peak hour conditions. Such estimates shall be based upon the latest published estimates of the Institute of Transportation Engineers Trip Generation Handbook, or its successor entity unless a local study of three similarly sites is reviewed and approved by the Township Engineer and the Township Planning Commission. The traffic impact study preparer shall clearly indicate the methods and assumptions utilized to forecast future traffic volumes. Schematic diagrams similar to those required for existing conditions, shall depict future traffic volumes.
5. Projected Effects. The ability of the existing roadway system to accommodate the future traffic shall be described. The study shall take into account not only the proposed use by the applicant, but also other uses that have received buildings permits or preliminary subdivision or land development approval from West Brunswick Township. Future levels of service shall be determined for all affected streets and intersections in the study area for the initial full build out year and the 10 year horizon year. The study area shall include a trip distribution for the proposed generated traffic. Assessments of relative balance between roadway volumes and capacities shall be performed for future conditions.
6. Levels of Service. The traffic impact study shall use the description of the levels of service (A, B, C, D, E, and F) for streets and intersections established by the US Department of Transportation. When level of service F is encountered, the traffic study preparer is to include the seconds of delay as well. Included shall be a description of typical operating conditions at each level of service.
7. Queuing Distances. The traffic impact study shall include queuing distances for each movement in the base and projected conditions at all study area intersections.

8. Signal Warrants. All intersections in the traffic impact study area shall be studied to determine whether or not a traffic signal is warranted by state and federal criteria.
9. Recommended Improvements. In the event that the proposed project creates a drop(s) in the level of service, the traffic impact study preparer shall propose improvements to bring the level of service back to the base condition. A description shall be included in this section along with a plan, should any physical improvements be recommended. These proposals shall not include committed project(s) by the Township and State. The following information shall be included:
 1. Level of Service analysis for the intersection(s) which demonstrate the anticipated results of making these improvements.
 2. Queuing results for the intersection(s) which demonstrate that the base queuing distances have not been exceeded when comparing to the available storage distances.
10. Conclusion. The last section of the report shall be a clear and concise description of the traffic impact study findings.

4:029 Hydrogeologic Impact Study

- A. Based upon the recommendation of the Township Engineer, the Planning Commission may require an applicant to provide a study to determine whether a proposed project would have a significant negative impact upon groundwater quality or quantity.
- B. A Hydrogeologic Study may be required for any of the following uses:
 1. Residential: six (6) or more dwelling units.
 2. Whenever the Township determines that a proposed use could negatively impact upon groundwater quality or quantity.
- C. The study shall be completed by a qualified Registered Professional Engineer or hydrogeologist.
- D. The study shall include the following:
 1. A map showing the location of the site and proposed on-site sewage disposal systems and wells. Narrative descriptions of the types of these systems shall also be furnished.
 2. A description of the geologic conditions on and around the site, including factors which would affect the groundwater recharge rate and the degree of groundwater renovation. Site geology, including stratigraphy, structure and soils shall be analyzed. Hydrogeology, including aquifer characteristics, groundwater movement, local water use, aquifer yield and water quality shall be analyzed. Groundwater impacts, including impact from on-lot septic systems, availability of groundwater, well interference, water quality, and yield availability shall be analyzed.

3. Results of any test wells required under Section 5:074, including quality of ground water and flow rate.
4. A map and narrative description of the area that will be affected by the proposed use of on-lot wells and sewage disposal systems determined from the surface topography and known geologic conditions. The analysis shall describe anticipated groundwater quality/quantity impacts upon areas located downgradient and/or along any geologic strike or fault. These anticipated impacts shall also consider existing and potential land uses located within the affected area.
5. Should it be determined that the proposed use(s) would result in a degradation of groundwater quality, or will adversely impact the potential groundwater use at nearby properties, the study shall present measures that will be employed to prevent this.

SECTION 4:03 FINAL PLANS

- 4:031 The scale and sheet size of the Final Plan of a Subdivision shall be as required in Sections 4:021 and 4:022 for Preliminary Plans.
- 4:032 If the Final Plan requires more than one (1) sheet, a key diagram showing relative locations of the several sections shall be drawn on each sheet.
- 4:033 The Final Plan shall show all information required to be shown on Preliminary Plans as listed under Section 4:02 and shall show the following:
- A. Name and address of the record owner (and Subdivider) of the tract, and the source(s) of title to the land being subdivided, including the date and name of the grantor(s), as shown on the records of the County Recorder of Deeds.
 - B. Name, address, original signature and seal of the Professional Land Surveyor responsible for the plan, or any part thereof.
 - C. A key map for the purpose of locating the property being subdivided, drawn to a scale of one (1) inch equals eight hundred (800) feet and showing the relation of the property, differentiated by tone or pattern, to adjoining property and to all streets, roads and municipal and zoning district boundaries and watercourses within one thousand (1000) feet of the subdivision. In addition, a scale and north arrow shall be indicated.
 - D. The total tract boundaries of the area being subdivided with accurate dimensions in feet and hundredths of a foot and bearings in degrees, minutes and seconds. These boundaries shall be determined by accurate survey in the field, which shall be balanced and closed with an error of closure not to exceed one (1) foot in ten thousand (10,000) feet; provided, however, that the boundaries of adjoining additional unplatted land in excess of ten (10) acres are not required to be based upon field survey with a positional closure of a "Class I" survey as established by the Pennsylvania Society of Land Surveyors, and may be shown from deed information. The location and elevation, if established, of all boundary line (perimeter) monuments shall be indicated, along with a statement of the total area of the property being subdivided.
 - E. The name, number, cartway width, existing and proposed right-of-way widths for all existing and proposed public streets.

- F. The following data for the cartway edges (curb lines) and right-of-way lines of all proposed streets, and for the ultimate right-of-way lines of all existing streets within the property.
 - 1. The lengths of all straight lines in feet and hundredths of a foot.
 - 2. All curve data (central angle, radius, arc length) in degrees, minutes and seconds or feet and hundredths of a foot.
- G. All straight lot lines with dimensions in feet and hundredths of a foot and bearings in degrees, minutes and seconds. Curved lot lines shall have central angles, radii and arc lengths in degrees, minutes and seconds or feet and hundredths of a foot. Each lot shall be balanced to an accuracy of one (1) foot in twenty-five thousand (25,000) feet.
- H. Street addresses for each lot shall be shown on the plan. Addresses shall conform to the requirements of the 911 emergency system and otherwise be consistent with the existing street address system in the Township.
- I. A statement of the intended use of all non-residential lots, with reference to restrictions of any type which exist or will exist as covenants in the deed for the lots contained in the Subdivision and, if recorded, including the book and page number in the County Deed Book.
- J. Building reserve (setback) line, for all yards, and the proposed placement of each building.
- K. The location (and elevation, if established) of all existing and proposed street monuments as required by Section 6:038.
- L. All easements or rights-of-way where provided for or owned by public services and any limitations on such easements or rights-of-way. Such easements and rights-of-way shall be accurately identified and shown on the plan with sufficient information to accurately and completely delineate them upon the ground.
- M. A list of any waivers or modifications requested to the requirements of this Ordinance and any Variances or Special Exceptions granted by the Zoning Hearing Board.
- N. If the subdivision proposes new street or driveway intersections with a State Route, or proposes improvements within the right-of-way of a State Route, the Highway Occupancy Permit number(s) shall be indicated on the plan. The Township should be provided with a copy of all such correspondence, applications, supplemental information, and permits.
- O. Where appropriate, a statement requiring that individual lot owners obtain approval for erosion and sedimentation pollution control prior to obtaining any building permits or performing any earth-moving on the site.
- P. A certification of ownership, acknowledgment of plan and offer of dedication shall be lettered on the plan, using the form specified in Appendix B and shall be duly acknowledged and signed by the owner(s) of the property before an officer authorized to take acknowledgment of deeds.
- Q. Certificates of approval of the plan by the Township Board of Supervisors and the Township Planning Commission (Appendix B) should be visible when the plan is folded.

- R. A blank space measuring three and one-half by five (3-1/2 x 5) inches square shall be left, preferably adjacent to the Township certification, in which the appropriate stamp of the County Planning Commission may be applied.
- S. A blank space measuring three (3) inches square shall be left along the lower edge of the sheet, in order that the Recorder of Deeds may acknowledge receipt and recording of the plan when it is presented.
- T. All information in the format required by the Schuylkill County Recorder of Deeds. This information is available from that office and the office of the Schuylkill County Planning Commission.
- U. The first sheet in the plan set shall clearly identify the plan sheets that are to be recorded. The Township shall determine which sheets shall be recorded.
- V. For annexation plans, the plan must note that deeds for the new properties shall be submitted to the Township within 60 days of plan recordation.

4:034 The Final Plan shall be accompanied by the following Supplementary data, where applicable:

- A. Typical street cross-section drawing(s) for all proposed streets.
- B. Profiles along centerlines and cross sections of each proposed street shown on the Final Plan. The profiles shall show all information required for Preliminary Plans under Section 4:025 and shall be drawn to the scale specified in that Section. Both profiles and cross sections shall show natural and finished grades along both cartway edges of each street.
- C. All offers of dedication, and covenants governing the reservation and maintenance of undedicated open space, which shall be reviewed by the Township Solicitor.
- D. Such private deed restrictions, including building setback lines, as may be imposed upon the property as a condition of sale, together with a statement of any restrictions previously imposed which may affect the title to the land being subdivided.
- E. Letter of adequacy from the County Conservation District for the proposed erosion and sedimentation pollution control plan, and a copy of the NPDES permit, where required.
- F. Copies of all required permits from the Pennsylvania Department of Environmental Protection, including but not limited to wetland and flood plain encroachments, water-course obstructions and dam permits, shall be listed on the plan and copies provided to the Township.
- G. Landscape plan, when required by the Township, showing the number, location, size and species of all trees, shrubbery and vegetation that will be planted.
- H. Final designs of any bridges or culverts which may be required. Such designs shall meet all applicable requirements of this ordinance, the Pennsylvania Department of Environmental Protection, the Pennsylvania Department of Transportation and/or other state or federal agencies which may have jurisdiction. All such designs shall be approved by the appropriate agency prior to municipal approval.

- I. Development Agreement and Performance Guarantee in accordance with the requirements of Article VIII.
- J. Copies of draft legal descriptions for all new lots, annexations, etc. must be submitted for review and comment.

SECTION 4:04 SOIL PERCOLATION TEST REQUIREMENTS

- 4:041 Soil probes and percolation tests shall be performed for both a primary and an alternate sewage disposal system site on each lot of all subdivisions wherein buildings at the time of construction will not be connected to an active public or active community sanitary sewer disposal system.
- 4:042 Soil descriptions and percolation tests shall be performed in accordance with the procedures and requirements of the Pennsylvania Department of Environmental Protection, as amended.
- 4:043 The results of the test shall be recorded on the appropriate DEP form and shall be submitted with the Preliminary Plan.
- 4:044 The soil percolation tests must be performed at the exact location of the proposed drain field. The test holes must be spaced evenly throughout the area of the drain field.

ARTICLE V - DESIGN STANDARDS

SECTION 5:01 APPLICATION

- 5:011 The standards and requirements contained in Articles V and VI are intended as the minimum for the promotion of the public health, safety and welfare, and shall be applied as such by the Township Planning Commission and the Township Supervisors in reviewing all subdivision plans.
- 5:012 Whenever other Township regulations impose more restrictive standards and requirements than those contained herein, such other regulations shall prevail; otherwise, the standards and requirements of these regulations shall apply.

SECTION 5:02 GENERAL STANDARDS

- 5:021 Land shall be suited to the purpose for which it is intended to be subdivided or developed, as determined by Township ordinances, Township Supervisors, or any other applicable regulatory agencies.
- 5:022 Land subject to hazards to life, health or property (such as open quarries, limestone solution channels, unconsolidated fill, floods, vacant buildings, trash, miscellaneous debris, buildings within rights-of-way, excessive erosion, unsafe water supply, or other causes) shall not be subdivided for building purposes unless such hazards have been eliminated or unless the subdivision plan shall show adequate safeguards against them, which shall be approved by the appropriate regulatory agency and the Township.
- 5:023 The subdivision or land development shall be designed in consideration of any applicable provisions of the Township Comprehensive Plan.
- 5:024 All aspects of the proposed subdivision or land development shall conform to, and comply with the Township Zoning Ordinance and all other Township ordinances and specifications, and all state and federal laws and regulations.
- 5:025 No subdivision or land development shall occur in such a way that would significantly threaten the public health and safety, including hazards of toxic substances, traffic hazards, explosive hazards and fire hazards. The Township may require that structures, material, or other features that are fire or safety hazards be removed or made safe, at the discretion of the Township, prior to Final Plan approval.
- 5:026 Land with non-conforming uses shall not be subdivided.
- 5:027 Approval of plans and specifications provided within this Ordinance shall be of equal force and effect. In the case of any discrepancy between the plans and these specifications, the decision of the Township, or its authorized representative shall be final and conclusive as to which is preferred.

SECTION 5:03 STREETS

- 5:031 General Standards
 - A. All proposed subdivisions and land developments shall have adequate and safe access to the public street system.
 - B. Proposed streets shall be adjusted to the contour of the land to produce usable lots and streets of reasonable gradient.

- C. The location and width of all streets shall conform to the Township Official Plan, Comprehension Plans, or Road Classification Plan or to such parts thereof as may have been adopted by the Township.
- D. A subdivision or land development and its street pattern shall be coordinated with existing or proposed nearby developments or neighborhoods to help develop the area harmoniously and to help prevent conflicts between a neighboring development. The proposed street system shall extend existing or recorded streets at the same width, but in no case less than the required minimum width.
- E. Where, in the opinion of the Township Planning Commission, it is desirable to provide street access to adjoining property, proposed streets shall be extended to the boundary line of the tract being subdivided to eventually provide for normal circulation of traffic within the vicinity.
- F. Where a subdivision abuts an existing street of inadequate width or alignment, the Township may require the dedication of land sufficient to widen the street or correct the alignment.
- G. Private streets shall be designed and built to the standards found in this Ordinance.
- H. Where a proposed subdivision or land development is of sufficient size to warrant an interior circulation system, a clear hierarchy of streets shall be designed and established.
- I. Proposed streets shall be laid out to avoid environmentally sensitive areas such as flood plains, wetlands, sinkholes and steep slopes.
- J. New half or partial streets shall be prohibited.
- K. When internal streets or roads serve a lot in a subdivision, access to that lot must be from the internal street or road, unless approved by the Township Supervisors.

5:032 Loop Minor Streets

- A. Where practical, minor streets shall be designed as "loop minor streets" so that all abutting lots shall have two directions of access.
- B. In areas where site topography and/or tract configuration hinder the design of "loop minor streets", the Township may allow the use of cul-de-sac streets. The number of such cul-de-sac streets within a subdivision shall be limited to that necessary to serve the areas having the topographic or tract restrictions. All cul-de-sac streets shall meet the design requirements of Section 5:039.

5:033 Street Widths

- A. Street right of way and cartway (pavement) widths shall be as shown on the "official plans" or Comprehensive Plan, or if not shown on such plans, shall be as follows:

| <u>Street Type:</u> | <u>Right of Ways Width (in feet)</u> | <u>Cartway Width (in feet)</u> |
|-------------------------------------|--|------------------------------------|
| Local Street | 50 | 20 |
| Minor Collector Street | 60 | 30 |
| Major Collector Street | (See note 1) | (See note 1) |
| Cul-De-Sac Street | 50 | 20 |
| Cul-De-Sac Turn-around (See note 2) | 60 | 50 |

Notes:

1. As specified in the "official plans", or Comprehensive Plan, or as determined by the Township.
2. Cul-De-Sac Turn-around's shall have a centered unpaved island with a twenty-five (25) foot radius. The island shall be landscaped in accordance with Section 604. The island may be utilized to manage stormwater runoff.
3. When a tract to be subdivided or developed abuts the legal right of way of a state highway, additional right of way may be required as determined by the Pennsylvania Department of Transportation.
4. Additional right of way and cartway widths may be required by the Township for the purpose of promoting the public safety and convenience.
5. If streets are curbed, two (2) foot curb offsets shall be provided at each cartway edge.
6. In the event on-street parking is required or desired, an additional 8' of pavement width shall be provided to the minimum cartway width listed.

5:034 Street Grades

- A. There shall be a minimum centerline grade of one (1) percent.
- B. Centerline grades shall not exceed the following:
 1. Local Streets: ten (10) percent.
 2. Minor Collector Streets: six (6) percent.
 3. Major Collector Streets: five (5) percent.
 4. Cul-De-Sac Streets: eight (8) percent.

5:035 Horizontal Curves

- A. Whenever street lines are deflected in excess of two (2) degrees, connection shall be made by horizontal curves.
- B. To ensure adequate sight distance, minimum centerline radii for horizontal curves shall be as follows:
 1. Local and Cul-De-Sac Streets: one-hundred fifty (150) feet.
 2. Minor Collector Streets: three-hundred (300) feet.
 3. Major Collector Streets: five-hundred (500) feet.
- C. A tangent of at least one-hundred (100) feet shall be introduced between all horizontal curves on minor collector and major collector streets.
- D. To the greatest extent possible, combinations of the minimum radius and the maximum grade shall be avoided.
- E. A tangent of at least one-hundred (100) feet, measured from edge of cartway, shall be required between a horizontal curve and a street intersection where one of the intersecting streets is a arterial, minor collector, or a major collector street.

5:036 Vertical Curves

- A. Vertical curves shall be designed to the following minimum stopping sight distances (SSD) and head light sight distances (HSD).
 - 1. Local and Cul-De-Sac Streets: two-hundred (200) feet.
 - 2. Minor Collector Streets: three-hundred (300) feet.
 - 3. Major Collector Streets: four-hundred (400) feet.
- B. Stopping sight distance shall be measured from a point three and one-half (3.5) feet above the road surface to a point six (6) inches above the road surface. Stopping sight distance and headlight sight distance shall be based upon standards of the American Association of State Highway and Transportation Officials (AASHTO).
- C. Vertical curves shall be used at all changes in grade exceeding one (1) percent.

5:037 Intersections

- A. Streets shall intersect as nearly as possible at right angles, and no street shall intersect another at an angle of less than seventy-five (75) degrees or more than one-hundred five (105) degrees.
- B. No more than two (2) streets shall intersect at the same point and no driveway may intersect a street or road within eighty (80) feet of an intersection with another street or road.
- C. Streets intersecting another street shall either intersect directly opposite each other, or shall be separated by at least one-hundred fifty (150) feet between centerlines, measured along the centerline of the street being intersected.
- D. Intersections shall be approached on all sides by a straight leveling area the grade of which shall not exceed five (5) percent within fifty (50) feet of the intersection of the nearest right of way lines. The five (5) percent grade shall be provided on the cartway surface, not the tangent line of a vertical curve.
- E. Intersections with arterial and major collector streets shall be located not less than one thousand (1000) feet apart, measured between centerline, along the centerline of the arterial or major collector street.
- F. Street curb or cartway edge intersections shall be rounded by a tangential arc having a minimum radius of:
 - 1. Twenty (20) feet for all intersections involving only local streets.
 - 2. Thirty (30) feet for all intersections involving a minor collector street.
 - 3. Forty (40) feet for all intersections involving a major collector street.
 - 4. Street right-of-way lines shall be parallel to (concentric with) curb or cartway edge arcs at intersections.

5:038 Sight Distance at Intersections

- A. New street intersections of a subdivision or land development shall be designed to meet Penn DOT standards for sight distance (Appendix C).
- B. Wherever a portion of the line of such triangles occurs behind (i.e., from the street) the building setback line, such portion shall be shown on the Final Plan of the subdivision, and shall be considered a building setback line.

- C. Clear sight triangles shall be located so that they do not extend onto adjoining property not owned by the subdivider, unless the written approval of the property owner has been demonstrated.

5:039 Cul-De-Sac Streets

- A. Dead-end streets are prohibited unless designed as cul-de-sac streets or designed for future access to adjoining properties.
- B. Any dead-end street for access to an adjoining property or because of authorized stage development shall be provided with a permanent, fully-paved turnaround, within the subdivision, and the use of such turnaround shall be guaranteed to the public.
- C. The length of the cul-de-sac street shall be measured from the edge of the cartway of an intersecting street to the center of the turnaround of the cul-de-sac. The minimum length of a cul-de-sac street shall be two hundred fifty (250) feet.
- D. The maximum length of a cul-de-sac street shall be eight hundred (800) feet.
- E. Unless further extension is clearly impractical or undesirable, the turnaround right of way shall be placed adjacent to the tract boundary with sufficient additional width provided along the boundary line to permit extension of the street at full width.
- F. All cul-de-sac streets shall be provided at the closed end with a fully paved turnaround with a radius to the pavement edge or curb line of fifty (50) feet, and the radius of the right of way line shall be sixty (60) feet. The sidewalk area within the right of way shall conform to both the straight and curved edges of cartway.
- G. The centerline grade of a cul-de-sac street shall not exceed eight percent (8%) and the grade across the turnaround shall not exceed five percent (5%).
- H. A maximum of twenty-four (24) housing units shall be permitted on any single entrance portion (cul-de-sac) within a development.
- I. Cul-De-Sac streets shall not be intersected by other streets except at the open end and shall not intersect another cul-de-sac street.
- J. Cul-De-Sacs shall be centered on the access street or offset to the left. Right offsets shall only be used with approval of the Township Planning Commission.

5:0310 Street Names

- A. Proposed streets which are obviously in alignment with others already existing and named, shall bear the names of the existing streets.
- B. In no case shall the name of a proposed street duplicate an existing street name in the Township and in the postal district, irrespective of the use of the suffix street, road, avenue, boulevard, drive, way, place, court, lane, etc.
- C. All street names shall be subject to the approval of the Post Office, County Emergency Services, and the Township.

SECTION 5:04 BLOCKS

5:041 Layout

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

- A. Provision of adequate sites for buildings of the type proposed.
- B. Zoning requirements.

- C. Topography.
- D. Requirements for safe and convenient vehicular and pedestrian circulation, including the reduction of intersections with major streets.

5:042 Length

- A. Blocks shall have a maximum length of two thousand six-hundred (2,600) feet and a minimum length of one thousand five-hundred (1,500) feet.
- B. In the design of blocks longer than two thousand (2,000) feet, special consideration shall be given to the requirements of satisfactory fire protection and will be subject to approval by the regional fire department and Township.

5:043 Crosswalks

- A. Crosswalks may be required wherever necessary to facilitate pedestrian circulation and to give access to community facilities, as well as within blocks.
- B. Such crosswalks shall have a width not less than ten (10) feet and a paved sidewalk with a width not less than four (4) feet.

5:044 Depth

Residential blocks shall be of sufficient depth to accommodate two (2) tiers of lots, except where reverse frontage lots are required along major streets, or property, in which case the Township may approve a single tier of lots.

5:045 Commercial and Industrial Blocks

Blocks in commercial and industrial areas may vary from the elements of design detailed above if required by the nature of the use. In all cases, however, adequate provisions shall be made for off-street parking and loading areas as well as for traffic circulation and parking for employees and customers.

SECTION 5:05 LOTS AND PARCELS

5:051 General Standards

- A. The size, shape and orientation of lots shall be appropriate for the type of development and use intended, and in accordance with the Township Zoning Ordinance.
- B. Side lot lines shall abut and be approximately at right angles to straight streets and on radial lines to curved streets, unless otherwise approved by the Township. Pointed or very irregularly shaped lots shall be avoided.
- C. Lot lines shall follow municipal boundaries rather than cross them, in order to avoid jurisdictional problems.
- D. The depth of residential lots shall be not more than two and one-half (2-1/2) times their widths nor less than (1) one times their width.
- E. The depth and width of parcels intended for non-residential uses shall be adequate for the use proposed and sufficient to provide adequate space for on-site parking, loading and unloading, setbacks, landscaping, etc.
- F. If, after subdividing, there exists remnants of land, they shall be either:
 - 1. Incorporated into existing or proposed lots.
 - 2. Legally dedicated to public use, if acceptable to the Township.

- G. Where extra width has been offered to be dedicated for widening of existing streets, lots shall begin at such extra width lines, and all setbacks shall be measured from such lines.

5:052 Lot Frontage

- A. All lots shall front on an existing private street or public street.
- B. Double or reverse frontage lots shall be avoided except where needed to avoid direct vehicular access onto major streets or to overcome specific disadvantages of topography or orientation.
- C. All residential reverse frontage lots shall have rear yards with a minimum depth of seventy-five (75) feet, measured in the shortest distance from the proposed dwelling unit to the ultimate right of way line and shall, within such rear yard and immediately adjacent to the right of way, have a planting screen easement of at least ten (10) feet in width, across which there shall be no right of access. The planting screen within this easement shall be included in the plan and subject to approval by the Planning Commission.

5:053 Driveways and Off-Street Parking

- A. Each proposed dwelling unit within a subdivision shall be provided with at least three (3) off-street parking spaces, over-night on-street parking shall be prohibited.
 - 1. All driveways shall be constructed in conformance with the most current Driveway Ordinance of West Brunswick Township.
 - 2. The grade of any proposed parking area shall not exceed five percent (5%).
 - 3. Common driveways serving more than one single family detached dwelling shall be prohibited.
 - 4. Driveways providing access to lots within a subdivision shall gain access from proposed "internal" streets rather than existing public streets along the outer boundary of the subdivision.
 - 5. Driveways shall meet Penn DOT standards for sight distance.
 - 6. In cases where the required sight distance can only be obtained with the removal of certain features (earthen banks, trees, stumps, and other obstructions), the Township will require that these items be removed (and the corresponding required sight distance be provided) before the plan is approved.

SECTION 5:06 SANITARY SEWAGE DISPOSAL

5:061 General Standards

- A. All subdivisions and land developments within West Brunswick Township shall be served with an adequate sewage disposal system (either community or on-lot) that conforms to the standards and requirements of the Pennsylvania Department of Environmental Protection.
- B. The developer shall provide the most desirable method of sanitary sewage disposal utilizing the best available technology to achieve the maximum level of treatment resulting in the most pollution free and environmentally safe discharge standards. The selected method shall conform to the existing physical site conditions.
- C. The installation of all public or community sanitary sewage disposal systems shall be the responsibility of the developer.

- D. The installation of all on-lot sanitary sewage disposal systems shall be the responsibility of the lot owner. The Township shall require location of a suitable alternate on-lot sewage disposal system on each lot.

5:062 Public Sewage Disposal Systems

- A. Any building or use within a subdivision or land development that generates wastewater and that in the determination of the Township Supervisors could reasonably connect into a public sewage disposal system shall be required to connect into that system. The applicant shall be responsible to pay all expenses that are necessary for such connection.
- B. Where public sewer services are accessible, the developer shall construct a sanitary sewage collection and conveyance system in order to provide adequate sanitary sewer service to each lot or dwelling unit within the subdivision or land development.
- C. The entire system shall be designed in accordance with all applicable standards and specifications established by the Township Supervisors and/or the appropriate municipal entity.
- D. The applicant shall comply with all procedural permit requirements established by the Pennsylvania Department of Environmental Protection (DEP). The applicant shall complete and submit to the Township the necessary components of the DEP Planning Module(s) for Land Development.
- E. If public sewage service is not accessible to an approved subdivision or land development, but is planned to be accessible within five (5) years of final approval, the developer shall install approved capped sewer collection lines within the limits of the subdivision or land development, in addition to approved on-lot sewage facilities. Such sewer lines shall be capped at the limits of the subdivision or land development and the lateral shall be capped at the street right-of-way,
- F. The developer shall warrant the sewage system for a period of five (5) years from the date of final inspection approval, covering both materials and workmanship. If repairs are required during the warrantee period, the developer will have the option to perform the corrective action or reimburse West Brunswick Township for corrections done by the Township.
- G. All plans and reports shall be dated and bear the seal, and signature, of the Registered Professional Engineer responsible for the design of the sewer system and related components (pump stations, etc.).

5:063 Private Sewage Disposal Systems (Community or On-Lot)

- A. Where public sewage services are either unavailable or inaccessible, the developer shall provide a sanitary sewage disposal system on either an individual or community basis in accordance with the standards and provisions established by the Township and/or Pennsylvania Department of Environmental Protection.
- B. Permits are required for the design, construction, installation, alteration, replacement, repair and/or extension of any community sewage disposal system or individual on-lot sewage disposal system. All such permits for private sewage disposal systems shall be subject to the approval of the Pennsylvania Department of Environmental Protection and/or the Township Sewage Enforcement Officer.

- C. The permit for a community sewage disposal system or an individual sewage disposal system shall not become effective until the installation is completed to the satisfaction of the Township Sewage Enforcement Officer.
- D. The use of an on-lot sewage disposal system will require the submittal of soil percolation test results at the Preliminary Plan stage as required by Section 4:04.
- E. In the case of a community sewage disposal system, the applicant shall provide a proposal for financially securing the operation and maintenance of the subject facility. The time period and the amount of financial security shall be as determined by the Township, based upon the recommendations of the Township Engineer, but shall be no less than a period of ten (10) years worth of anticipated maintenance and operations costs. Such security shall be posted by the applicant prior to issuance of the permit and operation or use of the subject facility.
- F. The use of an on-lot sewage disposal system shall require the location of a suitable alternate sewage disposal system on each lot. A community in-ground system shall also require a suitable back-up alternate disposal system.
- G. All plans and reports shall bear the impression seal, signature, and date of the Registered Professional Engineer responsible for the design of the sewer system and related components (pump stations, etc.).

SECTION 5:07 WATER SUPPLY and FIRE PROTECTION

5:071 General Standards

- A. All subdivisions and land developments shall be served with an adequate water supply system (either public, community or on-lot) that will meet the standards and requirements of the Pennsylvania Department of Environmental Protection. New or extended public water systems are required if feasible.
- B. When no public water supply is either available or accessible, adequate water supply shall be furnished by the landowner on either an individual lot basis or a community well supply system.
- C. All subdivisions or land developments ten acres or larger with a density greater than two (2) equivalent dwelling units (EDU) per acre shall be required to provide fire protection as deemed necessary by the Township. All distribution systems for community or public water systems shall be equipped with adequately sized mains and the appurtenances required to provide fire protection.
- D. Planned residential developments, single family cluster developments, mobile home parks and developments containing multifamily dwelling units, single family semi-detached dwelling units or two-family detached dwelling units shall be provided with a public or community water system.

- E. If water is to be provided by means other than by private wells owned and maintained by the individual owners of lots within the subdivision or development, applicants shall present evidence to the Supervisors and/or the Planning Commission that the subdivision or development is to be supplied by a certificated public utility, a bona fide cooperative association of lot owners, or by a municipal corporation, authority or utility. A copy of a Certificate of Public Convenience from the Pennsylvania Public Utility Commission or an application for such certificate, a cooperative agreement or a commitment or agreement to serve the area in question, whichever is appropriate, shall be deemed acceptable evidence.

5:072 Public Water Supply

- A. Any building or use within a subdivision or land development that will require a water supply and that in the determination of the Township Supervisors could reasonably connect into a public water supply system shall be required to connect into that system. The applicant shall be responsible to pay all expenses that are necessary for such connection.
- B. Subdivisions and land developments to be served by existing public water supplies shall be provided with water distribution facilities designed in accordance with the regulations of the Pennsylvania Department of Environmental Protection (DEP), the standards and specifications of the public water supplier, and or the authority.
- C. The public or community water distribution facilities shall be designed to provide fire protection at a minimum flow rate of five hundred (500) gpm with a minimum residual pressure at twenty (20) psi. The above is applicable to single family or similar residential subdivisions. Multi-family, commercial, or industrial subdivisions shall require greater flow rates commensurate with guidelines of agency having jurisdiction.
- D. The subdivider or developer shall provide the Township with a copy of a letter of intent from the public water supplier prior to Preliminary Plan approval and with a copy of an approved Water Service Agreement prior to Final Plan approval.
- E. All plans and reports shall bear the seal, and signature, (with) date of the Registered Professional Engineer responsible for the design of the water system and related components (storage tanks, foundations, booster stations, etc.).

5:073 Community Water Supply

- A. Community water systems shall be developed and maintained so as to meet the established standards and specifications of the Pennsylvania Department of Environmental Protection, the Environmental Protection Agency, the Delaware River Basin Commission and/or the Public Utility Commission (P.U.C.). At a minimum the community water supply shall be designed in accordance with the DEP (Division of Water Supplies) Public Water Supply Manual latest revision. All community water supply systems shall be organized in such a manner as to fall within the jurisdiction of the Pennsylvania Public Water Commission.

- B. Whenever a community on-site water supply system is proposed, the developer shall engage the services of a hydrogeologist to make a determination as to the feasibility and location of such groundwater withdrawals, the availability of the groundwater supply through geological study and, the submission of his report of findings to the Township for review. The Township shall further determine whether a review and/or approval of the proposed groundwater withdrawals will be required by any of the agencies listed under Section A above.
- C. Where a community water supply system is proposed to serve a subdivision or land development, a feasible water supply and distribution system shall be proposed, before Preliminary Plan approval of the subdivision or land development. Detailed plans, specifications, supply and demand shall be submitted to and approved by the municipal engineer before final approval. A permit for the system must be granted by DEP and any other agency having jurisdiction over the work before final approval.
- D. The water source shall be capable of supplying one hundred fifty (150) percent of the average daily demand based on eighty (80) gallons per day (GPD) per person and/or three hundred (300) GPD per dwelling unit, for the design population of the development or the service area.
- E. In the case of water service to nonresidential developments, the applicant shall demonstrate the adequacy to meet the projected demand from the specific project.
- F. The quality of the source shall conform to the water quality requirements of the DEP (Division of Water Supplies) Public Water Supply Manual. Treatment of the water supply shall be done in accordance with requirements set forth in the Public Water Supply Manual.
- G. All plans and reports shall bear the seal, and signature, and (with date) of the Registered Professional Engineer responsible for the design of the water system and related components (storage tanks, foundations, booster stations, etc.).

5:074 On-Lot Water Supply

- A. When no public or private water supply is either available or accessible, adequate water supply shall be furnished by the developer on an individual lot basis.
- B. Where on-lot water supply systems are proposed, the developer shall either install such facilities or shall require (by deed restriction or otherwise) as a condition of the sale of each lot or parcel, that the facilities shall be installed by the purchaser of such lot or parcel at the time that a principal building is constructed. A Township well drilling permit is required for each well.
- C. Each lot to be served by an individual on-lot water supply shall be of a size and shape to permit the safe location for each well. No proposed wells shall be located within one hundred (100) feet of any existing or proposed on-lot sewage disposal system; within fifty (50) feet of the centerline of any street or road, or property line; or within any other limitations as set forth in other Township Ordinances.

- D. The applicant shall provide at least one (1) test well for each ten (10) proposed dwelling units. The yield of each test well shall be no less than eight (8) gallons per minute per dwelling unit. A sample shall be obtained from each test well and tested to ensure that the well is free of bacteriological contaminants; and each shall comply with all DEP and EPA restrictions for minerals and metals. The Planning Commission shall be provided with documentation from a licensed well driller verifying the yield of each test well and from a state certified laboratory verifying that the sample(s) are potable.
- E. The applicant may be required to submit a study prepared by a qualified professional certifying that the proposed individual wells will be able to supply each lot with a dependable water supply and that the proposed wells will not adversely affect the groundwater table or existing wells near the project site. The study shall examine the possibility of contamination to the proposed wells due to existing environmental factors.
- F. The installation of a well to be utilized for an individual on-lot water supply shall be at the location shown on the approved subdivision or land development plan. Any deviation from this location must have prior approval of the Township.

5:075 Fire Hydrants

- A. All subdivisions and land developments that are to be serviced by a public or community water supply system shall provide fire hydrants which are compatible with the hose couplings used by the local Fire Department.
- B. Fire hydrants shall be located no farther than six hundred (600) feet apart, as measured along the centerline of each road. All residential dwelling units and non-residential principal buildings shall be located no farther than four hundred (400) feet from an active fire hydrant.
- C. Fire hydrants shall be located in a manner to provide complete accessibility and so that possibility of damage from vehicles or injury to pedestrians will be minimized.
- D. The type and location of all required fire hydrants are subject to the review and approval of the Township, and the public water supply company and comments from the regional fire company.
- E. All subdivisions and land developments that contain seven (7) or more lots without public or community water supplies shall provide fire-fighting cisterns approved by the Fire Department with a minimum storage capacity of 10,000 gallons. The actual storage capacity will be determined by the Fire Department and other Township authorities as required. Access to the cistern for repair and maintenance shall be guaranteed by easement. Cisterns should be placed to take advantage of any natural conditions which would maintain the necessary water levels.
All subdivision and land developments ten (10) acres or larger that contain two (2) or more equivalent dwelling units per acre which shall not be served by public or community water supplies shall provide dry hydrants connected to a water supply approved by the Township Engineer and/or Township/local Fire Department and shall provide a minimum storage capacity of ten thousand (10,000) gallons. Access to the dry hydrant for use, repair and maintenance shall be guaranteed by easement. Dry hydrants should be placed to take advantage of any natural conditions which would maintain the necessary water levels. The design must provide for all-weather accessibility by fire apparatus.

- F. Notwithstanding the above, all subdivisions and land developments ten (10) acres or larger with a density of two (2) or more equivalent dwelling units per acre shall be referred to the regional fire company for comments to be considered by the Township in Preliminary Plan review.

SECTION 5:08 STORMWATER MANAGEMENT

- 5:081 The management of stormwater on the site including discharges from the site both during and upon completion of the disturbances associated with the proposed subdivision or land development, shall be accomplished in accordance with the standards and criteria of this section, except if other ordinances or regulatory rules require more stringent controls.
- 5:082 Stormwater management shall be designed and constructed so as to protect the quality of groundwater and surface water runoff from degradation due to the development, as well as ensuring that any increases in the volume of stormwater runoff are managed so as to avoid or mitigate effects upon downstream properties, swales, streams, or drainage facilities.
- 5:083 In addition, the stormwater management design shall provide for adequate drainage facilities, whether existing natural or man-made features, or new facilities to be constructed by the developer. To be adequate, drainage facilities and grading (as a minimum) shall:
 - A. Prevent flooding of any new building or the aggravation of flooding of an existing building due to run-off events of up to one hundred (100) year frequency.
 - B. Prevent overtopping of culverts or bridges from run-off events of up to twenty-five (25) year frequency and flood proof such structures so as to preclude major damages during more intense run-off events.
 - C. Provide swales and/or storm sewers along un-curbed roadways designed to convey run-off events of up to ten (10) year frequency such that flows shall not encroach into the cartway and that swales and road shoulders shall not be eroded.
 - D. Provide catch basins and storm sewers along curbed roadways designed to convey run-off events up to ten (10) year frequency such that the width of flows shall extending from the curbs shall retain a cartway passage, free of gutter flow, having a twelve (12) foot width or greater.
 - E. Provided that, in the case of storm sewers for curbed streets the storm pipe leading from any catch basin shall be adequate to convey the flows of run-off events up to ten (10) year frequency.
 - F. Provided that, catch basins shall be positioned at street intersections to fully drain any low points and to prevent gutter flow from crossing any intersecting street.
 - G. Provided that, in all cases pavements, gutter, and swales shall be designed to fully drain, leaving no significant pools or puddles at the end of a run-off event.
- 5:084 The storm water management design shall observe the following additional criteria:
 - A. Stormwater drainage systems shall be provided in order to permit unimpeded flow along natural watercourses, except as modified by stormwater management facilities or open channels consistent with this Ordinance.

- B. The existing points of concentrated drainage that discharge onto adjacent property shall not be altered without permission of the affected property owner(s) and shall be subject to any applicable discharge criteria specified in this Ordinance.
- C. Areas of existing diffused drainage discharge shall be subject to any applicable discharge criteria in the general direction of existing discharge, whether proposed to be concentrated or maintained as diffused drainage areas, except as otherwise provided by this ordinance. If diffused flow is proposed to be concentrated and discharged onto adjacent property, the Developer must document that adequate downstream conveyance facilities exist to safely transport the concentrated discharge, or otherwise prove that no erosion, sedimentation, flooding or other harm will result from the concentrated discharge.
- D. Where a development site is traversed by watercourses, easements shall be provided conforming to the line of such watercourses. The terms of the easement shall prohibit excavation, the placing of fill or structures, and any alterations that may adversely affect the flow of stormwater within any portion of the easement. Also maintenance, including mowing of vegetation within the easement shall be required, except as approved by the Township Supervisors.
- E. When it can be shown that, due to topographic conditions, natural drainageways on the site cannot adequately provide for drainage, open channels may be constructed conforming substantially to the line and grade of such natural drainageways. Work within natural drainageways shall be subject to approval by PaDEP through the Joint Permit Application process, or, where deemed appropriate by PaDEP, through the General Permit process.
- F. Any stormwater management facilities regulated by this Ordinance that would be located in or adjacent to waters of the Commonwealth or wetlands shall be subject to approval by PaDEP through the Joint Permit Application process, or, where deemed appropriate by PaDEP, the General Permit process. When there is a question whether wetlands may be involved, it is the responsibility of the Developer or his agent to show that the land in question cannot be classified as wetlands, otherwise approval to work in the area must be obtained from PaDEP.
- G. Any stormwater management facilities regulated by this Ordinance that would be located on State highway rights-of-way shall be subject to approval by the Pennsylvania Department of Transportation (PaDOT).
- H. Minimization of impervious surfaces and infiltration of runoff through seepage beds, infiltration trenches, etc. shall be incorporated, where soil conditions permit, to reduce the size or eliminate the need for detention facilities and to promote groundwater recharge.
- I. Roof drains shall not be connected to streets, sanitary or storm sewers or roadside ditches. Roof drains shall use devices intended to promote infiltration/percolation of stormwater where advantageous to do so. When it is more advantageous to connect directly to streets or storm sewers, then it shall be permitted on a case by case basis by the Township.

5:085 Reserved

5:086 Design Criteria for Stormwater Management Facilities

- A. Any stormwater facility located on State highway right-of-way shall be subject to approval by the Pennsylvania Department of Transportation (PaDOT).
- B. Any Stormwater Management Facility (i.e., detention basin) designed to store run-off and requiring a berm or earthen embankment required or regulated by this ordinance shall be designed to provide an emergency spillway to handle flow up to and including the one hundred (100) year post-development conditions. The height of embankment must be set as to provide a minimum one point zero (1.0) foot of freeboard above the maximum pool elevation computed when the facility functions for the one hundred (100) year post-development inflow. Should any Stormwater Management Facility require a dam safety permit under PaDEP Chapter 105, the facility shall be designed in accordance with Chapter 105 and meet the regulations of Chapter 105 concerning dam safety which may be required to pass storms larger than a one hundred (100) year event.
- C. Any facilities that constitute water obstructions (e.g., culverts, bridges, outfalls, or stream enclosures), and any work involving wetlands as directed in PaDEP Chapter regulations (as amended or replaced from time to time by PaDEP), shall be designed in accordance with Chapter 105 and will require a permit from PaDEP. Any other drainage conveyance facility that does not fall under Chapter 105 regulations must be able to convey, without damage to the drainage structure or roadway, runoff from the twenty-five (25) year design storm with a minimum one point zero (1.0) foot of freeboard measured below the lowest point along the top of the roadway. Roadway crossings located within designated floodplain areas must be able to convey runoff from a one hundred (100) year design storm with a minimum one point zero (1.0) foot of freeboard measured below the lowest point along the top of roadway. Any facility that constitutes a dam as defined in PaDEP Chapter 105 regulations may require a permit under dam safety regulations. Any facility located within a PaDOT right of way must meet PaDOT minimum design standards and permit submission requirements.
- D. Any drainage conveyance facility and/or channel that does not fall under Chapter 105 Regulations, must be able to convey, without damage to the drainage structure or roadway, runoff from the ten (10) year design storm. Conveyance facilities to or exiting from Stormwater Management Facilities (i.e., detention basins) shall be designed to convey the design flow to or from that structure. Roadway crossings located within designated floodplain areas must be able to convey runoff from a one hundred (100) year design storm. Any facility located within a PaDOT right-of-way must meet PaDOT minimum design standards and permit submission requirements.
- E. Storm sewers must be able to convey post-development runoff from a five (5) year design storm without surcharging inlets, where appropriate.
- F. Adequate erosion protection shall be provided along all open channels, and at all points of discharge.
- G. The design of all Stormwater Management Facilities shall incorporate sound engineering principles and practices. The Township shall reserve the right to disapprove any design that would result in the creation or continuation of an adverse hydrologic or hydraulic condition within the watershed.

5:087 Calculation Methodology

Stormwater runoff from all development sites shall be calculated using either the Rational Method or a soil-cover-complex methodology.

- A. Any stormwater runoff calculations shall use generally accepted calculation technique that is based on the NRCS soil cover complex method, (Table V-1 in this Section summarizes acceptable computation methods). It is assumed that all methods will be selected by the design professional based on the individual limitations and suitability of each method for a particular site.

The Township may allow the use of the Rational Method to estimate peak discharges from drainage areas that contain less than three hundred twenty (320) acres.

- B. All calculations consistent with this Ordinance using the soil cover complex method shall use the appropriate design rainfall depths for the various return period storms according to the region for which they are located. If a hydrologic computer model such as PSRM or HEC-1 is used for stormwater runoff calculations, then the duration of rainfall shall be twenty-four (24) hours.
- C. For the purposes of pre-development flow rate determination, undeveloped land shall be considered as “meadow” in good condition unless the natural ground cover generates a lower curve number or Rational ‘C’ value (i.e., forest).
- D. All calculations using the Rational Method shall use rainfall intensities consistent with appropriate times-of-concentration for overland flow and return periods from the Design Storm Curves from PA Department of Transportation Design Rainfall Curves (1986). Times-of-concentration for overland flow shall be calculated using the methodology presented in Chapter 3 of Urban Hydrology for Small Watersheds, NRCS, TR-55 (as amended or replaced from time to time by NRCS). Times-of-concentration for channel and pipe flow shall be computed using Manning’s equation.
- E. Runoff Curve Numbers (CN) for both existing and proposed conditions to be used in the soil cover complex method shall be obtained from Table B-1 in Appendix D of this Ordinance.
- F. Runoff coefficients (c) for both existing and proposed conditions for use in the Rational Method shall be obtained from Table B-2 in Appendix D of this Ordinance.
- G. Where uniform flow is anticipated, the Manning’s equation shall be used for hydraulic computations, and to determine the capacity of open channels, pipes, and storm sewers. Values for Manning’s roughness coefficient (n) shall be consistent with Table B-3 in Appendix D of the Ordinance.
- H. The design of any stormwater detention facilities intended to meet the performance standards of this Ordinance shall be verified by routing the design storm hydrograph through these facilities using the Storage Indication Method. The design storm hydrograph shall be computed using a calculation method that produces a full hydrograph.

TABLE V-1
Acceptable Computation Methodologies For
Stormwater Management Plans

| METHOD | METHOD DEVELOPED BY | APPLICABILITY |
|---|-----------------------------------|--|
| TR-20 (or commercial computer Package based on TR-20) | USDA NRCS | Applicable where use of full hydrology computer model is desirable or necessary. |
| TR-55 (or commercial computer package based on TR-55) | USDA NRCS | Applicable for land development plans within limitations described in TR-55. |
| HEC-1 | US Army Corps of Engineers | Applicable where use of full hydrologic computer model is desirable or necessary. |
| PSRM | Penn State University | Applicable where use of a hydrologic computer model is desirable or necessary; simpler than TR-20 or HEC-1. |
| Rational Method (or commercial computer package based on Rational Method) | Emil Kuichling (1889) | For sites less than 200 acres, or as approved by the Township and Township Engineer. |
| Other methods | Varies | Other computation methodologies approved by the Township and Township Engineer. |

5:088 Ground Water Recharge (Infiltration/Recharge/Retention)

- A. The ability to retain and maximize the ground water recharge capacity of the area being developed is the first option required to be considered for all developments where applicable. Design of the infiltration/recharge Stormwater Management Facilities shall give consideration to providing ground water recharge to compensate for the reduction in the percolation that occurs when the ground surface is paved and roofed over. These measures, particularly in hydrologic soil groups A and B, (as shown in Table V-2 in this Section) shall be utilized wherever feasible. Soils used for the construction of basins shall have low-erodibility factors (“K” factors).
- B. Infiltration Best Management Practices (BMPs) shall meet the following minimum requirements:
 - 1. Infiltration BMP’s intended to receive runoff which may contain harmful pollutants from developed areas shall be selected based on suitability of soils and site conditions and shall be constructed on soils that have the following characteristics:
 - a. A minimum depth of twenty-four (24) inches between the bottom of the facility and the seasonal high water table and/or bedrock (limiting zones).

- b. An infiltration and/or percolation rate sufficient to accept the additional stormwater load and drain completely as determined by field tests conducted by the Applicant's professional designer.
- 2. Infiltration BMPs receiving only roof runoff may be placed in soils having a minimum depth of twenty-four (24) inches between the bottom of the facility and the limiting zone.
- 3. The size of the recharge facility shall be based upon the following equation:

$$RE_v = [(S) (R_v) (A)] / 12$$

Where:

Re_v = Recharge Volume (acre-feet)

S = Soil specific recharge factor (inches)

R_v = Volumetric runoff coefficient

A = Site area contributing to the recharge facility (acres)

And:

$$R_v = 0.05 + 0.009 (I)$$

Where:

I = percent impervious area

And:

S shall be obtained based upon hydrologic soil group based upon Table V-2 below:

TABLE V-2

| Hydrologic Soil Group | Soil Specific Recharge Factor (S) |
|------------------------------|--|
| A | 0.38 inches |
| B | 0.25 inches |
| C | 0.13 inches |
| D | 0.06 inches |

If more than one (1) hydrologic soil group (HSG) is present at a site, a composite recharge volume shall be computed based upon the proportion of total site area within each HSG.

- 4. The recharge volume provided at the site shall be directed to the most permeable HSG available.
- 5. The recharge facility shall be capable of completely infiltrating the impounded water within forty-eight (48) hours.
- C. A detailed soils evaluation of the project site shall be performed to determine the suitability of recharge facilities. The evaluation shall be performed by a qualified professional, and at a minimum, address soil permeability, depth to bedrock, susceptibility to sinkhole formation, and subgrade stability. The general process for designing the infiltration BMP shall be:

1. Analyze hydrologic soil groups as well as natural and man-made features within a watershed to determine general areas of suitability for infiltration practices.
 2. Provide field test to determine appropriate percolation rate and/or hydraulic conductivity.
 3. Design the infiltration structure for required storm volume based on field determined capacity at the level of the proposed infiltration surface.
- D. Extreme caution shall be exercised where infiltration is proposed in geologically susceptible areas such as mined or limestone areas. Extreme caution shall also be exercised where salt or chloride would be a pollutant since soils do little to filter this pollutant and it may contaminate the ground water. It is also extremely important that the design professional evaluate the possibility of groundwater contamination from the proposed infiltration/recharge facility and recommend a hydrogeologic justification study be performed if necessary. Whenever a basin will be located in an area underlain by limestone, a geological evaluation of the proposed location shall be conducted to determine susceptibility to sinkhole formations. The design of all facilities over limestone formations shall include measures to prevent ground water contamination and, where necessary, sinkhole formation. The Township may require the installation of an impermeable liner in detention basins. A detailed hydrogeologic investigation may be required by the Township.

It shall be the developer's responsibility to verify if the site is underlain by limestone or other adverse subsurface condition and to observe all appropriate precautions in design and construction where adverse conditions are present.

- E. Where pervious pavement is permitted for parking lots, recreational facilities, streets, or other areas, pavement construction specifications shall be noted on the plan.
- F. Recharge/infiltration facilities may be used in conjunction with other innovative or traditional BMP's, stormwater control facilities, and nonstructural stormwater management alternatives.

5:089 Water Quality Requirements

- A. In addition to the performance standards and design criteria requirements elsewhere in this Ordinance, the land developer SHALL comply with the following water quality requirements of this Article unless otherwise exempted by provisions of this Ordinance.

For water quality, the objective is to detain the post-development two (2) year, twenty-four (24) hour design storm to the pre-development one (1) year flow using the SCS Type II distribution. Additionally, provisions shall be made such as adding a small orifice at the bottom of the outlet structure so that the post-development 1-year storm takes a minimum of twenty-four (24) hours to drain from the facility from a point where the maximum volume of water from the one (1) year storm is captured. (i.e., the maximum water surface elevation is achieved in the facility). At the same time, the objective is not to attenuate the larger storms. This can be accomplished by configuration of the outlet structure not to control the larger storms, or via a bypass or channel to divert only the two (2) year flood into the basin or divert flows in excess of the two (2) year storm away from the basin.

Release of water can begin at the start of the storm (i.e., the invert of the water quality orifice is at the invert of the facility). The design of the facility shall consider and minimize the chances of clogging and sedimentation potential. Orifices smaller than three (3) inches in diameter are not recommended.

- B. To accomplish A. above, the land developer MAY submit original and innovative designs to the Township Engineer for review and approval. Such designs may achieve the water quality objectives through a combination of BMPs.
- C. In selecting the appropriate BMP's or combinations thereof, the land developer SHALL consider the following:
 - 1. Total contributing area.
 - 2. Permeability and infiltration rate of the site soils.
 - 3. Slope and depth to bedrock.
 - 4. Seasonal high water table.
 - 5. Proximity to building foundations and well heads.
 - 6. Erodibility of soils.
 - 7. Land availability and configuration of the topography.
- D. The following additional factors SHOULD be considered when evaluating the suitability of BMPs used to control water quality at a given development site:
 - 1. Peak discharge and required volume control.
 - 2. Stream bank erosion.
 - 3. Efficiency of the BMPs to mitigate potential water quality problems.
 - 4. The volume of runoff that will be effectively treated.
 - 5. The nature of the pollutant being removed.
 - 6. Maintenance requirements.
 - 7. Creation/protection of aquatic and wildlife habitat.
 - 8. Recreational value.
 - 9. Enhancement of aesthetic and property value.

5:0810 A "STORMWATER MANAGEMENT REPORT" shall be required for any proposed development meeting the criteria for a Land Development or Subdivision submitted pursuant to Section 3:05, or Section 3:06 of this ordinance. The report shall include the following:

- A. A narrative describing the proposed development and the stormwater management measures to be included.
- B. A listing of criteria applied to the design showing where the ordinance criteria have been applied and describing any alternative criteria or methods incorporated in the design.
- C. All calculations performed to analyze conditions or to generate the design, including copies of any charts or graphs utilized in that work.
- D. A map or maps depicting drainage areas, time of concentration paths or similar data pertinent to the design or analysis; this map shall also indicate points of interest where calculated pre and post development runoff rates are applied.

- E. The report shall bear the seal and signature (with date) of the Registered Professional Engineer responsible for the design.

5:0811 Roadside drainage swales shall conform to the following:

- A. Such swales shall be designed not only to carry the required discharge without excessive erosion, but also to increase the time of concentration, reduce the peak discharge and velocity and permit the water to percolate into the soil. The minimum grassed swale grade shall be three percent (3%) and all swales shall be designed with a minimum six inches (6") of freeboard.
- B. For grass swales the designs shall meet the following standards:
 - 1. Maximum capacity – ten (10) cfs.
 - 2. Maximum velocity – four (4) fps.
 - 3. Minimum velocity – two (2) fps.
 - 4. Maximum slope – five percent (5%).
 - 5. Maximum side slope – three to one (3:1).
- C. Erosion resistant swale linings approved by the Township are required when velocities exceed four (4) fps.
- D. Capacities greater than ten (10) cfs and slopes greater than five percent (5%) shall be carried by storm sewer pipes.

5:0812 Properly designed, graded and turfed drainage swales shall be permitted elsewhere in lieu of storm sewers, where approved by the Township Engineer. Swales shall be located within an easement not less than twenty feet (20') wide, but of sufficient width to allow access for maintenance.

5:0813 Driveways shall cross swales in a manner so as to not impede the flow in the swale which may be accomplished by a paved dip that allows the swale flow to safely cross the driveway or by fifteen (15) inch diameter (or larger) pipe designed to carry the swale flow under the driveway. If a pipe is used the top of pipe shall be a minimum of six (6) inches lower than the nearest cartway edge.

5:0814 Storm sewer systems shall conform to the following:

- A. Storm sewers shall be installed in accordance with the following requirements:
 - 1. All storm sewers shall be constructed per PennDOT Form 408 Specifications and Design Manual, Part 2, Highway Design and Standards for Roadway Construction, unless otherwise directed by the Township.
 - 2. Storm sewers shall have a minimum diameter of eighteen (18) inches and a minimum slope of one-half percent (1/2 %).
 - 3. Reinforced concrete and smooth-bore (non-corrugated) polyethylene pipe is generally acceptable for all storm sewer construction. All headwalls and end sections must be reinforced concrete. Pipe materials shall be subject to approval by the Township Engineer.

4. All storm sewer pipe within street cartways or other paved areas shall be bedded and backfilled with 2A stone placed in six (6) inch lifts and compacted to the satisfaction of the Township Engineer.
 5. In carbonate areas the Township may determine during construction that watertight connections are required.
- B. Storm sewers shall be designed based upon the following criteria:
1. Any changes in alignment shall be accomplished utilizing straight sections connected by inlets or manholes.
 2. When there is a change in pipe size through a structure, the top inside elevation of the outlet pipe shall be at or-below the elevations of all incoming pipes.
 3. Storm sewer design shall be based upon PennDOT design methods. Inlet efficiency and bypass flow shall be determined for all inlets.
 4. Where necessary, storm sewers and culverts shall be evaluated for inlet and outlet control restrictions.
 5. Rainfall intensity curves and other hydraulic design data, provided by the manufacturers of storm drainage structures shall be used for design purposes.
- C. Inlets shall conform to Penn DOT standards.
1. Inlets shall generally be located at the lowest point of street intersections to intercept the storm water before it reaches pedestrian crossings or at sag points of vertical curves in the street alignment which provides a natural point of ponding of surface storm water.
 2. At street intersections, inlets shall be placed in the tangent and not the curved portion of the curbing.
 3. Where the Township Supervisors deem it necessary because of special land requirements, they may approve special inlets.
 4. The interval between inlets serving stormwater runoff flow along the curb shall not exceed a maximum of one thousand (1,000) feet when located along any one (1) continuous curb line. More frequent spacing shall be required when the entrance capacity of any individual inlet warrants closer spacing as determined by calculations which incorporate consideration of the area drained, intensity of rainfall, slope or grade, runoff coefficient of imperviousness and cross-sectional area of the gutter.
 - a. When inlets are used in a storm system within the right-of-way limits of a street in lieu of manholes, the spacing of such inlets shall not exceed the maximum distance of three hundred (300) feet along any one continuous line.
 - b. All inlets shall be furnished with “bicycle safe” structural steel grates.
- D. Manholes shall be installed in accordance with the following requirements:
1. The constructed locations of manholes shall be as indicated on the subdivision drainage plan or area drainage plan approved by the Township Supervisors.

2. Manholes shall be located on a continuous storm sewer system at all abrupt changes of grade, at all locations where a transition in storm sewer pipe sizing is required, at all angle points and at all points of convergence of two (2) or more influent storm sewer mains.
 3. Manholes shall not be more than three hundred feet (300) apart on pipe sizes up to twenty-four inches (24") and not more than four hundred and fifty feet (450) apart on larger sizes. Inlets may be substituted for manholes on approval by the Township.
 4. Manhole design and construction shall conform to the latest Penn DOT specifications and design standards.
- E. The construction of endwalls shall be required at ends of all storm water conveyance structures.
1. Generally, these structures will be built of three thousand (3000) psi concrete, except in special cases three thousand five hundred (3500) psi may be required by the Township Engineer. Special care shall be used by the design engineer to select the proper endwall to fit the condition.
 2. The Design Engineer shall provide energy dissipaters at endwalls where the discharge velocity with pipe flowing full is more than four (4) f.p.s.
- F. Storm water roof drains shall not discharge water directly over a sidewalk or into any sanitary sewer line.
- 5:0815 Bridges and culverts shall have ample waterway to carry expected flows, based on a minimum storm frequency of twenty-five (25) years. Bridge and/or culvert construction shall be in accordance with the Penn DOT specifications and shall meet the requirements of DEP. Culverts shall be provided with wing walls and constructed for the full width of the cartway plus sidewalks or shoulders. The cartway area over the bridge shall be twenty four (24) inches wider, on either side, than the road connecting with the bridge, or if the character of the road is expected to change for future planning, the cartway of the bridge shall be made to anticipate this condition. On either side of the bridge cartway, the bridge railing must be set back from the edge of the final cartway as needed to place sidewalks, present or future.
- 5:0816 All existing and proposed one hundred (100) year floodplains shall be delineated on the plans for drainage ways having watershed areas greater than one hundred (100) acres. The floodplain delineation's shall be based upon the following criteria:
- A. Where available, the floodplain shall be as mapped by the Federal Emergency Management Agency as part of the National Flood Insurance program.
 - B. If the drainage course has not been mapped by FEMA, the horizontal and vertical limits of the floodplain shall be determined by the Standard Step Method (i.e., HEC-2 or similar approved computer model). If the HEC-2 model is used, the applicant shall submit a computer disc containing all input files for the calculations.
 - C. Where approved by the Township Engineer, the Manning Equation may be used for relatively small drainage areas.
 - D. An average of three (3) of the methods below may be used to compute the design flow(s) upon prior approval by the Township.

1. The graphical and tabular hydrograph methods in Technical Release No. 55, "Urban Hydrology for Small Watershed", latest edition, by the United States Department of Agriculture Soil Conservation Service. The graphical method may be used for streams whose drainage area at the point of interest is no larger than two thousand (2,000) acres, and the tabular hydrograph method may be used for drainage areas up to twenty (20) square miles.
2. The Rational Method may be used for streams whose drainage area at the point of interest is no larger than three hundred and twenty (320) acres.
3. The method in Water Protection Bulletin Number 13, Floods in Pennsylvania, issued by the Pennsylvania Department of Environmental Protection, may be used for streams whose drainage area at the point of interest is larger than two (2) square miles.
4. The Procedure PSU-IV for Estimating Design Flood Peaks on Ungaged Pennsylvania Watersheds.
5. The Penn State Runoff Model.

5:0817 Detention or retention basins for the control of stormwater peak discharges shall meet the following requirements:

- A. Generally, basins shall be installed prior to any earth-moving or land disturbances which they will serve. The phasing of their construction shall be noted in the narrative and on the approved Preliminary and/or Final Plan.
- B. Basins may be designed to capture sediment during construction and then be adjusted to serve as detention or retention facilities in the completed project.
- C. Whenever a basin will be located in an area underlain by limestone, or other adverse subsurface condition a geological evaluation of the proposed location will be conducted to determine susceptibility to sinkhole formations. The design of all facilities over limestone formations shall include measures to prevent groundwater contamination and, where necessary, sinkhole formation. Soils used for the construction of basins shall have low erodibility factors ("K" factors). The Township may require an impermeable liner to be installed up to the one hundred (100) year design water surface elevation.
- D. Energy dissipaters and/or level spreaders shall be installed at points where pipes or drainageways discharge to or from basins. Generally, outlet pipes designed to carry the pre-development, two (2) year storm flow will be permitted to discharge to a stream with only an energy dissipater. Storms of a ten (10) year or greater intensity should be spread across the floodplain by level spreaders. Rock material found on the site is suggested for their construction.
- E. The following slope restrictions shall apply to basins:
 1. Exterior slopes of compacted soil shall not exceed one (1) foot vertical for three (3) feet horizontal, and may be flattened if the soil has unstable characteristics.
 2. Interior slopes of the basin shall not exceed one (1) foot vertical in two point five (2.5) feet horizontal except with approval of the Township.
 - a. Where maximum water depth will not exceed three (3) feet.
 - b. When a two (2) inch rainfall in one (1) hour will not fill the basin in one (1) hour.

- c. Where concrete, stone or brick walls are used with side slopes proposed to be steeper than one (1) foot vertical in (3) feet horizontal, in which case the basin shall be fenced by a permanent wire fence forty-eight (48) inches in height and a ramp of durable, non-slip materials for maintenance vehicles shall be provided for access into the basin.
 - 3. The minimum bottom slope shall be two percent (2%) for grass, and zero point seven five percent (0.75%) for concrete paving. One percent (1%) may be used for grass if an underdrain system is provided.
- F. Detention and retention basins shall also be designed to meet the following requirements:
 - 1. The minimum top of berm width shall be eight feet (8').
 - 2. Outlet pipes shall be a minimum of eighteen (18) inch diameter with a concrete endwall. For single stage primary outlet structures, orifice plate shall be a three-eighths inch (3/8") thick steel plate, secured with four (4) one-half inch (1/2") expansion anchors. For multiple stage outlet structures, PADOT 2x4 precast inlet boxes shall be utilized.
 - 3. Properly spaced anti-seep collars shall be installed on all basin outlet pipes. Design calculations shall be provided.
 - 4. All basins shall be constructed with a compacted, relatively impervious (Unified Soil Classification CL-ML or ML) key trench and core. The key trench shall extend at least two (2) feet into undisturbed subsoil (below topsoil layer). The minimum bottom width of the trench shall be six (6) feet and the minimum top width of the core shall be four feet (4'). The side slopes of the compacted core and trench shall not exceed a ratio of one (1) foot horizontal to one (1) foot vertical, and the top elevation of the core shall be set at or above the twenty-five (25) year design water elevation.
 - 5. If approved by the Township Engineer, basins with volumes less than ten thousand (10,000) cubic feet and maximum depth less than three (3) feet may substitute alternate requirements.
- G. Outlet structures within basins which will control peak discharge flows and distribute the flows by pipes to discharge areas shall be constructed of reinforced concrete, and shall have childproof, nonclogging trash racks over all design openings exceeding eight (8) inches in diameter, except those openings designed to carry perennial stream flows. Emergency spillways shall be designed to safely convey the one hundred (100) year basin inflow hydrograph through the basin assuming the principal outlet is completely blocked, and a minimum six (6) inch freeboard shall be provided. The spillway shall be lined with suitable erosion resistant material.
- H. Inlet and outlet structures shall be located at maximum distances from one another. The Township may require a rock filter berm or rock-filled gabions between inlet and outlet areas when the distance is deemed insufficient for sediment trapping.
- I. Permanent grasses or other approved stabilization measures shall be established on the sides of all earthen basins by hydroseeding within five (5) days of initial construction. The Township may require jute or erosion control matting to be installed inside the basin or on the basin embankment.

- J. If the basin will not discharge to a suitable natural drainage course, the Township may require the Developer to provide facilities to safely and efficiently convey the discharge to a suitable drainage course. Securing of necessary drainage easements for this purpose shall be the sole responsibility of the Developer.
- K. When Pa. DEP requires facilities to have a State permit, the designer shall submit all information to Pa. DEP and obtain all necessary approval and permits. No stormwater facility shall create health or sanitation problems. Consideration shall be given to safety standards.
- L. Basins with depth greater than three feet shall be fenced with four (4) feet tall galvanized or vinyl coated chain link fabric, steel posts with three (3) foot minimum embedment in concrete and a suitable lockable vehicle access gate.

5:0818 Intercepting underdrains shall be required at all locations in which subsurface water is encountered which may permeate or endanger the subgrade of the street. Underdrains may be required in cuts three (3) feet deep and greater, and in all other locations stipulated by the Township Engineer. Pipe foundation underdrains shall be parallel to the established street grade to outlet in approved drainage structures. Pipe foundation underdrain shall consist of a trench excavated to a minimum depth of twenty four (24) inches below the underneath elevation of the special subgrade and to the minimum width of eighteen (18) inches in which a six (6) inch perforated pipe underdrain shall be laid. The trench shall be backfilled with Pennsylvania Department of Transportation #2B Aggregate to its full depth around and above the laid pipe. If the length of pipe underdrain exceeds six hundred (600) feet in one run, the minimum diameter of six (6) inches shall be increased to eight (8) inches beyond that point. Pipe shall meet Penn DOT, Publication 218 Specifications.

5:0819 Storm/Sanitary Sewers and Surface Water Control

- A. Within all subdivisions in which off street storm or sanitary sewers are to be constructed, or are anticipated for future construction, a twenty (20) foot maintenance easement shall be provided for such easement shown in the subdivision plans which are submitted to the Township Supervisors for their approval. Existing watercourses which are under the jurisdiction of the Pa. DEP into which storm water is permitted to be deposited shall require an easement within or adjacent to its banks equal to the one hundred (100) year floodplain.
- B. All storm sewers, if placed to feed into the said existing watercourses, shall require the stipulated maintenance easement. Sanitary sewers which parallel or are adjacent to such watercourses shall be provided with the stipulated easement.
- C. Any developer shall be responsible for the control of surface water from his property to a point of natural disposal. Downstream easements may be required, as well as the construction of improvements necessary to control runoff and prevent property damage. Whenever practical, the maintenance easement shall be parallel with and conjunctive to property lines of the subdivision.

5:0820 All streets shall be so designed to provide for the discharge of surface water from their rights-of-way.

5:0821 The slope of the crown on proposed streets shall be one-fourth inch (1/4") per foot, super elevation may be required at curves.

5:0822 Maintenance and repair of detention basins shall be the responsibility of the property owner(s) and shall be deed restricted and indicated on the approved plans unless otherwise assumed by the Township and/or others. The Township may perform necessary maintenance and repairs to detention basins if the owner(s) fail to do so after receiving notice from the Township. The Township may recover the cost of such necessary maintenance and repairs from the property owner. The Township shall require the property owner(s) to enter into an Agreement with the Township setting forth such maintenance standards.

SECTION 5:09 EROSION AND SEDIMENTATION POLLUTION CONTROL

- 5:091 Land proposed for subdivision shall not be developed or changed by grading, excavating, or by the removal or destruction of the natural topsoil, trees or other vegetative cover unless adequate provisions for minimizing erosion and sedimentation are provided on the Subdivision Plan.
- 5:092 Prior to commencement of any of the above mentioned activities the developer must obtain a Letter of Adequacy from the Schuylkill County Conservation District for the Erosion and Sedimentation Pollution Control Plan.
- 5:093 The plan for erosion and sedimentation pollution control shall be in accordance with all provisions of the "Erosion and Sediment Pollution Control Program Manual" published by PA DEP, Bureau of Soil and Water Conservation.
- 5:094 Where state or federal law requires additional permits or approvals for erosion and sedimentation pollution control, those permits or approvals shall be obtained prior to commencement of the earth disturbance activities.
- 5:095 Installation of the erosion and sedimentation pollution control facilities specified by the plan shall be made by the developer as a required improvement.

SECTION 5:10 WETLANDS

5:101 The US Army Corps of Engineers in conjunction with the United States Environmental Protection Agency have defined the term "wetlands" as follows:

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

The three (3) major characteristics of wetlands include vegetation, soil and hydrology.

Wetlands to be regulated by this section are those which meet the definition of regulated wetlands as determined by federal and/or state laws and regulations.

- 5:102 All land designated as "wetlands" within West Brunswick Township are subject to restrictions and/or permits by the Pennsylvania Department of Environmental Protection and United States Army Corps of Engineers.
- 5:103 For all subdivisions involving hydric soils, streams, floodplains, or where a “wetland” may exist, the applicant shall have a qualified person perform a presence/absence determination which shall be noted on the plans with the signature of the qualified person.

In the event “wetland(s)” are present, a complete delineation shall be performed.

The plan shall also contain the following certification, signed and dated by the person(s) who performed the delineation:

"I do hereby certify to the best of my knowledge and belief that the wetland(s), as depicted upon this plan, represent the true and correct limit and extent of wetland(s) that are present on the subject property, and were delineated in a manner that is currently accepted by all applicable federal and state agencies having jurisdiction in this matter."

- 5:104 Within all subdivisions, a buffer zone shall be applied to all areas delineated as wetlands. Within this buffer no removal of existing, natural vegetation or installation of sewage disposal systems will be permitted. The minimum width of the buffer zone shall be fifty (50) feet.
- 5:105 If the applicant disputes any provision specified under this Section, the applicant shall be responsible for an Army Corps of Engineers and/or Environmental Protection Agency Jurisdictional Determination. All pertinent costs incurred shall be the responsibility of the applicant and not the Township.

SECTION 5:11 SOLID WASTE MANAGEMENT

- 5:111 To insure incorporation of adequate provision for solid waste management practices in the design of land developments and subdivisions, the following minimum requirements shall be contained on development plans:
- A. The location, size, and type of bulk storage containers shall be shown and be adequate to contain all wastes generated between collections.
 - B. All bulk containers shall be located to permit efficient use of collection equipment and to permit maneuverability of such equipment.
 - C. All bulk storage containers shall be appropriately screened from view.
 - D. A statement of the method and frequency of refuse collection to be used shall be included on the plan.
- 5:112 Where no bulk storage is proposed and individual households are expected to establish appropriate collection service, a statement shall be shown on the plan which advises that solid waste storage and collection is an individual household responsibility.
- 5:113 In a subdivision or land development located in an area presently served by municipal collection or municipal contract collection system, and for which no bulk storage methods are proposed, a statement indicating the availability of an existing solid waste collection system may be shown on the plan in lieu of information required in Section 5:111 or Section 5:112 of this ordinance.

ARTICLE VI - IMPROVEMENTS SPECIFICATIONS

SECTION 6:01 GENERAL REQUIREMENTS

- 6:011 Physical improvements to the property being subdivided shall be provided, constructed and installed as shown on the Record and Supplemental Plans and in accordance with the requirements of the Township.
- 6:012 As a condition of approval of a Final Plan by the Township Board of Supervisors, the subdivider shall enter into a Development Agreement covering the improvements shown on the Plan and required by these regulations. The Development Agreement shall conform to the requirement of Article VIII - Improvements Guarantees.
- 6:013 Unless shown otherwise in the approved Final Plan all improvements installed by the subdivider shall be constructed in accordance with the applicable design specifications of the Township or, where none apply, as prepared by the Township Engineer. Where required, the specifications of the applicable State agency shall be used.

SECTION 6:02 GENERAL PROCEDURES

- 6:021 The Township Board of Supervisors or duly assigned representative shall be notified prior to the start of any construction and/or excavation, including removal of topsoil, or the performance of any work in a street, right-of-way, utility easement, storm drainage easement, water way, and approved subdivision or land development in West Brunswick Township.
- 6:022 A preconstruction conference will be required for all subdivision and land developments where there is a Development Agreement covering improvements costs, or for any other construction or earth-moving activities when deemed necessary by the Township Supervisors or Township Engineer. The developer or his representative and the contractor or contractors who will perform the work are to attend along with the Township Engineer and Township representatives.
- 6:023 Proof of all required permits, certifications and approvals shall be provided at the preconstruction meeting as well as compliance with the utility notification requirement per most recent state laws regarding the "PA One Call System." Construction may not commence until all permits and approvals are obtained. Approval of the plan does not relieve the developer of the requirement to obtain permits.
- 6:024 Work being performed on any and all existing public highways, streets, rights-of-way and easements, shall require a Street Occupancy Permit from the proper authority, and all required safety protection, including flag persons, signing, barricades, flashing warning devices and other required devices. All safety protection methods and devices and procedures shall be in accordance with Pennsylvania Department of Transportation Publication 213 latest edition, (or most current Penn DOT standards that govern the same) Work Zone Traffic Control, and will be furnished and maintained solely by the applicant.
- 6:025 Inspections Required
 - A. Inspections shall be performed by the Township to observe that the proper procedures and methods of installation of all approved structures and approved materials required to be installed were used. The cost of all inspections shall be the responsibility of the developer/owner.

- B. Inspections shall be required prior to starting construction, during the installation of materials and structures, and upon completion of all improvements. All improvements shall be installed in accordance with all required approved regulations and specifications.
- C. Any and all unsatisfactory work, faulty procedures and methods, and defective materials that have been installed shall be rejected and noted for the record on the inspection report, and shall be corrected before final acceptance.
- D. The placement of all improvements shall be in accordance with the controls set by a Professional Land Surveyor, to ensure installation of improvements to proper location, elevation, alignment and profile.
- E. Scheduling of required inspections shall be the responsibility of the Owner, or his contractor and shall be in accordance with the procedures described at the preconstruction conference.
- F. Notwithstanding any of the above the property owner or his/her/their designated agent (developer or contractor) shall be solely and entirely responsible for all safety related to the work.

SECTION 6:03 REQUIRED IMPROVEMENTS

The following improvements, as shown on the approved plans, shall be provided by the subdivider:

6:031 Streets

- A. General - The construction of streets in West Brunswick Township shall be done in conformity with the specifications, regulations and provisions set forth in this Ordinance, together with the Road and Street Ordinance as may from time to time be in effect.
- B. Street Grading - All streets shall be graded at their full right-of-way width, unless otherwise specified by the Township.
- C. Cartway Paving - All streets shall be paved to full cartway width (as shown on the Final Plan), in accordance with Township requirements.
- D. Existing Streets - Improvements to existing Township roads shall be made when deemed necessary by the Board of Supervisors for safety, drainage or other purposes. These improvements may include, but are not limited to, clearing and grading of right-of-way, shoulder construction, installation of drainage facilities, road widening, resurfacing, reconstruction, sealing, and/or clearing for line of sight.
- E. All street and related improvements shall be built in accordance with PA DOT Pub 408 and the PUB 72M standards (latest revision). In addition, all areas that involve road construction activity shall receive soil compaction testing by a qualified agency. The cost for all testing shall be borne by the Developer.

6:032 Curbs

- A. Curbs, if required by the Township, shall be installed along both sides of all streets.
- B. Curbs shall be the standard straight (vertical) type.
- C. Standard straight curb (machine slip form) shall be a minimum eighteen (18) inch structure height, installed on a minimum four (4) inch layer of (#2B) crushed aggregate stone bed. Expansion joints shall be every sixty (60) feet at structures, ten (10) feet away from each side of a structure, and at the end of a day's work. Contraction joints shall be saw cut every ten (10) feet, a minimum of two (2) inches in depth. Concrete shall be minimum three thousand (3,000) psi compressive strength.

- D. Standard straight curb (type hand form) shall be a minimum eighteen (18) inch structure height and as a minimum installed on compacted subgrade. Expansion joints shall be every ten (10) feet at structures, ten (10) feet away from each side of a structure, and at the end of a day's work. Concrete shall be minimum three thousand (3,000) psi compressive strength.
- E. A depressed curb for driveway entrances is permitted rather than a horizontal radius. The curb shall be depressed by rounding the edge from the top of the curb to a lip two (2) inches above the gutter line. The bottom line of the curb shall be maintained.
- F. When curbing is not required, the applicant shall provide a suitable means to ensure a stable grade at the edge of the roadway for roadway stability. This can be in the form of a stabilized shoulder.
- G. All paved areas adjacent to curbs shall be sealed with PG 64-22 latest edition, (or most current Penn DOT standards that govern the same).
- H. Provide 'depressed curb' at all intersection locations in accordance with the latest ADA rules and regulations. Construction of same shall follow PennDOT Roadway Construction Standards that govern same.

6:033 Sidewalks

- A. Sidewalks, if required by the Township, shall be installed along both sides of all streets.
- B. Wherever sidewalks are required, curbs shall also be required, in accordance with the specifications of Section 6:032.
- C. Sidewalks shall be four (4) feet wide, four (4) inches thick and placed upon a minimum four (4) inch layer of (#2B) crushed aggregate stone bedding. Expansion joints shall be every twenty (20) feet with contraction joints cut every four (4) feet a minimum of one (1) inch in depth. Additional expansion materials shall be placed between any curb and driveway aprons and in the sidewalk at the driveway limits.
- D. Driveways over sidewalks shall be at least six (6) inches thick and welded wire fabric, six inch by six inch (6" x 6") by ten (10) gauge, shall be installed in all driveway apron/sidewalk areas. Concrete shall be minimum three thousand five hundred (3,500) psi compressive strength. The sloped portion of the driveway on all new construction shall terminate at the closest edge of sidewalk and at the two (2) inch curb lip above the gutter line).
- E. Provide rain leaders when and where applicable. Pipe shall be 4" diameter schedule 40 pipe, with a minimum of 2" of concrete cover. Provide control joint on surface of sidewalk above pipe centerline.
- F. Provide 'ADA ramps' at all intersection locations in accordance with the latest ADA rules and regulations. Construction of same shall follow PennDOT Roadway Construction Standards that govern same.

6:034 Storm Sewers

Storm sewers and related facilities shall be installed consistent with acceptable design principles and the requirements contained in Section 5:08 of these regulations.

6:035 Sanitary Sewage Disposal

- A. Sanitary sewage disposal systems shall be provided consistent with the design standards and requirements contained in Section 5:06 of these regulations.

- B. Whenever a subdivider proposes that individual on-site sanitary sewage disposal systems shall be utilized within the subdivision, the subdivider shall either install such facilities or shall require (by deed restriction or otherwise), as a condition of the sale of each lot or parcel within the subdivision, that such facilities shall be installed by the purchaser of such lot or parcel at the time that a principal building is constructed and in accordance with these regulations.
- C. In all other cases, the subdivider shall provide a complete community or public sanitary sewage disposal system. The design and installation shall be subject to the approval of the Township Engineer, PADEP, or Municipal Authority. The design and installation of such community distribution system shall be subject to the approval of the Pennsylvania Department of Environmental Protection and such system shall be further subject to satisfactory provision for the maintenance thereof.

6:036 Water Supply

- A. Water supply system(s) shall be provided consistent with the standards and recommendations contained in Section 5:07 of these regulations.
- B. Where on-lot water supply systems are proposed, the developer shall either install such facilities or shall require (by deed restriction or otherwise) as a condition of the sale of each lot or parcel, that the facilities shall be installed by the purchaser of such lot or parcel at the time that a principal building is constructed.
- C. Wherever economically feasible, the subdivision shall be provided with a complete public or community water distribution system. The design and installation of such public system shall be subject to the approval of the engineer of the appropriate water utility company or the Township Engineer or Municipal Authority. The design and installation of such community distribution system shall be subject to the approval of the Pennsylvania Department of Environmental Protection and such system shall be further subject to satisfactory provision of the maintenance thereof.

6:037 Fire Hydrants

All subdivisions and land developments that will be served by a public water system shall be provided with fire hydrants as needed with appropriate water pressure and shall otherwise comply with the provisions in Section 5:075.

6:038 Monuments

- A. Permanent reference monuments shall be located along street right-of-way lines at the following locations:
 1. At least one (1) monument at each street intersection.
 2. At changes in direction of street lines, excluding arcs at intersections.
 3. At each end of each curved street line, excluding arcs at intersections.
 4. An intermediate monument wherever topographical or other conditions make it impossible to sight between two (2) otherwise required monuments.
 5. At such other places along the line of streets as may be determined by the Township Engineer to be necessary so that any street may be readily defined in the future.
- B. With the approval of the Township Engineer the subdivider may install monuments on only one (1) side of the street provided that enough monuments are set to permit a surveyor to stakeout accurately any building lot shown on the plan.

- C. For all subdivisions of five (5) lots or less, at least two (2) monuments shall be required. For all subdivisions greater than five (5) lots an additional one (1) monument shall be required for each five (5) additional lots.
- D. All monuments shall be placed by a Professional Land Surveyor so that the center or the control point of the monument shall coincide exactly with the point of intersection of the lines being monumented.
- E. Reference monuments shall be placed so that the top of the monument is flush with the surrounding grade.

6:039 Lot Pins

All lot corner markers shall be permanently located and shall be at least a five eighths inch (5/8") inch metal pin with a minimum length of twenty-four (24) inches, located in the ground to existing grade. Lot corner markers shall be placed prior to Final Plan approval, unless an appropriate escrow amount is established and set aside with the Township.

6:0310 Signs

Street name signs shall be installed at all street intersections. Stop signs and no-parking signs shall be placed as depicted on the approved plans. Other advisory signs may be required by the Township. The design and placement of such signs shall be subject to approval by the Township.

6:0311 Street Lights

- A. Street lights shall be placed along streets within and abutting a proposed subdivision or land development where the Board of Supervisors deems them necessary to provide safe traffic or pedestrian circulation. When required, street lights shall be provided, at a minimum, at all street intersections, curves in the streets and the more isolated areas of a development.
- B. Such lights shall meet the design standards established by the public utility. The location and number of street lights shall meet the approval of the Township.
- C. In commercial areas or residential areas with a density more than four (4) units per acre sidewalks shall be lighted to an average intensity of one half (1/2) foot candle. Street lights shall be designed or shielded to prevent direct light rays into residential windows.

6:0312 Shade Trees

Shade trees shall be planted by the developer, outside the street right-of-way and not closer than twenty-five (25) feet from the street pavement edge nor closer than fifteen (15) feet from the sidewalk pavement edge where sidewalks are present. In no event shall trees be planted closer than ten (10) feet to the street right-of-way line. Trees shall be spaced not less than forty (40) feet nor more than sixty (60) feet apart, staggered along both sides of all streets. These shade trees shall conform to all of the following:

- A. Two (2) inch or greater caliper measured six (6) inches above the root flair.
- B. Eight (8) feet or greater in total height above finish grade.
- C. Clear trunk height of at least five (5) feet.
- D. A single straight trunk of at least seven (7) feet.
- E. When planted, the top of the root ball will be slightly above finish grade.

Where these spacings will place trees within fifteen (15) feet of a building or other structure, lesser separations, approved by the Supervisors, shall be applied. Where the separation from a building or structure will be less than ten (10) feet or the separation from sidewalk or curb will be less than five (5) feet, special urban street tree pits shall be provided along with street tree types which are tolerant of such spacings.

The type of tree species shall be approved by the Township.

6:0313 Utilities and Utility Easements

- A. All utilities including, but not limited to electric, gas, cable television, and telephone shall be placed underground. Installation of all utilities shall be in strict accordance with the engineering standards and specifications of the public utility concerned.
- B. In accordance with the provisions of the latest state law of 1996, all developers, contractors, etc., shall contact all applicable agencies and accurately determine locations and depth of all underground utilities within the lot boundaries prior to excavation, pursuant to the "PA One Call System".
- C. An easement ten (10) feet in width shall be provided abutting all side and rear property lines of all lots in a subdivision that abut another lot in the subdivision. An easement twenty (20) feet in width shall be provided abutting all side and rear property lines of all lots in a subdivision that do not abut another lot in the subdivision. Such easements shall be provided for wires, conduits, storm and sanitary sewers, gas and water mains, and other utilities.
- D. There shall be a minimum distance of fifty (50) feet, measured at the closest point, between any proposed dwelling unit and any petroleum product or natural gas transmission right of way which abuts or transverses the subdivision or land development.

SECTION 6:04 LANDSCAPING

6:041 General

Any required landscaping (landscape strips and interior landscaping) shall include a combination of the following elements: deciduous trees, ground covers, evergreens, shrubs, vines, flowers, rocks, gravel, earth mounds, berms, walls, fences, screens, sculptures, fountains, sidewalk furniture, or other approved materials. Artificial plants, trees, and shrubs may not be used to satisfy any requirement for landscaping or screening. No less than eighty percent (80%) of the required landscape area shall be vegetative in composition, and no outdoor storage shall be permitted within required landscape areas. For each seven hundred fifty (750) square feet of required area for landscape strips, one shade/ornamental tree shall be provided. For every three hundred (300) square feet of interior landscaping required for parking lots, one shade tree shall be provided. If deciduous, these trees shall have a clear trunk at least five (5) feet above finished grade; if evergreen, these trees shall have a minimum height of six (6) feet. All required landscape strips shall have landscaping materials distributed along the entire length of the lot line abutting the yard.

6:042 Existing Wooded Areas

Existing wooded areas shall be protected to prevent unnecessary destruction.

At least 15 (fifteen) percent of the number of trees (minimum caliper of five (5) inches at a height of three (3) feet above ground) that exist at the time of plan submission shall be maintained or replaced immediately following completion of improvements. Replacement trees shall be a minimum caliper of two (2) inches at a height of three (3) feet above finished grade.

6:043 Yard Groundcover

Any part of the site which is not used for buildings, other structures, loading or parking spaces and aisles, sidewalks, and designated storage areas shall be planted with an all-season groundcover (e.g., grass, ivy, vetch, pachysandra, etc.). In addition, gravel can be substituted if done in a manner to complement other vegetative materials. It shall be maintained to provide an attractive appearance, and all non-surviving plants shall be replaced promptly.

6:044 Buffer Planting and Visual Screening

The following materials may be used: evergreens (trees, hedges, or shrubs), walls, fences, earth berms, or other approved similar materials. Any wall or fence shall not be constructed of corrugated metal, corrugated fiberglass, or sheet metal. Screening shall be arranged so as to block the ground level views between grade, and a height of six (6) feet. Landscape screens must achieve this visual blockage within two (2) years of installation.

6:045 Street Trees

A minimum of one deciduous canopy tree, with a minimum caliper of two (2) inches at a height of three (3) feet above finished grade, per 50 feet of street frontage, or fraction thereof, shall be planted parallel to the street along all streets and access roads (except for alleys) and no closer than ten (10) feet of the right-of-way.

Street trees shall not be permitted within any required clear sight triangle.

6:046 Selection of Plant Material

Trees and shrubs shall be typical of their species and variety; have normal growth habits, well-developed branches, densely foliated, vigorous, fibrous root systems and free of insect pests and disease. They shall have been grown under climatic conditions similar to those in the locality of the project or properly acclimated to conditions of the locality of the project.

Any tree or shrub which dies within eighteen (18) months of planting shall be replaced.

ARTICLE VII - MOBILE HOME PARKS

SECTION 7:01 GENERAL REQUIREMENTS

All mobile home parks shall comply with the plan requirements, design standards, and improvement specifications of this Ordinance and the applicable provisions of the West Brunswick Township Zoning Ordinance, as amended.

- 7:011 The minimum size of a mobile home park shall be five (5) acres.
- 7:012 The maximum density of a mobile home park shall be eight (8) units per acre.
- 7:013 No unit shall be set closer than fifteen (15) feet to an internal street, walkway, storm drain, or utility main. Units shall be separated by a minimum of thirty (30) feet.
- 7:014 Minor encroachments such as steps, porches, and utility sheds, having an on-the-ground foot print of twenty (20) square feet or less may be placed within the thirty (30) foot separation area, provided a clear path of at least twenty (20) feet wide is maintained.
- 7:015 Mobile home units may be set on permanent concrete slabs or permanent concrete support columns. Suitable skirting or screening shall cover the under side of the home from public view. New or replacement homes must be set upon permanent slabs or columns within fourteen (14) days.

SECTION 7:02 STREET LAYOUT AND CONSTRUCTION

- 7:021 There shall be at least (1) one street in the park which is circumferential and from which lessor streets shall turn out so as to provide direct access to each lot and each common space area of the tract.
- 7:022 Cul-de-sacs shall not exceed six hundred (600) feet in length and shall terminate in a turnaround having a fifty (50) foot radius to the outer edge of the cartway.
- 7:023 There shall be at least two (2) entrances from a public street into the park. Additional entrances may be approved by the Township if traffic conditions would warrant them.
- 7:024 Street design shall meet the requirements of this Ordinance.
- 7:025 All streets shall be constructed in accordance with Township specifications.
- 7:026 Every mobile home lot shall abut and have access to an approved street.

SECTION 7:03 ENTRANCE TO MOBILE HOME PARK

- 7:031 The main park entrance shall conform to the standards of the Pennsylvania Department of Transportation (PennDOT) when the entrance is from a state road. A PennDOT Highway Occupancy Permit shall be obtained in such cases. When the entrance is from a Township road, it shall conform to the specifications of this Ordinance.
- 7:032 The entrance shall take into account the traffic on the public street and that to be generated by the park residents. Acceleration and deceleration lanes may be required as well as two (2) lane entrances and two (2) lane exits.

SECTION 7:04 PARKING STANDARDS

- 7:041 Off-street parking areas shall be provided in all mobile home parks for the use of park residents and guests.
- 7:042 Each mobile home lot within a mobile home park shall contain at least two (2) off-street parking spaces. No on-street parking shall be permitted within the park.
- 7:043 Off-street common parking areas may be provided in lieu of the required two (2) parking spaces on each mobile home lot, in which case parking shall be provided at the minimum rate of two (2) spaces for each mobile home lot not equipped with on-lot parking spaces. Such off-site common parking area shall be located as to provide convenient access to the mobile homes, but shall not exceed a distance of two hundred (200) feet from the mobile homes that it is intended to serve.
- 7:044 Additional parking spaces for vehicles of non-residents shall be provided as off-street common parking at the minimum rate of one (1) space for each mobile home lot.
- 7:045 Design and construction of off-street common parking areas shall comply with the design standards and specifications of this Ordinance.

SECTION 7:05 STORMWATER MANAGEMENT

- 7:051 Stormwater management shall be in accordance with the requirements set forth in Section 5:08 of this Ordinance.

SECTION 7:06 UTILITIES

7:061 Sewage Disposal

- A. All mobile home parks shall be served by a public or community sewage disposal system, approved by the appropriate local and state agencies, and shall be constructed and certified by the appropriate authorities before occupancy permits are issued.
- B. Individual lateral connections to the sewage collection system shall conform to the BOCA National Plumbing Code and/or applicable Township and state regulations.

7:062 Water Supply

- A. All mobile home parks shall be served by a public or community water supply system. The system shall conform to Section 502.1 "Standards For Mobile Home Parks" publication of the National Fire Protection Association (NFPA) and any other applicable codes. The system shall be approved by the appropriate local and state agencies, and shall be constructed and certified by the appropriate authorities before occupancy permits are issued.
- B. Individual connections to the water supply system shall conform to the BOCA National Plumbing Code and/or applicable Township and state regulations.
- C. The water supply system shall provide for fire protection in mobile home parks of ten (10) or more units.

7:063 Electrical Distribution System

The electrical distribution system shall be underground and shall conform to the NFPA standards for mobile home parks and any other applicable codes. Each mobile home shall have not less than one hundred (100) amp service.

7:064 Gas Service

If the mobile home park is to have gas service to the homes, the same shall conform to the applicable NFPA regulations and any other applicable codes.

7:065 Telephone and Television Service

Telephone and television lines shall be underground. No outside antenna greater than twenty-four (24) inches in diameter shall be permitted on a mobile home.

7:066 Lighting Standards

All streets and common walkways shall be illuminated at a maximum level of zero point six (0.6) foot candles. Service to all lighting fixtures and standards shall be underground.

SECTION 7:07 PEDESTRIAN WALKWAYS

All mobile home parks shall provide and maintain safe, durable, convenient, all-season pedestrian walkways of adequate width to provide safe pedestrian egress throughout the mobile home park.

SECTION 7:08 REFUSE DISPOSAL

Exterior storage areas for refuse stations shall be properly screened. All containers shall be airtight, vermin-proof and have adequate storage capacity to accommodate the projected volumes of solid waste. The park shall have a solid waste management plan in accordance with all applicable Township regulations and standards.

SECTION 7:09 LANDSCAPING and LIGHTING

7:091 Shade Trees and Street Lights

Street lights shall be provided in accordance with Section 6:0311 of this ordinance.

Shade trees shall be provided on all streets within a mobile home park in accordance Section 6:0312 of this Ordinance.

7:092 Ground Cover

Except for paved areas, areas beneath mobile homes, and cultivated areas, all ground shall be planted, maintained, and grassed. The grass shall be regularly cut. No weeds or wild growth, except for native trees, shall be permitted anywhere in the park.

7:093 Park Screening

The mobile home park shall have an evergreen planting screen consisting of a double row of six (6) foot tall trees at a twenty (20) foot staggered spacing along the property lines at the periphery of the development to protect the privacy of adjacent residents.

7:094 Park Buffer

The mobile home park shall provide a forty (40) foot wide buffer yard along the street line and the property line at the periphery of the development. The buffer yard shall be planted with an all season ground cover and no structures shall be permitted in the buffer yard. Required screening may be placed within the buffer yard.

SECTION 7:10 MOBILE HOME UNIT SIZE

All mobile homes located in the mobile home park shall have a minimum living area of eight hundred (800) square feet.

SECTION 7:11 ADMINISTRATION

- 7:111 Mobile home parks of twenty-five (25) or more units shall employ the services of a qualified manager. The manager shall reside in the mobile home park and shall be responsible for the operation and maintenance of the park.
- 7:112 The developer of the park shall make arrangements, provisions, and/or agreements to insure that the common open spaces shall be adequately managed and maintained. Prior to municipal approval, the Township Solicitor shall review any agreement or provision.
- 7:113 It shall be unlawful to operate a mobile home park within the Township unless the Board of Supervisors has issued approval and unless the Pennsylvania Department of Environmental Protection has issued a certificate of registration. Such approval, licenses and certificates shall be issued annually.
- 7:114 Licenses are not transferable. Notice in writing shall be given the Board of Supervisors within ten (10) days after a mobile home park has been sold, transferred, given away, leased, or the controlling interest otherwise disposed of. A transfer certificate by the Pennsylvania Department of Environmental Protection shall be required and a new application to the Township shall be made for an operating license.
- 7:115 The park shall furnish the Township a list of tenants of the park. Any change in tenancy shall be reported to the Township within one (1) week. The Board of Supervisors shall have the power to inspect the park register containing a record of all residents of the mobile home park at any reasonable time.
- 7:116 All applications to the Township for a mobile home park shall be subject to all applicable review procedures for subdivision and land development and shall be subject to the appropriate fees established by resolution by the Township Board of Supervisors.

ARTICLE VIII - IMPROVEMENTS GUARANTEES

SECTION 8:01 GUARANTEE OF INSTALLATION OF REQUIRED IMPROVEMENTS

- 8:011 Where subdivision or land development plans require improvements pursuant to this ordinance and/or as shown within approved or conditionally approved Final Plan documents, it is the responsibility of the developer to either cause all such improvements to be installed and/or to provide an adequate financial guarantee that said improvements will be installed within a schedule incorporated as part of a Development Agreement as defined later herein.
- 8:012 In addition the developer shall have paid or guaranteed payment of any and all fees required pursuant to Section 509 (i) of the Pennsylvania Municipalities Planning Code (as most recently amended) and the payment or financial guarantee shall include reimbursement of the cost of inspections which are required by this Ordinance or other laws or regulations.
- 8:013 The amount of the financial guarantee shall be sufficient to cover the cost of all such improvements if constructed by the Township pursuant to the prevailing Township Code, plus an allowance for administrative costs, including inspections. The improvement cost above shall first be furnished by the developer to the Township Engineer in the form of an estimate with a list of work items, calculated quantities, and estimated unit prices. The Township Engineer shall review the estimate and recommend to the Supervisors approval or specific modifications. The final improvement cost shall be that approved by or modified by the Township Supervisors. Escalation to reflect future prices shall be included in the estimate.

SECTION 8:02 DEVELOPMENT AGREEMENT

8:021 Improvements Agreement Required

- A. All applicants proposing any subdivision or land development which provides for the installation of improvements required by this Ordinance or any improvements or amenities which appear on the plan shall be required to enter into a legally binding Improvements Agreement complete with Performance Guarantee with the Township prior to Final Plan approval.
- B. The Improvements Agreement shall guarantee the installation of said improvements in strict accordance with all Township requirements.

8:022 Terms of Improvements Agreement

The Improvements Agreement shall be in the manner and form approved by the Township Solicitor and it shall consist of the following terms, where applicable:

- A. Scope of Construction:
 - 1. Shall list all improvements as shown in the approved plans and/or related documents.
- B. Schedule:
 - 1. A work schedule setting forth the beginning and ending dates and such other details as the Township deems fit and appropriate for the improvements covered by the Improvements Agreement.
 - 2. An inspection schedule approved by the Township Engineer.
 - 3. A date certain by which all improvements shall be complete.

- C. Performance Guarantee:
 - 1. The provision of a Performance Guarantee for completion of required improvements which complies with Section 8:01.
 - 2. The estimated cost of the improvements, including a detailed breakdown in a form acceptable to the Township Supervisors, and amount of the Performance Guarantee.
 - 3. Improvements subject to the Improvements Agreement shall be considered approved only after inspection by the engineer and acceptance by the Supervisors.
- D. Developers Responsibilities:
 - 1. The developer shall be solely responsible for damage to any other property;
 - 2. The developer or his agent shall secure or maintain public liability insurance and workers' compensation insurance for the duration of improvements construction. A copy (or other evidence of coverage) shall be submitted to the Township.
 - 3. A save harmless clause to protect the Township from liability.
 - 4. Prevention of erosion, sedimentation, pollution and water damage.
- E. Dedication of streets, transfer of water and sewer lines and easements:
 - 1. A provision for dedication of streets and easements.
 - 2. Provisions for the transfer of ownership of improvements to appropriate utility owners.
- F. After completion of all required improvements, the developer shall provide the Township with a set of reproducible completed improvement record plans prepared by and certified by a Registered Professional Engineer or Professional Land Surveyor showing all streets, storm, and sanitary sewers, water distribution facilities and street monuments complete with elevations, as constructed. The scale of these plans shall be one (1) inch equals fifty (50) feet.
- G. The developer shall be responsible for all engineering and legal costs and expenses for review, inspection, consultations and preparation of agreements.
- H. Provisions for violation of the Improvements Agreement.
- I. Any other lawful terms which the Township Supervisors may require to carry out the provisions of this Ordinance.
- J. Signatures. The development agreement shall be signed by all landowners and/or developers.

8:023 Ownership of Land and Guarantee

A certificate of ownership in the form of Appendix B shall be executed in the exact name in which title is held. If the developer of a subdivision is someone other than the landowner of the subdivision, the developer shall also execute the affidavit mentioned above, along with financial security agreements.

SECTION 8:03 PERFORMANCE GUARANTEE

The Performance Guarantee for completion of required improvements shall meet the following requirements:

8:031 Security:

- A. The Guarantee shall be secured by any of the following:
 - 1. An irrevocable and unconditional letter of credit of a Federal or State chartered lending institution.
 - 2. A restrictive or escrow account in a Federal or State chartered lending institution.
 - 3. Such other financial security approved by the Township Supervisors (which approval shall not be unreasonably withheld).
- B. Such security shall provide for, and secure to the public, the completion of any improvements which may be required on or before the date fixed in the Development Schedule for the completion of such improvements.
- C. Such financial security shall be posted with a bonding company or Federally insured or State chartered lending institution chosen by the party posting the financial security, provided said bonding company or lending institution is authorized to conduct such business within the State.
 - 1. The Township Supervisors may require that evidence be provided that such institution or company has sufficiently adequate and secure assets to cover the security.
 - 2. The Township Supervisors shall be an authorized signatory on any account in which the escrow funds are held and all escrow funds from sales of lots shall be paid directly to such fund, and a monthly statement shall be furnished to the Township.

8:032 Amount:

- A. The amount of financial security to be posted for the completion of the required improvements shall be equal to one hundred ten (110) percent of the cost of completion estimated as of ninety (90) days following the date scheduled for completion by the developer in the official development schedule, and within the process for increases to cover inflation as permitted by the Municipalities Planning Code.
- B. If the party posting the financial security requires more than one (1) year from the date of posting of the financial security to complete the required improvements, the amount of financial security shall be increased by an additional ten percent (10%) for each one (1) year period beyond the first anniversary date from posting of financial security or to an amount not exceeding one hundred ten percent (110%) of the cost of completing the required improvements as reestablished on or about the expiration of the preceding one (1) year period by using the above bidding procedure.

8:033 Multi-Year or Multi-Stage Development. In the case where development is projected over a period of years, the Township Supervisors may authorize submission of final plans by sections or stages of development subject to such requirements or guarantees as to improvements in future sections or stages of development as it finds essential for the protection of any finally approved section of the development.

SECTION 8:04 APPROVAL OF IMPROVEMENTS

8:041 General

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, such portions of the financial security corresponding to improvements which have been completed, inspected, and approved.

8:042 Notice of Completion

When the developer has completed an improvement, the developer shall notify the Township Supervisors in writing by certified or registered mail of such completion and request for release and shall send a copy thereof to the Township Engineer.

8:043 Engineer's Report:

- A. Within thirty (30) days of the receipt of such request, the Township Engineer shall submit a written report to the Township Supervisors certifying which improvements have been completed in accordance with the approved plan.
- B. This report shall be based on the inspections made according to the approved inspection schedule included in the Improvements Agreement and shall recommend approval or rejection of the improvements, either in whole or in part.
- C. If the Township Engineer finds any or all of the improvements to be not as required, he shall include a statement of the reasons for recommending their rejection in the report.

8:044 Release of Funds

See Section 510 of the Pennsylvania Municipalities Planning Code, as amended.

8:045 Completion of Approved Improvements

The Developer shall proceed to complete any improvements approved by the Township Supervisors and, upon completion, request final approval in conformance with the procedures specified in this section.

8:046 Final Release

- A. When the developer has completed all of the necessary and appropriate improvements, the developer shall request Final Release in conformance with the procedures specified in this Section. (See time limitations and procedures in Section 510 of the Municipalities Planning Code).
- B. A maintenance agreement must be in place before final release.

8:047 Appeal

Nothing herein, however, shall be construed in limitation of the developers right to contest or question by legal proceedings or otherwise, any determination of the Township Supervisors or the Township Engineer.

SECTION 8:05 REMEDIES TO EFFECT COMPLETION OF IMPROVEMENTS

8:051 Enforcement of Security

- A. In the event that any improvements which may be required have not been installed as provided in this Ordinance or in accordance with the approved Final Plan, or in the event of bankruptcy of the owner or developer, the Township Supervisors are hereby granted the power to elect to enforce any corporate bond (or other security) by appropriate legal and equitable remedies.
- B. This may include taking all actions necessary to obtain monies under said bond, including but not limited to seizure of undeveloped lots, confession of judgment, suit on the bond, seizure of escrow funds, renovation of building permits and prosecution under the Ordinance.
- C. Rate of Construction. Failure of a developer to construct streets and other public improvements reasonably at the same time or prior to the construction of the buildings served by those streets or public improvements, and at the same rate in time at which buildings are completed, shall be a violation of this Ordinance and a cause for default.

8:052 Completion by Township:

If the 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 Township Supervisors may, at its 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 the improvements.

8:053 Proceeds for Installation 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 Township purpose.

SECTION 8:06 MAINTENANCE AGREEMENT

8:061 Maintenance Agreement Required

- A. All applicants proposing any subdivision or land development which provides for the dedication of improvements required by this Ordinance or any improvements or amenities which appear on the Plan shall be required to enter into a legally binding Maintenance Agreement with the Township prior to acceptance of dedication by the Township.
- B. The dedication of any improvement shall not be accepted by the Township prior to the execution of a Maintenance Agreement and the delivery of the Maintenance Guarantee.

8:062 Terms of Maintenance Agreement

- A. The Maintenance Agreement shall be in the manner and form approved by the Township Solicitor.
- B. The Maintenance Agreement shall require the Applicant to make any repair or reconstruction of any improvement stipulated in the Maintenance Agreement which is specified by the Township Supervisors as necessary by reason to faulty construction, workmanship, or materials.

- C. The Maintenance Agreement shall require the Applicant to maintain at his/her own cost all improvements stipulated in the Maintenance Agreement. This period shall not exceed eighteen (18) months from the date of acceptance or dedication by the Township, except for any special purpose escrow or maintenance agreements required by the Township.
- D. The Maintenance Agreement shall require the posting of financial security to secure 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 exceeding eighteen (18) months from the date of acceptance of dedication.
- E. Snow plowing. It shall be the responsibility of the developer to plow snow and maintain all streets until such time as the Township may accept such streets.

8:063 Public Utilities and Authorities:

If water mains or sanitary sewer lines or both, along with apparatus or facilities related thereto, are to be installed under the jurisdiction and pursuant to the rules and regulations of a public utility or municipal authority separate and distinct from the Township, financial security to assure proper completion and maintenance thereof shall be posted in accordance with the regulations of the controlling public utility or municipal authority and shall not be included within the financial security as otherwise required by this Section.

SECTION 8:07 MAINTENANCE GUARANTEE

8:071 Security:

The Maintenance Guarantee shall be secured by the credit of any of the following:

- A. An irrevocable and unconditional letter of credit of a Federal or State chartered lending institution.
- B. A restrictive or escrow account in a Federal or State chartered lending institution.
- C. Such other financial security approved by the Township Supervisors (which approval shall not be unreasonably withheld).
 - 1. The Township Supervisors may require that evidence be provided that such institution or company has sufficiently adequate and secure assets to cover the security.

8:072 Terms:

Such Maintenance Guarantee shall be in the form approved by the Township Solicitor and Township Supervisors, payable to the Township, to guarantee the maintenance and repair of the streets and other public improvements in the subdivision for eighteen (18) months from the date of acceptance thereof by the Township. The applicant shall prove to the satisfaction of the Township Supervisors that there will be an acceptable system for the long-term maintenance of any storm water management facilities.

8:073 Amount:

The amount of the Maintenance Guarantee shall be determined by the Township.

8:074 Release:

After the expiration of eighteen (18) months from the date of acceptance of said improvements, and upon request from the developer, the Township shall release said Maintenance Guarantee to the developer (or party posting said Maintenance Guarantee) if all improvements are in satisfactory condition.

SECTION 8:08 PROTECTION OF OPEN SPACE AND NON-DEDICATED IMPROVEMENTS

8:081 Open spaces between structures, including those spaces being used as public or private recreational areas, shall be protected by adequate covenants running with the land, by conveyances or dedications.

8:082 Where subdivision or land development plans require communal open space, recreation areas or other communally owned facilities, the developer shall submit a legal instrument or instruments setting forth a plan or manner of permanent care and maintenance of such open spaces, recreational areas and communally owned facilities.

8:083 In cases where the Township will not be accepting dedications of streets, stormwater management facilities, communal recreation areas or communal open spaces, the developer shall provide for an organization or trust for ownership and maintenance.

8:084 If the non-dedicated streets, stormwater management facilities, communal recreation areas or communal open space is deeded to a homeowners association or a nonprofit corporation established on a membership basis, the developer shall file a declaration of covenants and restrictions that will govern the association, to be submitted with the application for Final Plan approval. If there is a homeowners association under the Unit Property Act the developer must file a declaration of rules and regulations. The provisions shall include, but not be limited to, the following:

- A. The homeowners association or nonprofit corporation must be established before lots or homes are sold.
- B. Membership must be mandatory for each lot or home owner and any successive owner.
- C. The non-dedicated streets, stormwater management facilities, communal recreation areas or communal open space restrictions must be permanent, not just for a period of years.
- D. The association must be responsible for liability insurance, local taxes, and the maintenance of the non-dedicated streets, stormwater management facilities, communal recreation areas or communal open space.
- E. Homeowners must pay their pro rata share of the cost. The assessment levied by the association can become a lien on the property.
- F. The association must be able to adjust the assessment to meet changed needs.

8:085 The Township may, at any time and from time to time, accept the dedication of land or any interest therein for public use and maintenance, but the Township need not require, as a condition of the approval of a subdivision or land development, that land proposed to be set aside for non-dedicated streets, stormwater management facilities, communal recreation areas or communal open space be dedicated or made available to public use.

8:086 Maintenance by Township.

- A. In the event that the organization established to own and maintain non-dedicated streets, stormwater management facilities, communal recreation areas or communal open space, or any successor organization, shall at any time after establishment of the subdivision or land development fail to maintain the non-dedicated streets, stormwater management facilities, communal recreation areas or communal open space in reasonable order and condition in accordance with the subdivision or land development plan, the Township may (but shall not be required to) serve written notice upon such organization and/or upon the residents of the subdivision or land development setting forth the manner in which the organization has failed to maintain the common open space in reasonable condition, and said notice shall include a demand that such deficiencies of maintenance be corrected within thirty (30) days thereof. If the deficiencies set forth in the original notice or in any modifications thereof shall not be corrected within said thirty (30) days or any extension thereof, the Township, in order to preserve the taxable values of the properties within the subdivision or land development and to prevent the common open space from becoming a public nuisance, may enter upon said common open space, and maintain the same for a period of up to one (1) year.
- B. If the Board of Supervisors shall determine that such organization is ready and able to maintain said common open space in reasonable condition, the Township shall cease to maintain said common open space at the end of said year or sooner if appropriate. If the Board of Supervisors shall determine that such organization is not ready and able to maintain said common open space in a reasonable condition, the Township may, in its discretion, continue to maintain said common open space during the next succeeding year and, subject to a similar hearing and determination, in each year thereafter.
- C. Any decision of the Board of Supervisors under Section 8:088.A. or Section 8:088.B. above shall be subject to appeal to court in the same manner, and within the same time limitation, as is provided for zoning appeals by the Pennsylvania Municipalities Planning Code, as amended.
- D. The cost of such maintenance by the Township shall be assessed ratably against the properties within the planned residential development that have a right of enjoyment of the non-dedicated streets, stormwater management facilities, communal recreation areas or communal open space, and shall become a lien on said properties. The Township at the time of entering upon said non-dedicated streets, stormwater management facilities, communal recreation areas or communal open space for the purpose of maintenance shall file a notice of lien in the Office of the Prothonotary of Schuylkill County, Pennsylvania, upon the properties affected by the lien within the planned residential development.
- E. The provisions of this Section 8:088 shall be incorporated in all declarations, rules, regulations and similar documents of the homeowners association or a nonprofit corporation relating in any manner to the non-dedicated streets, stormwater management facilities, communal recreation areas or communal open space and shall constitute covenants running with the land.

8:087 Appropriate notes shall be included on the subdivision or land development plans regarding the provisions of this Section 8:08. No instruments or plan notes referred to herein shall be acceptable until approved by the Township Solicitor as to legal form and effect, and the Board of Supervisors as to suitability for the proposed use of the open areas.

ARTICLE IX - ADMINISTRATION AND AMENDMENT

SECTION 9:01 FEES

- 9:011 The Township Supervisors shall establish by resolution a collection procedure and Schedule of Fees to be paid by the subdivider at the time of filing a Preliminary Plan in the case of a Major Subdivision, and prior to filing a Final Plan in the case of a Minor Subdivision. The Schedule of Fees may be modified periodically by resolution of the Township Supervisors.
- 9:012 The schedule of fees shall be obtained from the Township office, and shall be posted therein and in such other places as the Township Supervisors may designate.
- 9:013 The applicant is also required to pay any review fees required by the County Planning Commission, the County Conservation District and any other reviewing agency.
- 9:014 Plans shall not be considered filed until all fees are paid and the applications are properly signed as required.
- 9:015 If the Township expenses associated with reviewing a subdivision or land development plan exceed the total fees that have been paid by an applicant, the applicant shall pay such excess expenses prior to approval of the Final Plans by the Township.

SECTION 9:02 MODIFICATIONS

- 9:021 The provisions of this Ordinance are intended as minimum standards for the protection of the public health, safety and welfare. The Township Supervisors may modify or extend said provisions conditionally in individual cases as may be deemed necessary in the public interest, provided however, that such variation shall not have the effect of nullifying the intent and purpose of this Ordinance. The list of such modifications and the reasons therefore shall be entered in the minutes of the meeting of the Township Supervisors pertaining thereto, and shall be clearly defined and entered on the Final Plan.
- 9:022 The Township Supervisors, after receiving a written request for a modification, including the grounds for such modification, and after providing the Planning Commission with an opportunity to provide a recommendation, shall have the power to pass a written resolution to grant a waiver or modifications to the specific requirements of this Ordinance, where the applicant proves to the satisfaction of the Township Supervisors that, owing to special conditions, a waiver or modification is needed to:
 - A. Avoid an undue hardship that was not self-created and that would result because of the peculiar and uncommon conditions pertaining to the land in question.
 - B. Avoid the imposition of a clearly unreasonable requirement that would not serve any valid public purpose.
 - C. Allow an alternative standard that is clearly proven by the applicant to provide equal or better results.
 - D. Allow a layout or effect improvements that would clearly be more in the public interest than what would occur if the modifications were not granted.
- 9:023 No changes, erasures, modifications or revisions shall be made in any plan of a subdivision after approval has been made by the Township Supervisors and endorsed on the plan, unless the said plan is resubmitted to and approved by the Township Supervisors.

SECTION 9:03 CHALLENGES

A landowner desiring to challenge the validity of any provision of this Ordinance, or any amendment thereof, shall make such challenge in accordance with the provisions of Article VIII of the Act of the General Assembly No.247 of 1968, as amended by Act 170 of 1988.

SECTION 9:04 RECONSIDERATION APPEAL

- 9:041 Any subdivider aggrieved by a finding, decision or recommendation of the Township Planning Commission may request and shall receive an opportunity to appear before the Township Planning Commission to present additional relevant information and request, in writing, reconsideration of the original finding, decision or recommendation.
- 9:042 Any person aggrieved by a finding, decision or recommendation of the Township Planning Commission may present to the Township Supervisors any relevant information at the time the Township Supervisors consider action on the subject plans.
- 9:043 Affirmative action by the Township Supervisors shall authorize the subdivider to continue the application process from the point at which it was interrupted.
- 9:044 Any person aggrieved by action of the Township Supervisors may appeal within thirty (30)days to the Court of Common Pleas of Schuylkill County, as provided in Section 512 of Article V of the Act of the General Assembly No. 247 of 1968, as amended by act 170 of 1988.

SECTION 9:05 PENALTIES

9:051 Preventive Remedies

In addition to other remedies, West Brunswick Township may institute and maintain appropriate actions by law or in equity to restrain, correct or abate violations, to prevent unlawful construction, to recover damages and to prevent the illegal occupancy of a building, structure or premises. The description by metes and bounds in the instrument of transfer or other documents used in the process of selling or transferring shall not exempt the seller or transferor from such penalties or the remedies herein provided. This authority to deny such 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 violation.
- 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.

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

9:052 Enforcement Remedies:

- A. Any person, partnership or corporation who or which has violated of this Ordinance shall, upon being found liable therefore in a civil enforcement proceeding commenced by West Brunswick Township, pay a judgment of not more than six hundred dollars (\$600.00) plus all court costs, including attorney fees incurred by West Brunswick Township as a result thereof. No judgment shall commence or be imposed, levied or be payable until the date of the determination of a violation by the District Justice. If the defendant neither pays nor timely appeals the judgment, West Brunswick Township may enforce the judgment pursuant to the applicable rules of civil procedure. Each day that a violation continues shall constitute a separate violation, unless the District Justice determining that there has been a violation further determines that there was a good faith basis for the person, partnership or corporation violating the Ordinance to have believed that there was no such violation, in which event, there shall be deemed to have been only one such violation until the fifth day following the date of the determination of a violation by the District Justice and there after each day that a violation continues shall be considered a separate violation.
- B. The Court of Common Pleas, upon petition, may grant an order of stay, upon cause shown, tolling the per diem judgment pending a final adjudication of the violation and judgment.
- C. Nothing contained in this section shall be construed or interpreted to grant any person or entity other than West Brunswick Township the right to commence any action for enforcement pursuant to this section.

9:053 In addition to the penalties above, the Township Supervisors may initiate and maintain civil action:

- A. To obtain a writ of injunction against the owner or agent who attempt the improper sale or conveyance of land.
- B. To set aside and invalidate any conveyances of land made prior to Final Plan approval of any subdivision.

9:054 Nothing herein shall prevent the Township from taking such other action necessary to prevent or remedy any violation.

SECTION 9:06 KEEPING OF RECORD:

The Township Planning Commission and the Township Supervisors shall keep a record of their findings, decisions and recommendations relative to all subdivision plans filed for review. Such records shall be made available to the public for review.

SECTION 9:07 RESPONSIBILITY:

The subdivider shall be responsible for observing the procedures established in this Ordinance and for submitting all plans and documents as may be required.

SECTION 9:08 CONFLICTS:

9:081 Whenever there is a difference between the minimum standards specified herein and those included in other official Township regulations the most stringent requirements shall apply.

9:082 All existing ordinances or parts of ordinances which are contrary to the provisions of this Ordinance are hereby repealed to the extent necessary to give this Ordinance full force and effect.

SECTION 9:09 REVISION AND AMENDMENT

9:091 The Township Supervisors may, from time to time on its own motion revise, modify or amend these regulations in order to increase their effectiveness or to expedite the approval of subdivision plans.

9:092 Any revisions, modifications or amendments to these regulations shall be made in accordance with the procedures established by Section 505 of Article V of the Act of the General Assembly No. 247 of 1968, as amended by Act 170 of 1988, after a public hearing on the proposed revisions, modifications or amendments.

SECTION 9:10 SEVERABILITY

It is hereby declared to be the legislative intent that:

9:101 If a court of competent jurisdiction declares any provisions of this Ordinance to be invalid or ineffective in whole or in part, the effect of such decision shall be limited to those provisions which are expressly stated in the decision to be invalid or ineffective, and all other provisions of this Ordinance shall continue to be separately and fully effective.

9:102 The Township Supervisors hereby declare that they would have passed this Ordinance and each section or part thereof irrespective of the fact that any one or more sections or parts thereof be declared invalid.

SECTION 9:11 STATE PLANNING CODE AMENDMENTS

The provisions of this Ordinance that only repeat, summarize or reference provisions of the Pennsylvania Municipalities Planning Code shall be deemed to be automatically superseded and replaced by any applicable amendments to the Pennsylvania Municipalities Planning Code.

SECTION 9:12 ENACTMENT

Enacted and ordained by the Board of Supervisors of West Brunswick Township, Schuylkill County, Pennsylvania, this 7th day of January, 2009, as amended May 3, 2017.

**BOARD OF SUPERVISORS OF
WEST BRUNSWICK TOWNSHIP**

APPENDICES

| | |
|------------|--|
| APPENDIX A | Application for Subdivision and Land Development Plan review (three pages) |
| APPENDIX B | Certificate of Ownership, Acknowledgement of Plan and Offer of Dedication |
| APPENDIX C | Determination of Sight Distance (two pages) |
| APPENDIX D | Stormwater Management Calculation Methodology (three pages) (Table B1 – B3) |

APPENDIX A

WEST BRUNSWICK TOWNSHIP
SCHUYLKILL COUNTY, PA
APPLICATION FOR SUBDIVISION
AND LAND DEVELOPMENT PLAN REVIEW

NAME OF DEVELOPMENT: _____

LOCATION: _____

DATE OF APPLICATION: _____

TYPE OF PLAN: _____

SKETCH PLAN: _____

PRELIMINARY PLAN: _____

(a) NEW SUBMISSION: _____

(b) RE-SUBMISSION: _____

FINAL PLAN: _____

REVISED PLAN OF RECORD: _____

NAME OF LAND OWNER: _____

ADDRESS: _____

TELEPHONE NUMBER: _____

NAME OF APPLICANT: _____

ADDRESS: _____

TELEPHONE NUMBER: _____

INTEREST: _____

EQUITABLE OWNER /
AGENT: _____

ENGINEER OR SURVEYOR RESPONSIBLE FOR PLAN PREPARATION:

ADDRESS: _____

TELEPHONE NUMBER: _____

FAX NUMBER: _____

TOTAL ACREAGE: _____ ACREAGE BEING DEVELOPED: _____

TOTAL NUMBER OF LOTS/UNITS: _____

TYPE OF LAND USE PROPOSED:

RESIDENTIAL

AGRICULTURAL

OTHER

INDUSTRIAL

COMMERCIAL

WATER SUPPLY:

ON-LOT

PUBLIC

OTHER

SEWAGE DISPOSAL:

ON-LOT

PUBLIC

OTHER

STORMWATER DRAINAGE PLAN INCLUDING CALCULATIONS Included_____ Not Included _____

EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN Included_____ Not Included _____

STREET DETAIL: CROSS-SECTION PLAN Included_____ Not Included _____

ZONING DISTRICT(S): _____

ZONING CONFLICTS/CHANGES: _____

LINEAR FEET OF NEW STREETS PROPOSED: _____

TYPE OF OFF-STREET PARKING PROPOSED:

GARAGES

DRIVEWAYS

OTHER (SPECIFY)

ACREAGE PROPOSED FOR RECREATION OR OPEN SPACE: _____

I HEREBY ACKNOWLEDGE AND REQUEST REVIEW OF THIS APPLICATION. TO THE BEST OF MY KNOWLEDGE, ALL THE INFORMATION IDENTIFIED ABOVE IS TRUE, CORRECT AND COMPLETE. IN ADDITION, I HEREBY AUTHORIZE THE BOARD OF SUPERVISORS, PLANNING COMMISSION, ZONING OFFICER, CODE ENFORCEMENT OFFICER, TOWNSHIP ENGINEER, TOWNSHIP SOLICITOR AND TOWNSHIP SEWAGE ENFORCEMENT OFFICER TO ENTER THE PREMISES WHILE THE PROPOSED PLAN IS BEING CONSIDERED FOR MUNICIPAL APPROVAL.

APPLICANT'S SIGNATURE: _____ DATE: _____

LAND OWNER'S SIGNATURE: _____ DATE: _____

FOR MUNICIPAL USE ONLY

NAME OF APPLICANT: _____

APPLICATION DATE: _____ FILE NUMBER: _____

MUNICIPAL REVIEW FEE COLLECTED: _____
(Amount) (Check Number) (Cash)

| | <u>Date Submitted</u> | <u>Date of Response</u> |
|--|-----------------------|-------------------------|
| SCHUYLKILL COUNTY PLANNING COMMISSION | | |
| WEST BRUNSWICK TOWNSHIP PLANNING COMMISSION | _____ | _____ |
| WEST BRUNSWICK TOWNSHIP BOARD OF SUPERVISORS | _____ | _____ |
| PaDEP – SEWAGE MODULE | _____ | _____ |
| SCHUYLKILL COUNTY SOIL CONSERVATION DISTRICT | _____ | _____ |
| PaDEP – WATER MODULE | _____ | _____ |
| ADDITIONAL MUNICIPAL REVIEW FEES | _____ | _____ |

APPENDIX B

CERTIFICATE OF OWNERSHIP, ACKNOWLEDGMENT OF PLAN AND OFFER OF DEDICATION

On this, the _____ day of _____, _____ before me, the undersigned officer, personally appeared (Name of Owner) known to me or satisfactorily proven, who being duly sworn according to law, deposes and says that he is the owner or equitable owner of the property shown on this Plan, that the Plan was prepared at his direction, and that he acknowledges the same to be his act and Plan, and desires the same to be recorded as such according to law, and that all streets shown and not heretofore dedicated are hereby dedicated to public use.

Owner/Equitable Owner

Notary Public Name/Seal Commission Expiration Date

CERTIFICATE OF ACCURACY

I hereby certify that the Plan shown and described hereon is true and correct to the accuracy required by the West Brunswick Township Subdivision and Land Development Ordinance.

Surveyor Date

CERTIFICATE FOR APPROVAL BY THE PLANNING COMMISSION

At a meeting held on the day of _____, _____, the West Brunswick Township Planning Commission, by motion, recommended approval of the (Name of Subdivision or Land Development Plan), as shown and described hereon.

CERTIFICATE FOR APPROVAL BY THE BOARD OF SUPERVISORS

At a meeting held on the day of _____, _____, the West Brunswick Township Board of Supervisors, by motion, approved the (Name of Subdivision or Land Development), as shown and described hereon.

APPENDIX C

Determination Of Sight Distances At Intersections
Of New Driveways And Streets With Existing Township Roads

Access driveways shall be located at a point within the property frontage limits which provides at least the minimum safe stopping sight distance (SSSD) calculated using the formula given below. (SSSD's for most situations can be obtained directly or by interpretation from tables 1 and 2 of this Appendix.

Note that the term "driveway" as used above refers to every entrance or exit used by vehicular traffic to or from properties abutting a Township road. The term includes proposed streets, lanes, alleys, courts, and ways.

The calculated SSSD shall be obtainable and measured from a point ten (10) feet back from the pavement edge and at an elevation of 3.5 feet above the road surface.

If the minimum SSSD's cannot be achieved, the Township may exercise one or more of the following options:

1. Prohibit left turns by exiting vehicles;
2. Restrict turning movements to right turns into the driveway;
3. Require installation of a right turn acceleration or deceleration lane;
4. Require installation of a separate left turn standby lane;
5. Alter the horizontal or vertical geometry of the roadway; or
6. Deny access to the road or street.
7. Reduce the speed limit.

Formula

The following formula for calculating SSSD is reproduced from the Pennsylvania Code Title 67, Chapter 441 (Access to and Occupancy of Highways by Driveways and Local Roads).

$$SSSD = 1.47 Vt + \frac{V^2}{30(f + 0.01g)}$$

- SSSD = Minimum safe stopping sight distance (feet)
- V = Velocity of vehicle (miles per hour)
- t = Perception time of motorist (average = 2.5 seconds)
- f = Wet friction of pavement (average = 0.30)
- g = Percent grade of roadway approaching intersection, positive (+) for uphill or negative (-) for downhill (see example below)

Sample Using Formula

A new driveway will be created along an existing road with an 8% grade on which the dominant vehicle speed is 45 miles per hour. Determine the SSSD for vehicles approaching from both directions towards the new intersection.

For vehicles approaching uphill towards the intersection, use g = +8. (note that g is positive)

$$SSSD = 1.47 \times 45 \times 2.5 + \frac{(45)^2}{30 [.30 + .01(8)]} = 343 \text{ feet}$$

For vehicles approaching downhill towards the intersection, use g = -8. (note that g is negative)

$$SSSD = 1.47 \times 45 \times 2.5 + \frac{(45)^2}{30 [.30 + .01(-8)]} = 472 \text{ feet}$$

Tables 1 and 2

Tables 1 and 2 give SSSD's calculated using the above formula for vehicles approaching downhill and uphill respectively towards intersections for various speeds and road grades. For circumstances not covered adequately by the tables, the formula above should be used.

APPENDIX C

Table 1 SSSD's for vehicles approaching downhill towards an intersection

| Grade Level | Speed (MPH) | | | | |
|-------------|-------------|-----|-----|-----|------|
| | 25 | 35 | 45 | 55 | 65 |
| 1% | 161 | 265 | 390 | 538 | 708 |
| 2% | 163 | 270 | 398 | 550 | 724 |
| 3% | 166 | 275 | 406 | 562 | 742 |
| 4% | 169 | 280 | 415 | 575 | 760 |
| 5% | 172 | 286 | 425 | 590 | 780 |
| 6% | 175 | 292 | 435 | 605 | 802 |
| 7% | 178 | 299 | 446 | 622 | 825 |
| 8% | 181 | 306 | 458 | 640 | 851 |
| 9% | 186 | 315 | 472 | 660 | 879 |
| 10% | 191 | 323 | 486 | 682 | 909 |
| 11% | 196 | 333 | 502 | 706 | 943 |
| 12% | 202 | 344 | 521 | 733 | 980 |
| 13% | 207 | 356 | 540 | 762 | 1021 |
| 14% | 214 | 369 | 562 | 795 | 1067 |

Table 2 SSSD's for vehicles approaching uphill towards an intersection

| Grade Level | Speed (MPH) | | | | |
|-------------|-------------|-----|-----|-----|-----|
| | 25 | 35 | 45 | 55 | 65 |
| 1% | 159 | 260 | 383 | 527 | 693 |
| 2% | 157 | 256 | 376 | 517 | 679 |
| 3% | 155 | 252 | 370 | 507 | 666 |
| 4% | 153 | 249 | 363 | 499 | 653 |
| 5% | 151 | 245 | 358 | 490 | 641 |
| 6% | 150 | 242 | 353 | 482 | 630 |
| 7% | 148 | 239 | 348 | 475 | 620 |
| 8% | 147 | 236 | 343 | 467 | 610 |
| 9% | 145 | 233 | 338 | 461 | 600 |
| 10% | 144 | 231 | 334 | 454 | 591 |
| 11% | 143 | 228 | 330 | 448 | 582 |
| 12% | 141 | 226 | 326 | 442 | 574 |
| 13% | 140 | 224 | 322 | 436 | 566 |
| 14% | 139 | 221 | 319 | 431 | 559 |

APPENDIX D

TABLE B-1
Runoff Curve Numbers (CN)
(From NRCS (SCS) TR-55)

| LAND USE DESCRIPTION | HYDROLOGIC SOIL GROUP | | | |
|--|-----------------------|----|----|----|
| | A | B | C | D |
| Open Space | 44 | 65 | 77 | 82 |
| Orchard | 44 | 65 | 77 | 82 |
| Meadow | 30** | 58 | 71 | 78 |
| Agricultural | 59 | 71 | 79 | 83 |
| Forest | 36** | 60 | 73 | 79 |
| Commercial (85% Impervious) | 89 | 92 | 94 | 95 |
| Industrial (72% Impervious) | 81 | 88 | 91 | 93 |
| Institutional (50% Impervious) | 71 | 82 | 88 | 90 |
| Residential | | | | |
| Average Lot Size | % Impervious | | | |
| 1/8 acre or less* | 65 | 59 | 74 | 82 |
| 1/8 – 1/3 acre | 34 | 53 | 69 | 80 |
| 1/3 – 1 acre | 23 | 46 | 66 | 78 |
| 1 –2 acres | 12 | 59 | 74 | 82 |
| Farmstead | | 98 | 98 | 98 |
| * Smooth Surfaces (Concrete, Asphalt) | | | | |
| * Compacted Gravel or Bare Compacted Soil | | | | |
| * Loose Gravel | | 76 | 85 | 89 |
| Water | | 98 | 98 | 98 |
| Mining/Newly Graded Areas (Pervious Areas Only) | | 77 | 86 | 91 |

* Includes Multi-Family Housing unless justified lower density can be provided.

** Caution – CN values under 40 may produce erroneous modeling results.

Note: Existing site conditions of bare earth or fallow ground shall be considered as meadow when choosing a CN value.

APPENDIX D

TABEL B-2
 RATIONAL RUNOFF COEFFICIENTS
 (AMC II)

| LAND USE DESCRIPTION | HYDROLOGIC SOIL GROUP | | | | | |
|---|-----------------------|--------------|------|-----|-----|-----|
| | A | B | C | D | | |
| Cultivated Land: without conservation treatment | .49 | .67 | .81 | .88 | | |
| : with conservation treatment | .27 | .43 | .61 | .67 | | |
| Pasture or range land: poor condition | .38 | .63 | .78 | .84 | | |
| : good conditions | ---* | .25 | .51 | .65 | | |
| Meadow: good conditions | ---* | ---* | .44 | .61 | | |
| Wood or Forest Land: thin stand, poor cover, no mulch | ---* | .34 | .59 | .70 | | |
| : good cover | ---* | ---* | .45 | .59 | | |
| Open Spaces, lawns, parks, golf courses, cemeteries | | | | | | |
| Good conditions: grass cover on 75% or more of the area | ---* | .25 | .51 | .65 | | |
| Fair conditions: grass cover on 50% to 75% of the area | ---* | .45 | .63 | .74 | | |
| Commercial and business areas (85% impervious) | .84 | .90 | .93 | .96 | | |
| Industrial districts (72% impervious) | .67 | .81 | .88 | .92 | | |
| Residential: | | | | | | |
| Average Lot Size | | % Impervious | | | | |
| 1/8 acre or less | 65 | | .59 | .76 | .86 | .90 |
| 1/4 acre | 38 | | .25 | .49 | .67 | .78 |
| 1/3 acre | 30 | | ---* | .49 | .67 | .78 |
| 1/2 acre | 25 | | ---* | .45 | .65 | .76 |
| 1 acre | 20 | | ---* | .41 | .63 | .74 |
| Paved parking lots, roofs, driveways, etc. | .99 | .99 | .99 | .99 | | |
| Streets and roads: | | | | | | |
| Paved with curbs and storm sewers | .99 | .99 | .99 | .99 | | |
| Gravel | .57 | .76 | .80 | .88 | | |
| Dirt | .49 | .69 | .91 | .84 | | |

Notes: Values are based on S.C.S. definitions and are average values.

Values indicated by ---* should be determined by the design engineer based on site characteristics

Source: New Jersey Department of Transportation, Technical Manual for Stream Encroachment, August 1984

TABLE B-3
MANNING ROUGHNESS COEFFICIENTS
Roughness Coefficients (Manning's "n") For Overland/Sheet Flow
(From U.S. Army Corps of Engineers & NRCS TR-55)

| <u>Surface Description</u> | <u>n</u> | | |
|--|----------|---|------|
| Dense Growth | 0.4 | - | 0.5 |
| Pasture | 0.3 | - | 0.4 |
| Lawns | 0.2 | - | 0.3 |
| Bluegrass Sod | 0.2 | - | 0.5 |
| Short Grass Prairie | 0.1 | - | 0.2 |
| Sparse Vegetation | 0.05 | - | 0.13 |
| Bare Clay – Loam Soil (eroded) | 0.01 | - | 0.03 |
| Concrete/Asphalt – very shallow depths | | | |
| (less than 1/3 inch) | 0.10 | - | 0.15 |
| - small depths | | | |
| (1/4 inch to several inches) | 0.05 | - | 0.10 |
| Fallow (no residue) | | | 0.05 |
| Cultivated Soils | | | |
| Residue cover Less Than or = 20% | | | 0.06 |
| Residue Cover Greater Than 20% | | | 0.17 |
| Grass | | | |
| Dense Grasses | | | 0.24 |
| Bermuda Grass | | | 0.41 |
| Range (natural) | | | 0.13 |
| Woods (Light Underbrush) | | | 0.40 |

Roughness Coefficients (Manning's "n") For Channel Flow

| <u>Reach Description</u> | <u>n</u> |
|---|--------------|
| Natural stream, clean, straight, no rifts or pools | 0.03 |
| Natural stream, clean, winding, some pools or shoals | 0.04 |
| Natural stream, winding, pools, shoals, stony with some weeds | 0.05 |
| Natural stream, sluggish deep pools and weeds | 0.07 |
| Natural stream or swale, very weedy or with timber underbrush | 0.10 |
| Concrete pipe, culvert or channel | 0.012 |
| Corrugated metal pipe | 0.012-0.027* |

* depending upon type, coating and diameter