

SUBDIVISION AND LAND
DEVELOPMENT
ORDINANCE
OF
MARTIC TOWNSHIP

ORDINANCE NO. 03-07-16 B

Enacted March 7, 2016

ARTICLE 1

SHORT TITLE, INTENT AND AUTHORITY

Section 101. Short Title.1
Section 102. Purpose.....1
Section 103. Authority and Jurisdiction.....2
Section 104. Enactment Authority.2
Section 105. Applicability.2
Section 106. Prior Subdivision and Land Development Regulations.....2

ARTICLE 2

INTERPRETATION AND DEFINITIONS

Section 201. General Interpretation.4
Section 202. Definitions.....4

ARTICLE 3

PLAN PROCESSING PROCEDURE

Section 301. Scope.15
Section 302. Sketch plans.15
Section 303. Formal Applications.....15
Section 304. Application Acceptance for Review.16
Section 305. Preliminary Review Process.16
Section 306. Final Plans and Preliminary/Final Plans.20
Section 307. Expedited Processing of Certain Plans.22
Section 308. Improvement Construction Plans.....22
Section 309. Recording of Final Plans and Preliminary/Final Plans.23
Section 310. Changes to Recorded Plans.....24

ARTICLE 4

INFORMATION TO BE SHOWN ON OR SUBMITTED WITH
SUBDIVISION AND LAND DEVELOPMENT PLANS

Section 401. General Plan Requirements.....25
Section 402. Required Reports.31
Section 403. Sketch Plans.41
Section 404. Preliminary Plans.42
Section 405. Final and Preliminary/Final Plans.....44
Section 406. Lot-Line Change/Lot Add-on Plans.....48

ARTICLE 5

IMPROVEMENT CONSTRUCTION ASSURANCES

Section 501. Completion of Improvements; Guarantees.....50
Section 502. Financial Security.51
Section 503. Release from Financial Security.52
Section 504. Remedies to Effect Completion of Improvements.....52
Section 505. Inspections During Construction.52
Section 506. Dedication of Improvements.....52
Section 507. Effect of Plan Recording on Dedication and Reservations..... 53
Section 508. As-Built Plans..... 53

ARTICLE 6

DESIGN STANDARDS

Section 601. General.....54
Section 602. Streets, Access Drives and Driveways.....55
Section 603. Vehicular Parking Facilities.....67
Section 604. Blocks and Lots.....70
Section 605. Easements.73
Section 606. Survey Monuments and Markers.74
Section 607. Storm Water Management.74
Section 608. Landscaping.75
Section 609. Sanitary Wastewater Disposal and Water Supply.77
Section 610. Historic and Cultural Resources.84

ARTICLE 7

MOBILE HOME PARKS

Section 701. Processing Procedures.86
Section 702. Water Supply; Sewage Disposal.....86
Section 703. Streets, Curbs and Sidewalks.....86
Section 704. Lot Size and/or Density.86
Section 705. Storm Drainage; Erosion and Sedimentation; Floodplain Controls.86
Section 706. Lighting.....86
Section 707. Landscaping.....86
Section 708. Solid Waste Disposal.....87

ARTICLE 8

ADMINISTRATION

Section 801. Modifications and Waivers.....88
Section 802. Enforcement.....89
Section 803. Appeals.....89
Section 804. Violations and Penalties; Preventative Remedies.....89
Section 805. Fees and Charges.....90
Section 806. Construal of Provisions.....90
Section 807. Severability.....91
Section 808. Effective Date.....91

APPENDICES

Appendix No. 1 -- Certificates, Acknowledgments, and Verifications

Appendix No. 2 -- Forms of Financial Security

Appendix No. 3 -- Roadways

Appendix No. 4 -- Lot Grading Plan Examples

Appendix No. 5 -- Curb Improvements

Appendix No. 6 -- Sidewalk Improvements

Appendix No. 7 -- Lot Layouts

Appendix No. 8 -- Illumination Guidelines

TOWNSHIP OF MARTIC

Lancaster County, Pennsylvania

ORDINANCE NO. 03-07-16 B

THE MARTIC TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE TO STATE AND ESTABLISH SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WITHIN THE TOWNSHIP OF MARTIC, LANCASTER COUNTY, PENNSYLVANIA, INCLUDING, BUT NOT LIMITED TO, REGULATIONS FOR SUBMISSION OF PLANS, INFORMATION TO BE INCLUDED ON PLANS, DESIGN STANDARDS, AND ENFORCEMENT PROVISIONS.

BE AND IT IS HEREBY ORDAINED AND ENACTED by the Board of Supervisors of the Township of Martic, Lancaster County, Pennsylvania, as follows:

ARTICLE 1

SHORT TITLE, INTENT AND AUTHORITY

Section 101. Short Title.

This Ordinance shall be known and may be cited as the Martic Township Subdivision and Land Development Ordinance.

Section 102. Purpose.

This Ordinance is adopted for the following purposes:

- A. To promote and protect the public health, safety, morals and welfare.
- B. To promote orderly, efficient, integrated and harmonious development in the Township, as a means of fulfilling the growth management goals of the Comprehensive Plan.
- C. To require sites suitable for building purposes and human habitation in keeping with the standards of quality existing in the Township and to alleviate peril from fire, flood, erosion, excessive noise, smoke or other menace.
- D. To coordinate proposed streets and other improvements with existing or proposed streets, parks or other features of the Comprehensive Plan and to provide for drainage, water supply, sewage disposal and other appropriate utility services.
- E. To encourage preservation of adequate open spaces for recreation, light and air and maintenance of the natural amenities characteristic of the Township and its residential, commercial, agricultural, industrial, and public areas.
- F. To ensure conformance of subdivision and land development plans with the Comprehensive Plan, Zoning Ordinance, and public improvement plans and to ensure coordination of intergovernmental improvement plans and programs.
- G. To secure equitable treatment of all subdivision and land development plans by providing uniform procedures and standards.
- H. To ensure that developments are environmentally sound by requiring preservation of the natural features of the areas to be developed to the greatest extent practicable, to maintain the economic well-being of the Township and to prevent unnecessary or undesirable blight, runoff and pollution.
- I. To secure the protection of water resources and drainageways.
- J. To establish provisions governing the standards by which streets shall be granted and improved, and walkways, curbs, gutters, street lights, fire hydrants, water and sewage facilities and other improvements shall be installed as a condition precedent to final approval of plats.

Section 103. Authority and Jurisdiction.

No land development or subdivision of any lot, tract or parcel of land shall be made and no street, sanitary sewer, storm sewer, water main, 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 the provisions of this Ordinance.

The authority for the control and regulation of subdivision and land development within the Township shall be as follows:

- A. Approval by the Board of Supervisors. The Board of Supervisors shall be vested with the authority to approve or disapprove all subdivision and land development plans.
- B. Review by the Township Planning Commission. Plans for subdivision and land development located within the Township shall be submitted to the Township Planning Commission for review and report. Said submission shall take place before approval of any plans by the Board of Supervisors.
- C. Review by the County Planning Commission. Plans for subdivision and land development located within the Township shall be submitted to the County Planning Commission for review and report. Said submission shall take place before approval of any plans by the Township. However, if a report is not received from the County Planning Commission within 30 days after submission, the Township may proceed without the report.

Section 104. Enactment Authority.

This Ordinance is enacted pursuant to the authority of the MPC and the Second Class Township Code and governs all subdivisions and land developments within Martic Township.

Section 105. Applicability.

The standards and requirements contained in this Ordinance shall apply as minimum standards for subdivisions and land developments located within the Township. However, when the Township in its Zoning Ordinance, Storm Water Management Ordinance, Uniform Construction Code Ordinance, road ordinance, or other ordinance, code, resolution, or regulation other than this Ordinance, imposes more restrictive standards and requirements than contained herein, such other standards and requirements shall prevail. Approval of a plan by the Township shall not be construed as an indication that the plan complies with the other standards or requirements.

Section 106. Prior Subdivision and Land Development Regulations.

- A. The provisions of this Ordinance shall not affect an application for approval of a preliminary or final plan which is pending County Planning Commission action at the time of the effective date of this Ordinance, in which case the applicant shall be entitled to a decision in accordance with the governing ordinances as they stood at the time the application for the plan was filed. Additionally, this Ordinance shall not affect any suit or prose-

cution pending or to be instituted, to enforce any provision of the Lancaster County Subdivision and Land Development Ordinance, or its applicable predecessor regulations, on an act done, contract executed, or liability incurred prior to the effective date of this Ordinance, nor shall any provisions of this Ordinance be construed to waive the obligations imposed upon an applicant to complete a previously approved preliminary or final plan including the installation of all improvements required hereunder, in strict compliance with the requirements of the Lancaster County Subdivision and Land Development Ordinance or any applicable predecessor regulations.

- B. If an applicant has received approval of a preliminary or final plan from the County Planning Commission prior to the effective date of this Ordinance, no provision of this Ordinance shall be applied to adversely affect the right of the applicant to commence and complete any aspect of the approved preliminary or final plan in accordance with the terms of such approval within five (5) years of the date of such application. When approval of a final plan has been preceded by approval of a preliminary plan, the five (5) years shall be counted from the date of preliminary plan approval. If there is any doubt as to the terms of approval, the terms shall be construed in light of the provisions of the governing ordinances or plans as they stood at the time when the application for such approval was duly filed.

ARTICLE 2

INTERPRETATION AND DEFINITIONS

Section 201. General Interpretation.

In this Ordinance the following rules of interpretation shall be used:

- A. The word "lot" includes the word "plot" or "parcel".
- B. Words in the present tense may imply the future tense.
- C. Words used as singular include the plural.
- D. The masculine gender includes the feminine and neuter genders.
- E. The word "person" includes a partnership, corporation, association, trust, estate or any other legally recognized entity as well as an individual.
- F. The word "shall" is to be interpreted as mandatory; the word "may" as discretionary.
- G. References to codes, ordinances, resolutions, plans, maps, governmental bodies, commissions or agencies or officials are to codes, ordinances, resolutions, plans, maps, governmental bodies, commissions or agencies or officials of the Township as in effect or office from time to time including amendments thereto or revisions or successors thereof, unless the text indicates another reference is intended.
- H. Any word or phrase which is defined in the MPC and not defined in this Article shall have the meaning as set forth in the MPC.
- I. Any word or phrase which is defined in the Zoning Ordinance and not defined in this Article shall have the meaning as set forth in the Zoning Ordinance.

Section 202. Definitions.

Unless otherwise stated, the following words and phrases shall be construed throughout this Ordinance to have the meanings indicated in this Section:

AADT (Annual Average Daily Traffic) - A value computed by application of a day of the week by month factor to an average 24 hour traffic count. Such information is available in the latest volume of the PennDOT Traffic Data Collection and Factor Development Report. The value may also be derived from actual on-site traffic counts by an engineer.

Access Drive - A private drive providing vehicular access to and between parking areas for more than two parking spaces within a land development or any drive servicing two or more units of occupancy on a single lot.

Act 537 Plan – The official sewage facilities plan adopted by the Township pursuant to the Sewage Facilities Act.

ADA – The federal Americans with Disabilities Act and the regulations promulgated by federal agencies to implement the ADA.

ADT – Average daily traffic.

Agricultural Land - Land used exclusively for the cultivation of the soil, the production of crops or livestock, or the science of forestry; also, land diverted from agricultural use by an active Federal farm program, provided the diverted land has a conservation cover of grass, legume, trees, or wildlife shrubs. Agricultural land may include, to a minor degree, farmsteads inhabited by the cultivator of the land housing for farm employees, and land used for preparation of agricultural products by the cultivator of the land.

Alluvial Soil - Soils formed from material such as gravel, sand, or silt deposited by a stream of water and showing little or no modification of the original materials by the soil forming process. These soils are further identified by the Soil Survey or by an on-site assessment by a soil scientist.

Applicant - A landowner or developer who has filed an application for development including his heirs, successors and assigns.

As-Built Plan - A set of prints of the improvements showing the changes made during the construction process.

Base - That portion of a street or road below the paved surface which shall be constructed in accordance with this Ordinance.

Block - An area bounded by streets.

Board of Supervisors - The Martic Township Board of Supervisors.

Building. Any enclosed or open structure, other than a boundary wall or fence, occupying more than four square feet of area and/or having a roof supported by columns, piers, or walls.

- A. **Building, Accessory.** A detached, subordinate building, the use of which is customarily incidental and subordinate to that of the principal building, which is located on the same lot as that occupied by the principal building. Farm buildings not intended for habitation are considered to be accessory buildings.
- B. **Building, Principal.** A building which is enclosed within exterior walls or fire walls, and is built, erected, and framed of component structural parts. The principal building is also designed for housing, shelter, enclosure, and support of individuals, animals, or property of any kind, and is a main structure on a given lot.

Building Setback Line - A line as defined in and established by the Zoning Ordinance.

Cartway - The portion of a street or alley intended for vehicular use including travel lanes but excluding shoulders, curbs and sidewalk.

Clear Sight Triangle - An area of unobstructed vision at intersections of two or more streets, access drives or alleys. It is defined by lines of sight between points at a given distance from the intersection of the centerlines of both streets.

COE - The United States Army Corps of Engineers or any successor federal entity charged with regulation of wetlands.

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

Community Sewage System - A sewage disposal system, other than a public sewer system, which provides sewage disposal for two or more units of occupancy which shall comply with all applicable regulations of the DEP or other regulatory agency.

Community Water System - A water supply system, other than a public water system, providing water for more than two units of occupancy which shall comply with all applicable regulations of the DEP or other regulatory agency.

Comprehensive Plan - The plan, or parts thereof, which the Board of Supervisors has adopted in accordance with MPC Article III showing its recommendations for such systems as parks and recreation facilities, water supply, sewerage and sewage disposal, transportation highways, civic centers and other public improvements which affect the development of the Township.

Conservation District - The Lancaster County Conservation District or any agency successor thereto.

Corner Lot - A lot abutting upon two streets at their intersection.

Cost of Improvements - The amount which the Township Engineer estimates that the Township would be required to expend in order to complete the improvements proposed by a developer in a subdivision or land development plan, in the event the developer fails to complete such improvements within the time set forth in the subdivision or land development plan or otherwise agreed upon, which estimate shall take into consideration anticipated inflation in construction costs, bid preparation costs, prevailing wages, and other costs which the Township will incur in the event it is required to complete the proposed improvements.

County Planning Commission - The Lancaster County Planning Commission.

Cul-de-sac - A street which either (i) intersects at one end with another street and terminates at the other end in a vehicular turnaround; or (ii) intersects at one end with another street and loops back and intersects with itself roughly in a P shape.

Curb - The raised edge of a pavement to confine surface water to the pavement and to protect the abutting land from vehicular traffic; all curbs shall be constructed in accordance with the specifications in this Ordinance.

Density - The number of dwelling units permitted in relation to the land area actually in use or proposed to be used for residential purposes, exclusive of private or public street rights-of-way.

DEP - The Department of Environmental Protection of the Commonwealth of Pennsylvania or any agency successor thereto.

Design Speed - The design speed for streets designed in accordance with this Ordinance shall equal the proposed speed limit plus five miles per hour.

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

Double Frontage Lot - A lot, other than a corner lot, fronting on two streets.

Drainage Easement - The land required for installation of storm sewer or drainage facilities, or required along a watercourse (natural or man made) for preservation of the channel and provision of adequate width for storm flow conveyance.

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

Driveway - A minor vehicular right-of-way providing access between a street and a parking area or garage within a lot or property for a single residential unit of occupancy, which shall comply in all respects with the Township Driveway Ordinance.

Dwelling Unit - A building permanently erected on and attached to a foundation, having a fixed location on the ground, and used as the living quarters exclusively for one family.

Easement - A limited right of use granted in private land for public or quasi-public purpose. It is an area, within which, the owner shall not have the right to make use of the land in a manner that violates the right of the grantee.

Elevation - The vertical distance above or below a datum which is assumed to be level. The datum to be used for determination of all elevations within the Township shall be the National Geodetic Survey Datum of 1988.

Engineer - A professional engineer currently licensed to practice as such in the Commonwealth of Pennsylvania.

Environmental Covenants Act – The Pennsylvania Uniform Environmental Covenants Act, 27 Pa. C.S. §6501 et seq.

EPA - The United States Environmental Protection Agency or any agency successor thereto.

FEMA - The Federal Emergency Management Agency or any agency successor thereto.

Floor Elevation - The elevation of the lowest level of a particular building including the basement, crawl space, or other levels which may be occupied by persons or infrastructure which serves the building.

Frontage - The horizontal or curvilinear distance along the street line upon which a lot abuts.

Future Right-of-way - (1) The right-of-way width required for the expansion of existing streets to accommodate anticipated future traffic loads. (2) A right-of-way established to provide future access to or through undeveloped land.

Geologist - A professional geologist registered or licensed as such by the Commonwealth of Pennsylvania.

Grade - The slope expressed in a percent, which indicates the rate of change of elevation in feet per hundred feet.

Gutter - That portion of a right-of-way carrying surface drainage.

Hardship - A condition, not economic in nature, not caused by the applicant or developer for which he may request a waiver.

Highway Capacity Manual - The most recent edition of the *Highway Capacity Manual* as published by the Transportation Research Board or successor entity.

Historical Feature - Any building, site, structure, object, district, or area that:

is listed on the "National Register of Historical Places"; or

has received a "Determination of Eligibility" for the "National Register of Historical Places" from the National Park Service; or

is listed on the "Lancaster County Historic Sites Register" or the "Comprehensive Site Survey of Lancaster County", both of which are maintained by the Historic Preservation Trust of Lancaster County; or

is listed on any officially adopted Township register or inventory of historical features.

This term shall include the site, principal structures, accessory structures, yards, vegetation, fences, road alignments, and signage associated with such features.

Homeowners' Association - An unincorporated association or not-for-profit corporation whose membership consists of the lot owners of a residential development. A homeowners' association shall also include a condominium unit owners' association. All such associations shall comply with the requirements for an owners' associations contained in the Pennsylvania Uniform Con-

dominium Act, 68 Pa. C.S. §3101 et seq., or the Pennsylvania Uniformed Planned Community Act, 68 Pa.C.S. §5101 et seq.

Improvements - Pavements, curbs, gutters, sidewalks, water mains, sanitary sewers, storm sewers, storm water management facilities, grading, street signs and plantings, and other items for the welfare of the property owners and the public. Improvement shall also include the creation of a nonresidential building, the addition of more than 3,500 square feet to a nonresidential building, the conversion of a non-residential building into a greater or lesser number of units of occupancy, or the conversion of a single family residence into two or more dwelling units. Improvements shall not include the erection of a residential accessory building or structure including, but not limited to, detached garages (not exceeding two vehicle capacity), swimming pools or tennis courts, or the erection of an accessory building or structure for agricultural purposes on a farm in excess of 5,000 square feet.

ITE - Institute of Transportation Engineers.

Land Development - Any of the following activities:

The improvement of one lot or two or more contiguous lots, tracts or parcels of land for any purpose involving:

A group of two or more residential or non-residential buildings, whether proposed initially or accumulatively, or a single non-residential building on a lot or lots regardless of the number of occupants or tenure; or:

The division or allocation of land or space, whether initially or accumulatively, between or among two or more existing or prospective occupants by means of, or for the purpose of streets, common areas, leaseholds, condominiums, building groups or other features; or:

The construction of significant accessory or principal farm-related buildings in excess of 5,000 square feet; or

A subdivision of land.

"Land Development" shall not include:

The conversion of an existing single family detached dwelling or single family semi-detached dwelling into not more than three residential units, unless such units are intended to be a condominium; or

The addition of an accessory building containing 5,000 or fewer square feet, including farm buildings, on a lot subordinate to an existing principal building.

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

Landscape Architect - A professional landscape architect currently licensed to practice as such in the Commonwealth of Pennsylvania.

Location Map - A map showing the site with relation to adjoining areas.

Lot - A plot or parcel of land which is, or in the future, may be offered for sale, conveyance, transfer or improvement as one parcel, regardless of the method or methods by which title was acquired.

Lot Area - The lot area as defined in the Zoning Ordinance.

Lot Width - The width of a lot measured as established by the Zoning Ordinance.

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

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

Mobile Home Park - A parcel or contiguous parcels of land which has been so designated and improved that it contains two or more mobile home lots for the placement thereon of mobile homes.

Monument - A survey marker which may be made of metal, concrete, or stone which is placed in a location to indicate ends of lot lines, points of curvature, points of tangency in boundaries describing lots, parcels of land, or of rights-of-way.

MPC - The Pennsylvania Municipalities Planning Code, Act of July 31, 1968, P.L. 805, as re-enacted and amended, 53 P.S. §10101, and as may be amended in the future.

Non-residential - Any use other than single or multi-family dwellings. An institutional use in which persons may reside, such as a dormitory, prison, nursing home or hospital, shall be considered a non-residential use.

NWI - National Wetland Inventory.

Official Map – Any official map adopted by the Township pursuant to Article IV of the MPC.

Ordinance - The Martic Township Subdivision and Land Development Ordinance.

Owner - The owner of record of a parcel of land.

Parcel - A lot or tract of land.

Parent Tract - All contiguous land owned by the same landowner and all land owned by the same landowner on January 2, 1988, which is or was contiguous except for the presence of public or private roads and/or the presence of lots or parcels adversed from the original tract since January 2, 1988.

Parking Area - An area on a lot utilized for the parking of vehicles for a single unit of occupancy.

Parking Compound - An area on a lot containing any use other than agricultural or one single family detached dwelling for the parking of three or more motor vehicles.

Parking Space - An off-street space available for the parking of one motor vehicle and having usable access to a street. Garage space shall not be included in determining the required number of parking spaces.

Peak Hour - The hour during which the heaviest volume of vehicular traffic occurs on a given segment of road.

PennDOT - The Department of Transportation of the Commonwealth of Pennsylvania or any agency successor thereto.

PHMC - The Pennsylvania Historical and Museum Commission or any entity successor thereto.

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

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

Plan, Improvement Construction - A complete and exact subdivision and/or land development plan, the sole purpose of which is to permit the construction of only those improvements required by this Ordinance, as an alternative to guaranteeing the completion of those improvements by the posting of financial security in accordance with the requirements of Article 5.

Plan, Lot Line Change/Lot Add-On - A complete and exact subdivision or land development plan, prepared as for official recording, the sole purpose of which is to increase the lot area of an existing lot or tract or for the consolidation of two or more existing lots or tracts to create fewer lots or tracts with revised lot lines.

Plan, Preliminary - A tentative subdivision or land development plan, in lesser detail than a final plan, showing the salient existing features of a tract and its surroundings and approximate proposed street and lot layout as a basis for consideration prior to preparation of a final plan.

Plan, Record - An exact copy of the approved final plan prepared with necessary signatures for recording with the Recorder of Deeds.

Plan, Sketch - An informal plan, not necessarily to scale, indicating salient existing features of a tract and its surroundings and the general layout of the proposed subdivision for discussion pur-

poses only and not to be presented for approval. The sketch plan carries with in no vested rights for development.

Planning Commission - The Martic Township Planning Commission.

Recorder of Deeds - The Recorder of Deeds in and for Lancaster County, Pennsylvania.

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

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

Right-of-way - Land set aside for use as a street, alley or other means of travel.

Road Grade - The rate of rise and fall of a road surface, measured along the profile centerline of the road and expressed in percent.

SEO - The duly appointed Township Sewage Enforcement Officer.

Sewage Facilities Act - The Pennsylvania Sewage Facilities Act, Act of June 24, 1966, P. L. (1965) 1535, No. 537, as amended, 35 P.S. §750.1 et seq.

Sight Distance - The length of street, measured along the centerline, which is continuously visible from any point three feet above the centerline.

Soil Survey - The most recent edition of the Soil Survey of Lancaster County, Pennsylvania, published by the National Resource Conservation Service (NRCS) of the United States Department of Agriculture.

Storm Water Management Ordinance - The Martic Township Storm Water Management Ordinance, as amended and as may be amended in the future.

Street - A strip of land, including the entire right-of-way, intended primarily as a means of vehicular and pedestrian travel. Street includes avenue, boulevard, road, highway, freeway, parkway, lane, alley, viaduct and any other ways used or intended to be used by vehicular traffic or pedestrians whether public or private. Streets are further classified as follows:

Arterial Street; Highway - A street or road which is used primarily for fast or heavy traffic including all roads classified as main and secondary highways by PennDOT.

Collector Street - A street which carries traffic from minor streets to the major system or arterial streets, including the principal entrance streets of a residential development and streets within such a development.

Local Street - A street which is used primarily for access to the abutting properties.

Alley - A minor street which is used primarily for vehicle access to the back or the side of properties otherwise abutting a street, or for placement of utilities.

Special Purpose Street – Any street, alley, lane, driveway, etc., that is not classified as an arterial, collector or local access street. See residential street hierarchy in Appendix No. 3.

The Zoning Ordinance contains an identification of the classification of existing streets which is incorporated by reference.

Street Line - A boundary line defining the edge of a street right-of-way and separating the street parcel from abutting property or lots. Also known as the "street right-of-way line."

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

Subdivision – A subdivision as defined in the MPC.

Surveyor - A professional land surveyor currently licensed to practice as such in the Commonwealth of Pennsylvania.

Swale - A wide relatively shallow, usually dry ditch, which gathers and carries surface water flows.

Township – Martic Township, Lancaster County, Pennsylvania, as represented by the Board of Supervisors or its duly authorized agents.

Traffic Capacity - The maximum number of vehicles that can be expected to pass over a given section of roadway or on a specific lane as defined by PennDOT.

Unit of Occupancy - A unit, the use of which is not subordinate or customarily incidental to a principal unit. A unit of occupancy can be either residential or non-residential and can be an independent unit within a structure or a separate detached structure.

Waiver - The granting of an exception to these regulations which in the opinion of the Township will not be detrimental to the general welfare, impair the intent of the regulations in this Ordinance or conflict with the Comprehensive Plan.

Watercourse - A permanent topographic feature, whether natural or man-made, with a bed and banks, that serves to gather and carry flowing surface water such as a permanent or intermittent stream, a river, creek, brook, run, or swale; and which measured by width of the channel during normal high water.

Wetlands - Those areas defined as wetlands under Section 404 of the United States Federal Water Pollution Control Act, 33 U.S.C. §1344(a), and the regulations promulgated by the COE implementing Section 404, including but not limited to 33 C.F.R. §3263.

Zoning Hearing Board – The Martic Township Zoning Hearing Board.

Zoning Ordinance - The Martic Township Zoning Ordinance, as amended and as may be amended.

ARTICLE 3

PLAN PROCESSING PROCEDURE

Section 301. Scope.

This Article sets forth the application requirements for obtaining approval of subdivision and land developments. The form of the various plans referred to in this Article and the information required to be furnished with such plans shall be as specified in this Article and Article 4.

Section 302. Sketch plans.

Developers are strongly urged, but not required to, to submit a sketch plan for a proposed land development. The sketch plan will be considered an informal submission, for discussion purposes with Township staff, the Planning Commission, and the Board of Supervisors. A sketch plan shall show proposed streets, lots, and other proposed improvements within the land development, including any road and/or trail improvements indicated on the Official Map. Submission of a sketch plan shall be on plan sheets that are 24 inches by 36 inches. A total of eight paper copies of the sketch plan, two copies of any supporting documents, and one electronic copy of the plans and supporting documents shall be submitted to the Township for review. The submittal package shall be complete with any supplemental documents, an application for sketch plan review, and the necessary filing and review fees for a sketch plan submittal.

Upon receiving the sketch plan, the Township staff, including the Township Engineer and the Township Solicitor, the Planning Commission and the Board of Supervisors may review the sketch plan and advise in writing, at the sole cost and expense to the applicant, how the proposed subdivision or land development may conform or fail to conform to the requirements and objectives of this Ordinance and other applicable plans and ordinances. Said written comments shall not be deemed to be an approval or denial of any application or to vest any rights in the applicant.

Section 303. Formal Applications.

- A. All formal applications for approval of a subdivision plan or land development plan shall be made by the developer filing an application form, to be supplied by the Township Secretary, together with the appropriate plans, studies, reports, supporting data, and required filing fee.
- B. Multiple applications. The resources of the Township and the orderly administration of this Ordinance are unduly burdened by multiple and conflicting applications. An applicant may not submit multiple applications for approval of a subdivision or land development plan for the same property or any portion thereof. If an applicant desires to submit a new application, the applicant must withdraw in writing any pending application. In the event the applicant fails or refuses to withdraw a pending application, the Board of Supervisors may deny the new application for the same tract or portion thereof due to noncompliance with this Section.

- C. County Planning Commission Procedures. Applicants shall comply with all plan processing procedures of the County Planning Commission. It is the responsibility of the applicant to determine the requirements of the County Planning Commission, including, but not limited to, the number of copies of the plan which must be submitted and the filing fee.

Section 304. Application Acceptance for Review.

- A. Initial application. The Township Secretary shall have seven days from the date of submission of an application to check the plans and documents to determine if it is accepted for review. If defective, the application may be returned to the applicant with a statement of rejection, within the seven-day period; otherwise, it shall be deemed accepted for review as of the date of submission. Acceptance for review shall not, however, constitute a waiver of any deficiencies or irregularities. The applicant may appeal a decision by the Township Secretary under this Section to the Board of Supervisors in accordance with Article 8 of this Ordinance.
- B. Amendments or corrections to an application. The Township Secretary shall have seven days from the date of submission to examine an amended or corrected application filed to determine whether such amended or corrected application results in a substantial amendment to the plan or in the filing of a plan so changed as to be considered a new plan. If the Township Secretary determines that the amended or corrected application constitutes a substantial amendment, he shall so inform the applicant and shall inform the applicant that the Township shall consider the ninety-day review procedure to have been restarted as of the date of the filing of the substantial amendment. If the Township Secretary determines that the amended or corrected application constitutes a new plan, he shall so inform the applicant and shall inform the applicant that a new application and new fees are required. The applicant may appeal a decision by the Township Secretary under this Section to the Board of Supervisors.

Section 305. Preliminary Review Process.

- A. Purpose. The purpose of the preliminary plan is to require formal preliminary approval in order to vest the plan from changes in Township ordinances, phase development, and provide additional time to complete conditions of approval.
- B. Submission Requirements. All of the following items are required in order for a preliminary plan to be accepted for review:
 - 1. Three copies of the preliminary plan, 24 inches by 36 inches.
 - 2. Six copies of the preliminary plan, 11 inches by 17 inches.
 - 3. Two copies of all reports, notifications and certifications that are provided on the Plan, including Storm Water Management Plans and calculations.
 - 4. One copy of the application form completely and correctly executed, with all information legible, and bearing all required signatures.

5. The required filing fee as established from time to time by resolution by the Board of Supervisors.
 6. An electronic copy of the plan and all supporting documents in PDF format.
 7. All other items listed under Article 4, Plan Requirements.
 8. Filing fee and any escrow required by the Township Fee Resolution.
- C. Types of plans. One of the following plans, as appropriate, shall be filed with the application:
1. Preliminary subdivision plan. The preliminary subdivision plan is to be filed whenever approval is sought to subdivide a parcel of land, unless a lot-line change plan may be properly submitted.
 2. Preliminary land development plan. The preliminary land development plan is to be filed whenever land development approval is sought.
- D. Procedure upon acceptance of submission. When an application is accepted for review, the Township Secretary shall forward complete sets of the application, including plans and all appropriate documentation, to the Planning Commission, Zoning Officer, Township Engineer, Township Solicitor, and other persons as the Township may deem appropriate.
- E. Reviews.
1. Review by the Zoning Officer. The Zoning Officer shall review the application documents to determine if they are in compliance with the Zoning Ordinance. The Zoning Officer shall prepare a written report stating his findings and recommendations.
 2. Review by the Township Engineer. The Township Engineer shall review the application documents to determine if they are in compliance with this Ordinance, the Storm Water Management Ordinance, the Road Ordinance, applicable state and federal statutes and regulations, other applicable Township ordinances, Township standards, and good engineering practices. The Township Engineer shall prepare a written report stating his findings and recommendations.
 3. Review by Township Solicitor. The Township Solicitor shall review the application documents to determine the legal documents and agreement(s), and the terms and conditions to be contained therein, that should be required as a condition of approval to ensure compliance with applicable legal requirements and to legally protect the interests of the Township with respect to the completion of the proposed development in accordance with the final plan. The Solicitor shall prepare a written report stating his findings and recommendations.

- F. Submission of plan revisions. When any modifications to the preliminary plans are requested by Township staff or consultants, the applicant shall submit revised plans to the Township not later than 14 days prior to the date of the first meeting of the Board of Supervisors at which the plan will be considered; provided, however, that if said modifications result in a substantially different plan, a new formal application process shall be required, which shall follow all of the procedures and time requirements set forth herein.
- G. Closing of record and submission of additional plans.
 - 1. Closing of record. The application record shall be closed 14 days before the Board of Supervisors meeting at which the plan will be considered to allow time to examine and study the plans and all appropriate documentation. No changes or amendments to the application shall be received after this date unless the applicant shall apply for a rescheduling of the meeting at which the plan will be considered before the Board of Supervisors and make suitable provision for an extension of the review time.
 - 2. Submission of additional copies of plans. Prior to the date set forth in Section 305.G.1 above, the applicant shall submit such additional copies of plans, together with all appropriate documentation, and electronic copies as set forth in Section 305.B, so that the Township has the latest plans, supporting documents and reports on file, and the Board of Supervisors has reviewed the latest revised site plans.
- H. Planning Commission review.
 - 1. The Planning Commission shall conduct reviews of plan submissions at the next scheduled meeting which is at least three weeks following the date of submission.
 - 2. The Planning Commission shall review the application to determine if it meets the standards set forth in this Ordinance.
 - 3. Following review at a public meeting, the Planning Commission shall submit the preliminary plan to the Board of Supervisors together with its analysis and recommendations, including those of Township staff, the Township Engineer, and the Township Solicitor.
- I. Board of Supervisors review and action.
 - 1. The Board of Supervisors shall act upon the plan application in accordance with the time limitations set forth in MPC Article V.
 - 2. Plans shall be presented by the Township staff at the regular meeting of the Board of Supervisors following the first presentation of the plan to the Planning Commission. Following complete review by the Planning Commission, including its recommendations, the Board of Supervisors shall place the plan on its agenda for review and action.

3. The Board of Supervisors shall conduct reviews of plan submissions at the next scheduled meeting only if the plan and accompanying documents were filed in full at least 14 days prior to that meeting.
 4. The Board of Supervisors shall render its decision and provide notice of its decision in accordance with applicable requirements of the MPC.
- J. Approval subject to modification or condition. The Board of Supervisors may approve the preliminary plan, in whole or in part, or may subject the plan to modifications or conditions or may disapprove the plan.
1. If the preliminary plan is approved subject to conditions, the applicant shall either personally at a public meeting or in writing approve or reject such conditions within five days of receiving notice, either personally or in writing, of such conditions. For purposes of this Subsection, notice to a person presenting the plan on behalf of the applicant, whether such person is the applicant himself, a relative of the applicant, an officer of the applicant, an attorney, a surveyor, an engineer or otherwise, shall be notice to the applicant, and such person presenting the plan on behalf of the applicant shall be deemed to have authority to, on behalf of applicant, accept or reject such conditions. The failure to accept or reject such conditions within the five-day period shall be considered to be a rejection of the same, and conditional approval by the Board of Supervisors shall be automatically revoked. The applicant shall be notified in writing within ten days following the expiration of the five-day period of the plan rejection; provided, however, that failure to notify the applicant of such plan rejection shall not constitute a deemed approval.
 2. If the application is disapproved, the Board of Supervisors or the Township Solicitor shall notify the applicant, in writing, of the defects in the application and shall identify requirements which have not been met, through citing the provisions of the statute or ordinance relied upon.
- K. Satisfaction of conditions. Within one year after the date of the written decision stating that the preliminary plan is conditionally approved, the applicant shall submit to the Township evidence that the applicant has satisfied all conditions upon approval of the preliminary plan together with an electronic file copy, one Mylar copy, 24 inches by 36 inches, and one paper copy, 24 inches by 36 inches, of the preliminary plan revised to reflect compliance with all conditions. Such copies shall have all pertinent signatures, seals and certifications. Failure to satisfy conditions or submit the required copies shall result in the expiration of preliminary plan approval.
- L. Effect of approval.
1. Approval of the preliminary plan shall constitute approval of the subdivision as to the character and intensity of development and the arrangement and approximate dimensions of streets, lots and other planned features, but shall not authorize sale of lots or any construction. To change, relocate or remove a street from an ap-

proved preliminary plan, a new plan must be submitted by the owners of the land over which the street was laid out and be approved by the Board of Supervisors.

2. Upon approval of the preliminary plan by the Board of Supervisors, the streets shown thereon shall constitute easements over the property for the purpose of construction.
3. Approval of the preliminary plan shall confer upon the applicant such rights as are set forth in MPC Article V.
4. In the case of a preliminary plan calling for the installation of improvements beyond the five-year period, the applicant shall file a schedule with the preliminary plan delineating all proposed sections, as well as deadlines within which applications for final plan approval of each section are intended to be filed.
 - (a) The applicant shall update said schedule annually on or before the anniversary of preliminary plan approval until final plan approval of the final section has been granted.
 - (b) Any modification in the aforesaid schedule shall be subject to the approval of the Board of Supervisors in its discretion.
 - (c) Each section in any residential subdivision or land development, except for the last section, shall contain a minimum of 25% of the total number of dwelling units depicted on the preliminary plan, unless a lesser percentage is approved by the Board of Supervisors.

Section 306. Final Plans and Preliminary/Final Plans.

A. When required.

1. When all conditions of approval required by the preliminary plan approval have been obtained as required by this Ordinance, the developer may prepare a final plan in accordance with Section 405 showing all lot lines, improvements and other features of the subdivision or land development.
2. When a preliminary plan is not required by this Ordinance, the applicant may prepare a preliminary/final plan in accordance with Section 405 showing all lot lines, improvements and other features of the subdivision or land development. The following types of plans may be filed as preliminary/final plans:
 - (a) Lot-line change plan/Lot add-on plan. The lot line change plan (also known as lot add-on plan) is to be filed whenever approval is sought to shift lot lines or to merge lots. A lot-line change plan may be waived from review by the County Planning Commission (if the Township and the County Planning Commission agree) if the applicant provides the applicable County Planning Commission form signed by the applicable County Planning Commission representative.

- (b) Minor subdivision plans. A minor subdivision plan shall be filed whenever approval of a plan is sought that will:
 - (1) Result in a subdivision of fewer than five single-family residential lots; or
 - (2) Consists of a land development proposal which seeks to establish a second residential dwelling unit on a single lot.

A minor subdivision plan may be waived from review by the County Planning Commission (if the Township and the County Planning Commission agree) if the applicant provides the applicable County Planning Commission form signed by the applicable County Planning Commission representative.

- (c) Minor land development plans. A minor land development plan shall be filed whenever approval of a plan is sought that will:
 - (1) Result in the construction of a single principal building with an area of 1,500 square feet or less on a lot, and which will generate 50 or fewer AADT; or
 - (2) Result in the construction of a second principal building or building addition on a lot that is less than 10,000 square feet on a lot which contains an existing principal building, and which will generate no more than 200 AADT; or
 - (3) Result in the construction of a principal agricultural use or agricultural accessory building that will result in additional housing space for poultry, livestock or other farm animals.

With the exception of plans that meet Subsection (c) above, a minor land development plan may be waived from review by the County Planning Commission (if the Township and the County Planning Commission agree), provided the applicant provides the applicable County Planning Commission form signed by the applicable County Planning Commission representative.

B. Submission and approval.

- 1. The number of copies and the type of copies of a final or preliminary/final plan and supporting information to be submitted shall be in accordance with the requirements in Section 305.B. The applicant shall also submit one Verification (See Appendix No. 1). The plans and accompanying documents shall be submitted to the Township Secretary.

2. The final or preliminary/final plan shall be reviewed and acted upon in accordance with the procedure set forth in Sections 305.D through 305.J.
- C. Satisfaction of conditions. If the Board of Supervisors conditions its final plan approval upon receipt of additional information, changes, or notifications, such data shall be submitted or plan alterations noted on two paper copies of the plan submitted to the Board of Supervisors for approval. Such data shall be submitted to the Board of Supervisors within 180 days of the written decision granting conditional approval, unless the Board of Supervisors grants a waiver by extending the effective time period.
- D. Certification. After approval by the Board of Supervisors and satisfaction of conditions, five reproducible copies of the sizes and type specified by the Recorder of Deeds shall be submitted to the Township Secretary, accompanied by an application for signature. The developer shall also provide one electronic copy of the final or preliminary/final plan in the format specified by the Township Engineer. Final and preliminary/final plans shall not be signed by the Board of Supervisors if submitted more than 90 days from the Board of Supervisors' determination that conditions have been satisfied unless the Board of Supervisors grants a waiver extending the effective time period for approval.
- E. The entire preliminary plan need not be submitted as a final plan. The final plan may be submitted in sections, each covering a portion of the entire proposed subdivision shown on the preliminary plan. The Board of Supervisors may determine what constitutes a logical section in keeping with the best interests of the Township.
- F. If the entire preliminary plan is not submitted as a final plan and thus not approved or recorded as a final plan, within one year from the approval of the preliminary plan, the Board of Supervisors shall determine, as final plans are submitted, that conditions have or have not changed since the time of the preliminary plan approval to require the submission of another preliminary plan before considering the final plan for approval.

Section 307. Expedited Processing of Certain Plans.

Any applicant who elects to take advantage of the sketch plan process, will, at the applicant's option, have the right to proceed to a preliminary/final plan and forego the preliminary plan phase/processing requirements. Any land development that is to be phased shall be required to have a preliminary/final plan submitted for each phase. Additionally, applicants for approval of a lot line change plan (lot add-on plan) shall be permitted to file a single application for preliminary/final plan approval.

All plans that are filed for expedited processing shall be processed in accordance with Section 306, but shall not be required to be submitted for review as required by Section 305. All applicants who seek expedited processing for a lot-line change plan in accordance with this Section shall submit plans and documentation in accordance with the requirements of Section 406.

Section 308. Improvement Construction Plans.

The procedures set forth in this Section shall apply as an alternative to the guaranteeing of improvements through a letter of credit or other financial security. An applicant whose improve-

ment construction plan is approved under this Section is permitted to install all or part of the improvements required by this Ordinance prior to final plan submission.

- A. Improvement construction plan application. After an applicant has received official notification that the preliminary plan has been approved and the required changes, if any, have been made, an application may be processed for an improvement construction plan. The improvement construction plan may be submitted in sections, each section covering a reasonable portion of the entire proposed subdivision, as shown on the approved preliminary plan.
- B. Application requirements. All improvement construction plan applications shall be made and processed in accordance with Section 306.

Section 309. Recording of Final Plans and Preliminary/Final Plans.

- A. Within the required timeframe established by MPC Section 513, the final plan or preliminary/final plan shall be recorded in the office of the Recorder of Deeds. If the final plan or preliminary/final is not recorded within the specified time, the approval shall become null and void, unless the applicant shall have obtained an extension of time from the Board of Supervisors in which to record the plan. The final plan or preliminary/final plan shall be recorded as specified before proceeding with the construction of improvements (unless an improvement construction plan has been approved) or the sale of lots.
 - 1. If the applicant desires an extension of time in which to record the approved final plan, the applicant shall submit a request for such an extension of time in writing to the Township Secretary. All such requests shall be for a maximum time period of 90 days and shall be submitted at least one week prior to the expiration of the period within which the plan must be recorded.
 - 2. The Board of Supervisors shall consider all requests for extensions of time to record approved plans at a public meeting, and the applicant shall be notified of the Board of Supervisors' action.
- B. Recording the final plan or preliminary/final shall have the effect of an irrevocable offer to dedicate all streets and other public ways to public use and to dedicate or reserve all park reservations and school sites and other public areas to public use, unless reserved by the developers as hereinafter provided. The approval and subsequent recording of the plan shall not impose any duty upon the Township concerning maintenance or improvement of any such dedicated streets, parks, areas or portions of same until the Board of Supervisors shall have accepted the same by ordinance or resolution.
- C. The developer may place a notation on the final plan to the effect that there is no offer of dedication to the public of certain designated public areas or (in unusual circumstances) streets or alleys, in which event the title to such areas shall remain with the owner, and the Township shall assume no responsibility for improvement or maintenance thereof, which fact shall also be noted on the final plan.

Section 310. Changes to Recorded Plans.

- A. Any redevelopment or resubdivision, including changes to a recorded plan, shall be considered as a new application and shall comply with all requirements of this Ordinance, except that changes may be made to a recorded plan, provided that, in making such changes:
1. The original application shall have been made for residential purposes, and the residential character and use of the land shall be maintained.
 2. No lot or tract of land shall be created that does not meet the minimum design standards required by this Ordinance and other applicable Township ordinances.
 3. No structure shall be relocated which does not meet the minimum design standards required by this Ordinance and other applicable Township ordinances.
 4. No increase shall be made in overall density of the development.
 5. No easements, access drives, rights-of-way or stormwater management facilities shall be changed.
 6. No street locations, block sizes, or point of access onto an existing Township or state street shall be changed.
- B. In every case where a plan alteration conforms to the above, the applicant shall:
1. Submit to the Township Secretary two paper copies of the revised final plan, one electronic copy, and one application form. Upon review of the revision, the Township Secretary shall notify the applicant, in writing, whether or not the revision complies with the above requirements.
 2. If the revision complies, the applicant shall prepare two plans, which shall specifically identify the alterations to the previously recorded plan.
 3. The applicant shall submit the plan to the Board of Supervisors for certification as specified in Article 3 of this Ordinance and to the Township for signature as specified in Section 307.
 4. The plan shall be recorded as specified in Section 309.

ARTICLE 4

INFORMATION TO BE SHOWN ON OR SUBMITTED WITH SUBDIVISION AND LAND DEVELOPMENT PLANS

Section 401. General Plan Requirements.

All plans shall show, be accompanied by, and be prepared in accordance, with this Article and shall provide sufficient design information to demonstrate conformance with the requirements of Article 5, Development Standards.

A. Drafting Standards.

1. The plan shall be clearly and legibly drawn at a commonly-used scale between 20 to 100 feet to the inch.
2. Dimensions shall be in feet and decimals; bearings shall be in degrees, minutes, and seconds. Descriptions of tracts shall read in a clockwise direction.
3. The maximum sheet size shall be 24 inches by 36 inches. The preferred sheet size is 22 inches by 34 inches. If the plan is prepared on two or more drawing sheets, a key map showing the location of the sheets and a match line shall be placed on each of the sheets. If more than one sheet is necessary, each sheet shall be the same size and numbered to show the relationship to the total number of sheets in the plan (e.g., Sheet 1 of 5).
4. Plans shall be presented in a clear, legible, coherent, and organized manner. Plan submittals shall be legible in half size format.
5. Plans shall be prepared, signed and sealed by a registered engineer, surveyor or landscape architect.
6. For all plans other than sketch plans, the survey shall not have an error of closure greater than one foot in 10,000 feet.

B. Location and identification.

1. The project name or identifying title.
2. The name of the Township(s) in which the project is located, including the location of any municipal boundaries if located within the vicinity of the tract.
3. The name and address of the owner(s) of the subject tract (or an authorized agent), the developer/subdivider, and the firm that prepared the plan.
5. The file or project number assigned by the firm that prepared the plan, the plan date, and the date(s) of all revisions.

6. A north arrow, graphic scale, and a written scale.
7. The total acreage of the entire existing tract.
8. The district and lot size and/or density requirements of the Zoning Ordinance.
9. A location map, drawn to a scale of a minimum of one inch equals two thousand feet (1"=2,000') relating the subdivision or land development to at least two intersections of road centerlines. The approximate distance to the intersection of the centerlines of the nearest improved street intersection shall be identified.
10. If the tract of land is located within 200 feet of a municipal or zoning district boundary line(s), the location of such boundary shall be shown and labeled accordingly.
11. The source of title, deed, book, page, plan book (if applicable), and tax parcel identification number for the subject tract.
12. For land within the Agricultural District, identification of the parent tract and all prior subdivisions from the parent tract, including recording reference of each prior plan for the parent tract.
13. Where the land included in the subject tract has an agricultural, woodland or other natural resource easement located within the tract, the plan application shall be accompanied by a letter from the party holding the easement stating any conditions on the use of the land. This requirement may be satisfied by submitting a copy of the recorded agreement.
14. In the case of a plan for which the subject tract has an environmental covenant, the plan shall include a note indicating the recording information of the environmental covenant executed pursuant to the Environmental Covenants Act.
15. Identification of all prior recorded plans for the subject tract, identifying all notes and/or restrictions on such prior recorded plans affecting the current development together with a verification signed by the design professional that such list is complete and correct.
16. For all plans other than sketch plans, the entire existing tract boundary with bearing and distances.
17. For all plans other than sketch plans, the location and width of all proposed streets and alleys; street names; and approximate grade, rights-of-way and easements; proposed lot lines with approximate dimensions; proposed minimum building setback lines for each street; playgrounds; public buildings; public areas; historic resources; and parcels of land proposed to be dedicated or reserved for the public use.

- C. Existing Features. The requirements of this Section shall apply to preliminary plans, final plans, and preliminary/final plans.
1. Existing contours shall be shown at a minimum vertical interval of one foot for land with average natural slope of less than 3% or less, two feet for land with average natural slope between 3% and 6% and at a minimum vertical interval of five feet for more steeply sloping land. Contour interval may be adjusted based upon horizontal scale with concurrence of the Township Engineer. Contours shall be accompanied by the location of the bench mark and a notation indicating the datum used. The datum used by the public sewer provider or public water provider shall be used in all plans indicating connection to the public sewer system or public water system. Contours plotted by interpolation of the United States Geodetic Survey 7.5 feet mapping will not be accepted.
 2. The names of all adjacent landowners, both adjoining and across existing rights-of-way, along with the plan book record numbers of all previously recorded plans for adjacent properties.
 3. The following items when located within 200 feet of the subject tract:
 - (a) The location, name and dimensions of existing rights-of-way and cartways for streets, alleys, access drives, and driveways.
 - (b) As available, the location of the following features and any related right-of-way or easements: buildings, public utilities, on-lot utilities, on-lot water supplies, on-lot sewage disposal systems and related recharge areas, fire hydrants and stormwater management facilities.
 - (c) The location of existing rights-of-way and easements for telecommunications, electric, gas and oil transmission lines, and railroads.
 - (d) As available, the size, capacity and condition of the existing stormwater management system and any other facility that may be used to convey storm flows from the subject tract.
 - (e) The location of woodlands, habitats for endangered and threatened species, and highly erosive soils.
 4. The following items when located within the subject tract:
 - (a) The location, name and dimensions of existing rights-of-way and cartways for streets, alleys, access drives, and driveways.
 - (b) The location and size of the following features and related rights-of-way or easements: buildings, public utilities, on-lot utilities, on-lot water supplies, on-lot sewage disposal systems and related recharge areas, fire hydrants and stormwater management facilities.

- (c) The location of existing rights-of-way for telecommunications, electric, gas and oil transmission lines, and railroads.
 - (d) The size, capacity and condition of the existing stormwater management system and any other facility that may be used to convey storm flows within and from the subject tract.
 - (e) The preliminary plan shall indicate any proposed disturbance, encroachment or alteration to such features including: floodplains, wetlands, quarry sites, woodlands, significant trees, habitats for threatened and endangered species, solid waste disposal areas, superfund contaminations, historic resources, cemetery or burial sites, archeological sites, and areas with highly erosive soils.
5. Significant topographical and man-made features such as bodies of water, quarries, floodplains, tree masses, structures and suspected wetlands (as determined by a wetland survey conducted to identify wetlands as defined by the COE).
 6. In the case of a plan for which the subject tract has an environmental covenant executed pursuant to the Environmental Covenants Act, the plan shall include the boundary limits of any contamination remaining on site. The application shall include a copy of the environmental covenant agreement and any required engineering and institutional controls.
- D. Plan Information. The requirements of this Section shall apply to all plans except for sketch plans.
1. Block and lot numbers in consecutive order (e.g., Block A, Lots 1 through 10; Block B, Lots 11 through 22).
 2. In the case of land developments, the location and configuration of proposed buildings, parking lots, streets, alleys, access drives, driveways, common open space, recreational areas, and all other significant planned facilities.
 3. Total number of lots, units of occupancy, density and proposed land use. If a multiple land use is proposed, the location of each land use shall be indicated.
 5. Existing and proposed easements and rights-of-way.
 6. Building setback lines and building envelopes.
 7. Identification of buildings and other structures to be demolished or removed.
 8. Typical street cross section for each proposed public or private street and typical cross section for any existing street that will be improved as part of the application. Each cross section shall include the entire right-of-way width.

9. The location and design of driveways on corner lots and driveways on other lots as requested by the Board of Supervisors. Such driveways shall demonstrate the existence of reasonable, safe access to the property and shall not be designed so as to unreasonably erode the public street. If access is to be provided by a road maintained by PennDOT, the applicant shall supply proof that the driveway or street intersection permit has been issued to permit a driveway or street intersection to be completed at the proposed location or certification from a professional engineer that consistent with the regulations of PennDOT a permit can be issued to permit a driveway or street intersection to be completed at the proposed location. (See Appendix No. 1.)
10. A table indicating the existing zoning district, required lot size, required setbacks, required maximum and/or minimum development density and number of lots in the proposed subdivision along with the proposals for each of these parameters.
11. The manner in which water and sewer service shall be provided, i.e. public, community, on-lot, etc., shall be indicated.
12. Where the proposed subdivision or land development is located partially or wholly within an area prone to frequent flooding (either by impoundment or conveyance) as indicated by the Flood Insurance Rate Map Profiles and supporting data, soil type or local historical record, the developer shall supply the following information:
 - (a) The location and elevation of all proposed roads, fills, utilities, buildings, and stormwater management and erosion control facilities.
 - (b) The 10-year, 100-year and encroachment boundaries as required by the FEMA. Neither flood boundaries defined by the limits of alluvial soils nor by the boundaries shown on the Flood Insurance Rate Map shall be accepted without verification. Information shown on the Flood Insurance Rate Map and its accompanying documentation shall be verified using any currently available information to update the data.
13. Clear sight triangles and stopping sight distances as described in Section 602.J shall be shown on the plan.
14. For final plans, preliminary/final plans, and lot line change plans, the following additional information shall also be provided:
 - (a) Location and material of all permanent monuments and lot line markers, including a note that all monuments and lot markers are set or indicating when they will be set.
 - (b) Identification of any lands to be dedicated or reserved for public, semipublic or community use.

- (c) In the case of a plan which requires access to a highway under the jurisdiction of PennDOT, the inclusion of the following plan note:

A Highway Occupancy Permit is required pursuant to Section 420 of the Act of June 1, 1945 (P.L. 1242, No. 428), known as the "State Highway Law," before access to a state highway is permitted. Access to the state highway shall be as authorized by a Highway Occupancy Permit and the Township's approval of this plan in no way implies that such a permit can be acquired.

- (d) The following stormwater management data for all plans designed in accordance with the Storm Water Management Ordinance. This information may be provided on a sheet with other data or on separate sheets and need not necessarily be recorded with the final plan. In the case of any dispute in the methodology used in the design of any stormwater management plan and/or in the presentation of such information, the Board of Supervisors shall make the final determination on the design criteria, methodology and form of presentation.

- (1) All calculations, assumptions, criteria and references used in the design of the stormwater management facilities, the establishment of existing facilities' capacities and the pre- and post-development peak discharges.
- (2) All plans and profiles of the proposed stormwater management facilities, including the horizontal and vertical location, size and type of material. This information shall be to a detail required for construction of the facilities.
- (3) For all basins, a plotting or tabulation of the storage volumes and discharge curves with corresponding water surface elevations and inflow and outflow hydrographs.
- (4) For all basins which hold two acre-feet or more of water and have an embankment that is six feet or more in height, soil structure and characteristics shall be provided. Plans and data shall be prepared by a registered professional engineer. These submissions shall provide design solutions for the frost-heave potential, spring-swell potential, soil-bearing strength, water infiltration, soil settling characteristics, fill and backfilling procedures and soil treatment techniques as required to protect the improvements for adjacent structures.
- (5) All erosion and sedimentation control measures, temporary as well as permanent, including the staging of earthmoving activities, in sufficient detail to clearly indicate their function.

- (6) The guidelines for lot grading within subdivisions. This information shall identify the direction of stormwater runoff flow within each lot and the areas where stormwater flows will be concentrated. This information shall be provided by flow arrows or topographic data. (See Appendix No. 4 for examples). In areas where the Board of Supervisors believes additional lot grading information is needed to assure proper function of the stormwater management facilities, specific grading information will be required as part of the final plan submittal.
- (7) Finished first floor elevations for all residential units shall be shown on the plan.
- (8) Where land will be transferred from one lot to another, either as part of a final plan, preliminary/final plan or lot line change/lot add-on plan, a copy of the deed with a perimeter legal description for the lot as enlarged. The applicant shall present the Township with proof that the deed with the perimeter legal description has been recorded within 30 days after the release of the final, preliminary/final or lot line change/lot add-on plan for recording.

Section 402. Required Reports.

A. Wetland Studies.

1. The applicant shall submit a wetland study with the submittal of all subdivision and land development plans. The purpose of the study shall be to determine the presence and extent of wetlands on the site.
2. The study shall be performed by a qualified wetland scientist whom possesses a minimum of a bachelor's degree in biology, botany, zoology, ecology or environmental sciences. In general, other professionals, such as engineers, landscape architects, surveyors, planners, and geologists are not considered fully qualified to perform wetland delineations, unless they possess special ecological training and experience beyond their discipline. The Township reserves the right, in as much as no recognized certification program exists for wetland scientists, to determine the qualification of those preparing wetland delineations. Should a state or federal wetland scientist certification program be established, the Township will consider only those certified individuals qualified to perform delineations.
3. For sites which do not contain any wetlands, an abbreviated report may be submitted. The abbreviated report should contain the Results and Discussion and Conclusions information as required by Section 402.A.4(b)(3).
4. Requirements for Wetland Studies:

- (a) Delineation should follow the procedures outlined in the 1989 Federal Manual for Identifying and Delineating Jurisdictional Wetlands, and any subsequent amendments.
- (b) Delineations shall be supported by reports. The Reports shall contain the following sections:
 - (1) Introduction: Description of the physical features of the site, its location and the proposed plans for the site.
 - (2) Methods: Description of the methods used for the survey, with particular emphasis on any deviation from the outlined federal methods. Relevant information includes the date of the field studies, the number of transects and plots used, the size of vegetation quadrants employed, the size of soil pits used, taxonomic references used, and the disposition of any voucher specimens.
 - (3) Results and Discussion: Description of the findings of the study. Soils, vegetation, and hydrology for wetlands and upland areas of the site should be discussed. Any problem areas should be thoroughly treated.
 - (4) Conclusions: The extent of wetlands on the site should be discussed. The impact of the proposed project on these wetlands should also be considered.
- (c) Included in the report as appendices or tables should be:
 - (1) Site location map (USGS 7.5' quadrangle will suffice).
 - (2) National Wetlands Inventory Map.
 - (3) A letter from the DEP and/or the COE verifying the wetland boundaries shall also be attached to the preliminary plan. The verified boundaries shall be shown on the preliminary plan map.
 - (4) A letter from the Pennsylvania Natural Diversity Inventory (PNDI) identifying any threatened or endangered species and their habitats on or near the site shall be included. If such species or areas are identified, a statement of proposed measures to protect the species or areas shall be included. This statement shall be supplemented by correspondence from appropriate State or federal agencies regarding the adequacy of the proposed protective measures.
 - (5) The applicant shall verify that all required permits from both the COE and DEP have been obtained. If no permit is required, a statement to this effect from these agencies shall be submitted.

- (6) Soil survey map with soil descriptions.
 - (7) Data sheets for each plot.
 - (8) Wetland Boundary Map: Wetland boundaries shall be surveyed by a registered professional surveyor and shown on a plan of appropriate scale. The limits of the wetland study shall be clearly shown. The plan shall also show the location of all plots and/or transects used in the study, the date of delineation, a statement of the method used for the study, the name of the consulting firm which performed the delineation, the name of the surveyor, and a disclaimer statement indicating no wetland boundary is considered jurisdictional until approved the DEP and/or the COE.
 - (9) Color photos of wetlands areas on the site, with locations and directions of view keyed to the wetland boundary map.
 - (10) Resumes of the wetland scientist(s) who performed the delineations.
5. Compensatory mitigation projects required as part of a state or federal permit shall be shown on all subdivision and/or land development plans. In order to help ensure the long-term viability of wetland mitigation efforts, the Township discourages multiple ownership of mitigation areas. Ownership by one individual or a homeowners association is encouraged. Owners of the wetland mitigation areas must be clearly identified to the Township.
 6. Conservation easements shall be provided around the perimeter of all wetlands, including those existing wetlands on the lot, and those that may be added as part of the compensatory mitigation projects as part of a state or federal permit requirement. A conservation easement agreement shall be completed prior to the recording of a final plan. The conservation easement agreement shall be in a format and contain such information that is acceptable to the Board of Supervisors and the Township Solicitor. The Agreement shall be recorded at the Recorder of Deeds to make future lot owners aware of the conservation easement agreement requirements.

B. Traffic impact studies.

1. Legislative intent.
 - (a) The Board of Supervisors recognizes that the development of land within the Township presents both benefits and challenges. Each development displays unique circumstances. Without proper information, neither the developer nor the Township may gauge the actual effect of the development upon the surrounding area, including the existing road network, and how the surrounding area and existing road network may affect safe and convenient access to or use of the property to be developed. Information is

vital to enable developments to be designed in a manner which will insure adequate, safe and convenient access and prevent adverse consequences to neighboring properties or existing public facilities.

- (b) MPC Section 503(2)(i) expressly authorizes the Township to include provisions within this Ordinance to insure that the layout and arrangement of developments shall conform to the Comprehensive Plan and to any regulations or maps adopted to implement the Comprehensive Plan. MPC Section 503(2)(ii) further authorizes the Township to include in this Ordinance provisions for insuring that streets in and bordering a proposed development shall be coordinated and shall be of such widths and grades and in such locations as necessary to accommodate prospective traffic and to facilitate fire protection.
 - (c) It is the legislative intent of the Township to require developers to prepare a traffic study to determine whether adequate, safe and convenient access is available to the development site, and, if not, what improvements must be made by developers to provide adequate safe and convenient access. It is also the intent of the Township in requiring the traffic study to insure that the internal traffic system of the development is designed in manner which will not adversely impact or unduly burden the existing transportation network, access to adjoining properties or planned improvements.
2. When Required. Applications for all residential developments or subdivisions containing 20 or more dwelling units or residential lots and all nonresidential developments (with the exception of agricultural development) with buildings containing in excess of 1,000 square feet of usable space shall provide studies and reports in accordance with the requirements of this section.
- (a) Calculation of Units. The number of dwelling units, residential lots or square footage of usable nonresidential space shall be computed based upon all phases of a development planned, and the required traffic study and report shall be completed and submitted with the first phase. Failure to submit the required study and report with the first phase of development when subsequent phases are planned shall constitute a violation of this Ordinance, and the Township may avail itself of any and all remedies provided by the MPC, including the refusal to issue any permits or approvals necessary for further development of the tract.
3. The traffic study and report shall be required to be submitted with the preliminary plan or preliminary/final plans.
4. Traffic Impact Study Requirements. All plans for subdivisions and/or land developments meeting the criteria set forth above shall require the preparation of a traffic study and report by a professional traffic engineer with the following minimum considerations. The Traffic Impact Study shall also contain an executive summary and properly tabbed appendices that include, at a minimum, traffic count data, existing conditions, site plan, opening/design year conditions, con-

ceptual improvement sketches/cost estimates, and other relevant data as may be required by the Township Engineer.

- (a) Area of Traffic Impact Study. At a minimum, the traffic area shall include all streets and major intersections within the area contained in a one-half mile concentric circle drawn around each entrance to the proposed development and, if a street abutting the proposed development does not contain an intersection with another street within that area, the first intersection with such abutting street. If the proposed development will generate in excess of 1,000 trips per day, the traffic impact area shall include all streets and major intersections contained in a one mile concentric circle drawn around each entrance to the proposed development. The determination of whether an intersection shall be considered a major intersection shall be made in accordance with accepted engineering practices. In the event of a dispute, the determination of the Township Engineer shall be final. A site visit shall be conducted and documented by the transportation engineer performing the study.
- (b) Traffic Volumes.
 - (1) Twenty-four hour traffic volume data, including weekdays, Saturdays and Sundays, shall be included for all streets which provide direct access to the proposed development and for the arterial streets and collector streets that will serve the proposed development.
 - (2) Peak hour traffic volume data shall be included for any major intersection within the traffic impact area. The peak hours of the street network during the weekday morning, weekday afternoon, and Saturday midday time periods shall be used unless documentation is provided to indicate the traffic characteristics of the proposed use are such that analysis of different peak hours would better measure the impacts of the proposed use. The Township Engineer shall determine the peak hours to be analyzed based on the proposed use.
- (c) Existing Traffic Volumes and Conditions. Existing traffic volumes shall be included for the time periods and locations specified in Section 402.B.4(b). A brief crash analysis shall be researched and considered in the evaluation of the existing traffic area conditions.
- (d) Design Year Predevelopment Traffic Volumes. Design year predevelopment traffic volumes shall be included for the time periods and locations specified in Section 402.B.4(b). The design year shall be considered the point in time when the development is completed and shall be determined in accordance with accepted engineering practices. In the event of a dispute as to the design year, the determination of the Township Engineer shall be final. Apply a growth rate to existing traffic volumes to arrive at a

design year pre-development traffic volume; document the rate/publication utilized for this criteria.

- (e) Trip Generation. Estimates of the total number of vehicle trips to be generated by the proposed development for typical 24 hour periods, including weekdays, Saturdays and Sundays and the typical a.m. and p.m. peak periods for weekdays, Saturdays and Sundays. Trip generation rates shall be determined through the use of the current edition of the Trip Generation Report published by the Institute of Transportation Engineers. Consider pass-by and internal capture trips while performing trip generation. Document the methodology utilized to determine pass-by and internal capture trips and consider all existing travel patterns, origin-destination patterns, etc.
- (f) Trip Assignment. Assignments of postdevelopment 24 hour and peak hour volumes to the arterial streets and collector streets and other streets that will serve the proposed development based upon the projections of increased traffic volumes within the traffic impact area. In making these estimated assignments, consideration shall be given to other developments approved but not yet constructed and to development trends.
- (g) Design Year Postdevelopment Traffic Volumes. Design year postdevelopment traffic volumes shall be included for the time periods and locations specified in Section 402.B.4(b) in addition to all proposed site access points onto the existing roadway network.
- (h) Capacity analysis.
 - (1) Existing levels of service and levels of service projected for the design year without the impacts of the proposed development on all abutting streets and all major intersections within the traffic impact area. Level of service shall be computed in accordance with 2010 Highway Capacity Manual, published by the Transportation Research Board, or any subsequent revision of such manual.
 - (2) Capacity and level of service analysis on all abutting streets and all major intersections which will be impacted by the additional volumes generated by the development, including postdevelopment capacity and level of service and degradation of capacity and level of service.
 - (3) Levels of service by lane group and overall intersection shall be summarized in matrix form to compare existing conditions, design year predevelopment conditions, and design year postdevelopment conditions.
- (i) Mitigation Analysis.

(j) Site access evaluation.

- (1) The applicant shall demonstrate that the road network included in the TISA area providing access to the site can accommodate the volume of traffic reasonably expected to be generated by the proposed use in a safe and convenient manner. The applicant shall identify whether the applicant will make any improvements necessary to the road network to provide for safe and convenient access to the site and/or whether the steps can be taken to provide safe and efficient access, including, but not limited to, reduction of the intensity of the proposed development, changes in speed or traffic limitations.
- (2) The applicant shall demonstrate that the horizontal and vertical alignments and grades of the existing road network included within the TISA and the proposed streets or accessways to the site permit safe and convenient access to the site. If the TISA concludes that safe and convenient access to the site requires changes in horizontal and vertical alignments and grades of the existing road network, the applicant shall address what steps can be taken to provide safe and efficient access, including, but not limited to, reduction of the intensity of the proposed development, changes in speed or traffic limitations, and/or improvements to the road network. The applicant shall demonstrate that safe sight distance for site access shall be maintained, and the applicant shall incorporate the needs in the final and/or preliminary/final plan.
- (3) The applicant shall demonstrate that access to neighboring properties shall not be made unsafe or inconvenient or shall propose improvements, acceptable to the affected property owners, to ensure that access to all neighboring properties shall be maintained at a level of convenience and safety which is at least equal to that without the proposed use or development.
- (4) The applicant shall demonstrate that the proposed use will not create unusual traffic patterns or movements which will jeopardize the traveling public.
 - [a] Stacking and/or turn lanes of sufficient length shall be provided on the site or shall be added to existing streets providing access to the site to ensure that there shall be no blockage of through traffic. The design and length of the stacking lanes shall be justified and supported by computer optimization analyses which determine queue capacities and minimum storage lengths at existing intersections abutting the proposed development and at new intersections within the development.

- [b] Accessways to and within the site shall be located in a manner that blockage of through traffic by vehicles attempting to enter or exit an accessway will not occur.
 - [c] The applicant shall demonstrate that the proposed streets or accessways to the site are designed and located in a manner that will provide the least detrimental impact with regard to traffic capacity, level of service and safety upon abutting roads. The applicant shall install all traffic control devices necessary to mitigate detrimental impact.
 - [d] The applicant shall demonstrate that access to neighboring properties shall not be made unsafe or inconvenient or shall propose improvements, acceptable to the affected property owners, to ensure that access to all neighboring properties shall be maintained at a level of convenience and safety which is at least equal to that without the proposed use or development.
- (k) Design standards. Any improvements which are proposed to be constructed by the applicant in order to mitigate traffic impacts as part of the traffic impact study shall comply with the design standards in Section 602.
 - (l) The source of the standards used and the data presented.
5. Contribution in lieu of preparation of studies. If an applicant believes that the preparation of traffic study and report required herein is not warranted, he may request the Board of Supervisors to waive the preparation of such study and report and shall make an estimated contribution of the sum necessary to defray the costs of improvements which would be recommended by such studies. At the time of adoption of this Ordinance, the estimated contribution shall be \$350.00 per dwelling unit or residential lot in a residential subdivision or land development or \$1.50 per square foot of usable building floor area in a commercial, industrial or institutional subdivision or land development. The Board of Supervisors may revise the estimated contribution by resolution.
- (a) The applicant for approval of any commercial, industrial or institutional subdivision or land development shall provide the Township with a certification of the usable building floor area to be constructed for the purpose of determining the contribution in lieu of preparation of studies.
 - (b) The contribution in lieu of preparation of studies provided for herein shall be in addition to all other review, inspection and other fees or charges imposed by the Township and all sums otherwise agreed to be paid by the applicant.

- (c) The applicant shall enter into an agreement with the Township setting forth the contribution in lieu of preparation of studies to be paid and the studies to be waived by the Township. All such agreements shall be in a form satisfactory to the Township Solicitor. The agreement may be included with the land development agreement. Signature of acceptance of proposed conditions by the applicant shall also be acceptable.
 - (d) All contributions in lieu of preparations of studies fees shall be paid prior to recording of the final plan.
 - 6. Projects requiring PennDOT HOP. If a project proposes an access along a state-owned highway and PennDOT requires a traffic impact study as part the HOP approval process, the Township Engineer may allow modifications to the requirements in Section 402.B.4 in order to allow a single report to meet the requirements of PennDOT and the Township. If an applicant does not agree with the determination of the Township Engineer, a formal waiver may be requested from the Board of Supervisors.
- C. Hydrogeologic Report. When there is a reasonable probability that a project will affect or be affected by carbonate geologic hazards the Board of Supervisors shall require submission of a hydrogeologic report. In reaching a determination of whether a project will affect or be affected by carbonate geologic hazards, the Board of Supervisors shall consider the presence or absence of carbonate features in the vicinity of the project, the testimony of qualified expert witnesses, and such other reasonable information as may be available. All hydrogeologic reports shall be prepared at the Applicant's expense by a licensed geologist qualified in such matters. Each hydrogeologic report shall contain:
 - 1. A map showing all sinkholes, depressions, lineaments, faults, outcrops, springs, drainage entering the ground, water table, soil mottling and ghost lakes, and all features that may relate to the quality and availability of groundwater within two hundred (200) feet in all directions from the subject tract.
 - 2. A map outlining all private wells within a radius of two hundred (200) feet of the subject tract and all public water supplies, associated pipes, hydrants, and future service areas within two hundred (200) feet in all directions of the subject tract provided such information is available from public sources or documents.
 - 3. A listing of all referenced data, published and otherwise.
 - 4. A topographic site map with the site clearly outlined.
 - 5. A map indicating the location and design of all on-site wastewater disposal systems and secondary systems.
 - 6. A description of anticipated water quality impacts to areas located downgradient and areas located along the geologic strike.

7. A description of on site mitigation measures that could be applied to minimize impacts to the project or to correct existing problems.

Section 403. Sketch Plans.

- A. Drafting standards. Sketch plans shall include all information required in Section 401.A.
- B. Location and identification. Sketch plans shall include all information required in Section 401.B.
- C. Existing features.
 1. Existing contours. Lancaster County Geographic Information Systems (GIS) Topography may be accepted.
 2. The following items when located within the subject tract:
 - (a) The name and approximate location and approximate dimensions of existing rights-of-way or easements relating to streets, cartways, access drives, driveways or service streets, public utilities, stormwater management facilities, telecommunications, electric, gas, and oil transmission lines. The approximate location of railroads, buildings, environmental and topographic features, including, but not limited to, floodplains, wetlands, quarry sites, woodlands, habitats for threatened and endangered species, solid waste disposal areas, historic resources, cemetery or burial sites, archeological sites, or areas with highly erosive soils.
 3. When available, the following items when located within two hundred (200) feet of the subject tract as inventoried in the Lancaster County GIS:
 - (a) The name and approximate location and approximate dimensions of existing rights-of-way or easements relating to streets, cartways, access drives, driveways or service streets, public utilities, stormwater management facilities, telecommunications, electric, gas, and oil transmission lines. The approximate location of railroads, buildings, floodplains and wetlands.
 4. In the case of a plan for which the subject tract has an environmental covenant executed pursuant to the Environmental Covenants Act, the plan shall include the boundary limits of any contamination remaining on site. The application shall include a copy of the environmental covenant agreement and any required engineering and institutional controls.
- D. Additional Information.
 1. The total approximate acreage of the entire existing tract.
 2. The zoning district and lot size and/or density requirements of the applicable zoning regulations.

3. The approximate layout of lots, with approximate dimensions.
4. The total number of lots, units or occupancy, density and proposed land use (if multiple land uses are proposed, the location of each land use shall be indicated).
5. The approximate layout of streets, including cartway and right-of-way widths.
6. The approximate location and configuration of proposed buildings, parking lots, streets, access drives, driveways, general storm water facility locations, and wooded area to be cleared.
7. Building setback lines.
8. A note on the plan indicating the types of sewer and water facilities to be provided.
9. Identification of any modifications intended to be requested.
10. A copy of any applicable zoning decisions.
11. Location of any recreation or open space land to be provided.
12. Location of any existing trails transversing the tract, any trails transversing contiguous tracts, proposed trails, and any recreation or open space land on contiguous tracts.

Section 404. Preliminary Plans.

- A. Drafting standards. Preliminary plans shall include all information required in Section 401.A.
- B. Location and identification. Preliminary plans shall include all information required in Section 401.B.
- C. Existing features. Preliminary plans shall include all information required in Section 401.C.
- D. Plan information. Preliminary plans shall include all information required in Section 401.D in addition to the following requirements:
 1. The layout of streets, alleys and sidewalks, including cartway and right-of-way widths.
 2. The layout of lots, with approximate dimensions.

3. Street center-line profile for each proposed public or private street and/or access drives shown on the preliminary plan, including corresponding center-line stationing.
 4. The preliminary design of the proposed sanitary sewer mains, water supply mains and stormwater management facilities. This information shall include the approximate size, vertical location and horizontal location, if applicable.
 5. A statement on the plan indicating any proposed zoning amendment, special exception or variance, if applicable.
 6. A statement on the plan indicating any existing or proposed waivers granted by the Board of Supervisors.
 7. Proposed street names.
 8. A copy of any applicable zoning decisions.
- E. Certificates, notifications, reports and studies.
1. Certificates.
 - (a) Where the preliminary plan covers only a part of the entire landholdings, a sketch plan of the unsubmitted part, in a form suitable to the execution of the feasibility report on sewer and water facilities for the unsubmitted part shall be furnished. The street system of the plan under consideration may be subject to review, and the submitted part will be considered in light of adjustments and connections with future streets in the part not submitted.
 - (b) Certificate for review by the Planning Commission with space for the signatures of the Chairman or Vice Chairman of the Planning Commission, or designee(s) (See Appendix No. 1).
 - (c) Certificate for approval by the Board of Supervisors with space for the signatures of the Chairman of the Board of Supervisors and the Township Secretary (See Appendix No. 1).
 - (d) Certificate, signature and seal of the surveyor, to the effect that the survey and/or plan are correct (See Appendix No.1).
 - (e) Certificate, signature and seal of the engineer or landscape architect responsible for the design of the stormwater and utility systems (See Appendix No. 1).
 - (f) A copy of a certificate of public convenience or an application for such certificate, a cooperative agreement or agreement to serve the area in question, whichever is appropriate.

2. Notifications.

- (a) Where the tract described in the application includes any public utility, electric transmission line, gas pipeline or petroleum product transmission line located within the tract, the applicant or lessee of such right-of-way shall notify the owner of the right-of-way of his intentions in accordance with Pennsylvania Act 287. A note stating any condition regarding the use of the land, minimum building setback or right-of-way lines shall be included on the plan. This requirement may also be satisfied by submitting a copy of the recorded agreement.
- (b) Where land included in the subject application has an agricultural, woodland or other natural resource easement located within the tract, the application shall be accompanied by a letter from the party holding the easement stating any conditions on the use of the land.

3. Reports and studies.

- (a) A hydrologic report as required by the Storm Water Management Ordinance.
- (b) Wetland Study as described in Section 402.A.
- (c) Traffic Study as described in Section 402.B.
- (d) Hydrogeologic Report as described in Section 402.C.

F. Filing fee. The preliminary plan shall be accompanied by a check or money order drawn to the order of Martic Township in an amount specified on the fee schedule adopted by resolution of the Board of Supervisors and available at the Township Secretary's office.

Section 405. Final and Preliminary/Final Plans.

- A. Drafting standards. Final plans and preliminary/final plans shall include all information required in Section 401.A. In addition, the plan shall be formatted in a manner meeting the then-current requirements of the Recorder of Deeds.
- B. Location and identification. Final plans and preliminary/final plans shall include all information required in Section 401.B.
- C. Existing features. Final plans and preliminary/final plans shall include all information required in Section 401.C.
- D. Plan information. Final plans and preliminary/final plans shall include all information required in Section 401.D in addition to the following requirements:
 - 1. Complete description of the center line and the right-of-way line for all new streets, whether public or private, and alleys. The description shall include dis-

tances and bearings with curve segments comprised of radius, tangent, arc and chord.

2. Lot lines, with accurate bearings and distances and lot areas for all parcels. Curve segments shall be comprised of arc, chord, bearings and distances. Along existing street rights-of-way the description may utilize the existing deed lines or street center lines; along all proposed street rights-of-way, the description shall be prepared to the right-of-way lines.
3. Final vertical and horizontal alignment for proposed public or private streets, alleys, access drives, and sanitary sewer and water distribution systems. All street profiles shall show at least the existing (natural) profile along the center line, proposed grade at the center line and the length of all proposed vertical curves for streets. All water distribution and sanitary sewer systems shall provide manhole locations and the size and type of material. This information may be provided on separate sheets and is not subject to recording with the final plans.
4. Final street names.
5. In the case of land development plans, a grading plan. The grading plan shall include finished grades and ground floor elevations. This information may be provided on separate sheets and is not subject to recording with the final plans.
6. A statement on the plan indicating the granting of a zoning amendment, special exception or variance, if applicable, along with waivers granted by the Board of Supervisors to Sections of this Ordinance. If any special exceptions or variances granted by the Zoning Hearing Board contain conditions, all of the conditions shall be included as notes on the plan.
7. Accurate locations of all existing and recorded streets intersecting the boundaries of the tract.

E. Certificates, notifications and reports.

1. Certificates.
 - (a) Certificate, signature, and seal of the surveyor, to the effect that the survey and/or plan are correct (See Appendix No.1).
 - (b) Certificate for review by the Planning Commission with space for signature by the Chairman and Vice Chairman of the Planning Commission or designee (See Appendix No. 1).
 - (c) Certificate for approval by the Board of Supervisors with space for signature by two members of the Board of Supervisors (See Appendix No.1).
 - (d) A statement, duly acknowledged before an officer authorized to take acknowledgement of deeds and signed by the landowner, certifying that

the subdivision or land development shown on the plan is the act and the deed of the owner, that all those signing are all the owners of the property shown on the survey and plan, that they desire the same to be recorded as such and that all streets and other property identified as proposed public property dedicated for public use. (See Appendix No. 1). This must be dated following the last change or revision to the subdivision or land development plan.

- (e) Certification of review by the County Planning Commission (See Appendix No. 1).

2. Notifications.

- (a) Written notice from the DEP that approval of the sewer facility plan revision (plan revision module for land development) or supplement has been granted or notice from the DEP that such approval is not required.
- (b) Where the tract described in the subject application includes any public utility, electric transmission line, gas pipeline or petroleum product transmission line located within the tract, the applicant or lessee of such right-of-way shall notify the owner of the right-of-way of his intentions in accordance with Pennsylvania Act 287. A note stating any condition regarding the use of the land, minimum building setback or right-of-way lines shall be included on the plan. This requirement may also be satisfied by submitting a copy of the recorded agreement.
- (c) Written notice from the District Address Manager and the Lancaster County Wide Communications office stating that the proposed private and/or public street, and/or access drive names that are proposed for the subdivision or land development are acceptable.
- (d) A note placed on the plan indicating any area that is not to be offered for dedication, if applicable.
- (e) Written notice from the Township Engineer that all proposed improvements have been designed to the standards of the Township and that financial security in a form suitable to the Board of Supervisors has been received. (See Appendix No. 2 and Sections 501 and 502).
- (f) Written notices of approval as required by this Ordinance, including written notices approving the water supply systems, sanitary sewer systems and stormwater runoff to adjacent properties.
- (g) The submission of a controlling agreement in accordance with Section 602.B.5 when an application proposes to establish a street which is not offered for dedication to public use.

- (h) Written notices from the emergency service providers that will serve as the primary responders for the subdivision or land development that the street and building layout are satisfactory and will not present any obstacles or other problems for emergency responders to the subdivision or land development.
 - (i) For all stormwater management facilities that affect an existing watercourse or have an upland drainage area greater than one half (½) square mile, notification from the DEP of approval or that no approval is required.
3. Reports and studies.
- (a) A hydrologic report as required by the Storm Water Management Ordinance.
 - (b) Wetland Study as described in Section 402.A.
 - (c) Traffic Study as described in Section 402.B.
 - (d) Hydrogeologic Report as described in Section 402.C.
4. Other documentation.
- (a) Legal description for any easements to be dedicated to the Township, including, but not limited to, drainage easements and snow stockpile easements. Upon preparation of appropriate documentation in recordable form approved by the Township Solicitor, such documentation shall be executed by all landowners.
 - (b) Legal description for any rights-of-way along existing streets to be dedicated to the Township or PennDOT. Upon preparation of appropriate documentation in recordable form approved by the Township Solicitor, such documentation shall be executed by all landowners.
 - (c) A stormwater management agreement and declaration of easement in the form required by the Storm Water Management Ordinance, properly executed by all landowners with executed joinders by all mortgage holders.
 - (d) If the final plan contains wetlands or other natural features to be preserved, a conservation easement agreement and declaration of easement, in a form acceptable to the Township Solicitor, properly executed by all landowners.
 - (e) If the final plan proposed access or storm drainage facilities to be located on adjoining tracts, recordable easements in a form acceptable to the Township Solicitor.

- (f) Properly executed land development agreement in the form and content required by the Township setting forth, among other things, the responsibilities for the development of the property and listing required improvements, lands to be dedicated, and contributions to be made to the Township.
 - (g) If the final plan proposes an enlargement of an existing lot, a copy of the deed to transfer the land and a copy of a deed with a perimeter description for the enlarged lot. The applicant shall present evidence to the Township that the applicant has recorded such deeds prior to the final release of financial security.
 - (h) If all required improvements have not been installed, financial security in a form and in the amount meeting all MPC requirements and all requirements of this Ordinance.
5. Filing fee. The final plan shall be accompanied by a check or money order drawn to the order of Martic Township in an amount specified on the fee schedule adopted by resolution of the Board of Supervisors and available at the Township Secretary's office.

Section 406. Lot-Line Change/Lot Add-on Plans.

- A. Drafting standards. Lot-line change plans shall include all information required in Section 401.A. In addition, the plan shall be formatted in a manner meeting the then-current requirements of the Recorder of Deeds.
- B. Location and identification. Lot-line change plans shall include all information required in Section 401.B.
- C. Plan information. Lot-line change plans shall include all of the information required in Section 401.C and the additional information required for final plans in Section 405.D.
- D. Certificates.
 - 1. Certificate, signature, and seal of the surveyor, to the effect that the survey and/or plan are correct (See Appendix No. 1).
 - 2. Certificate for final plan review by the Planning Commission (See Appendix No. 1).
 - 3. Certificate for final plan approval by the Board of Supervisors (See Appendix No. 1).
 - 4. A statement, duly acknowledged before an officer authorized to take acknowledgement of deeds and signed by the landowner, certifying that the subdivision or land development shown on the plan is the act and the deed of the owner, that all those signing are all the owners of the property shown on the survey and plan, that

they desire the same to be recorded as such and that all streets and other property identified as proposed public property dedicated for public use. (See Appendix No. 1). This must be dated following the last change or revision to the subdivision or land development plan.

- E. All applicable notifications and reports shall be required to be filed with the Township prior to release of the plan for recording. See Section 405.E for notification and report requirements.

ARTICLE 5

IMPROVEMENT CONSTRUCTION ASSURANCES

Section 501. Completion of Improvements; Guarantees.

- A. No plan shall be finally approved unless the streets shown on such plan have been improved as may be required by this Ordinance and any walkways, curbs, gutters, streetlights, fire hydrants, shade trees, water mains, sanitary sewers, storm drains, stormwater management facilities or other improvements, as may be required by this Ordinance have been installed in accordance with this Ordinance, except that the surface course of streets shall not be completed until such time as 90% of the lots in the subdivision or land development have been improved by the construction of a dwelling if approved for residential development or by the construction of the proposed commercial or industrial structures if the lots are approved for such uses. In lieu of completion of the surface course of streets, as well as in lieu of completion of other improvements required as a condition for final plan approval of a plan, at the discretion of the developer, such developer may provide the Township financial security in accordance with Section 502.
- B. Where public sewer service and/or public water service is proposed by a plan, the developer shall post financial security with the public sewer and/or public water provider, as applicable. No plan shall be released for recording until the public sewer and/or public water provider has confirmed receipt of the financial security required under applicable statutes and regulations.
- C. The Township shall process requests for reduction of financial security in accordance with the requirements of the MPC.
- D. The value of the work completed shall be determined by subtracting 110% of the estimated cost of the completion of the remaining uncompleted work from the total amount of security deposited.
- E. At such time as 90% of the lots in the subdivision have been improved as set forth above or, if at the expiration of three (3) years from the date all of the improvements excepting the surface course have been completed, less than 90% of the lots have been so improved, the Township may notify the developer to complete the surface course within 60 days from the date of such notice. In computing the 60-day requirement, the period from October 1 to April 1 may not be counted.
- F. If at the time the surface course is completed, 90% of the lots are not improved as set forth above, the developer must:
 - I. Post with the Township financial security in an amount equal to 15% of the reasonable cost of the surface course as security to guarantee that damages to the road or street would not occur during the completion of the improvements on the unimproved lots in such developer's subdivision or land development. The Township shall hold such financial security and utilize it to pay for the repair of any damage occurring to the road during the period between the commencement

of improvements on any particular unimproved lot and the completion of such improvements irrespective of whether or not it can be established that the damage to the road was caused by contractors or other persons working in and about the construction of such improvements; or

2. Present to the Township agreements signed by the owners of all of such unimproved lots pursuant to which they will agree to pay to the Township the cost of repairing any damage occurring to roads in such subdivision during the period between the commencement of work on the improvements to their lot and the completion of such improvements irrespective of whether or not it can be established that such damage was caused by contractors or other persons involved in the improvement of their respective lot.

Section 502. Financial Security.

- A. The following forms of financial security shall be considered acceptable:
 1. Irrevocable letter of credit in an amount calculated in accordance with Section 502.B. An irrevocable letter of credit in the form set forth in Appendix No. 2 is required.
 2. Cash escrow in an amount calculated in accordance with Section 502.B. An escrow agreement in the form set forth in Appendix No. 2 is required.
 3. Surety bond in an amount calculated in accordance with Section 502.B. A surety bond in the form set forth in Appendix No. 2 is required.
 4. For required improvements on individual residential lots which would be constructed at the time the dwelling is constructed, including, but not limited to, rain gardens, infiltration beds, and similar storm water management facilities, a recorded agreement in the form set forth in Appendix No. 2.
- B. Financial security shall be in an amount equal to 110% of the estimated cost of improvements, as defined in Article 2, for all improvements required by the final plan or preliminary/final plan, as applicable. The cost of improvements is to be calculated at a time 90 days following the date scheduled for completion of the improvements by the developer. The estimated cost of the surface course shall be computed separately from the estimated cost of the other improvements and shall be based upon the developer's projected time table for completion of the development. The developer shall provide the estimated cost of the improvements prepared and certified by an engineer in accordance with the requirements of Article V of the MPC.
- C. The amount of the financial security shall be determined and annually adjusted in accordance with all applicable requirements of Article V of the MPC.

Section 503. Release from Financial Security.

The Township shall process requests for release of financial security in accordance with the MPC. Improvements shall not be considered completed unless the developer can demonstrate compliance with the requirements of this Ordinance, the Stormwater Management Ordinance, and all other applicable ordinances, statutes and regulations. Improvements shall also not be considered complete until as-built plans of all improvements to be dedicated to the Township and of all streets and storm water management facilities, whether or not such streets and storm water management facilities shall be dedicated, have been submitted to the Township, as applicable.

Section 504. Remedies to Effect Completion of Improvements.

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, the Board of Supervisors may enforce any letter of credit or other financial security by appropriate legal and equitable remedies. If proceeds of such financial security are insufficient to pay the cost of installing or making repairs or corrections to all the improvements covered by said financial security, the Board of Supervisors may, at its option, install such improvements in all or part of the subdivision or land development and may institute appropriate legal or equitable action or recover the moneys necessary to complete the remainder of the improvements. All of the proceeds, after deducting the costs of collection, whether resulting from the financial 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 505. Inspections During Construction.

The Township shall inspect the improvements during construction. The developer shall pay the costs of any such inspection in accordance with the provisions of MPC Article V. The developer shall provide at least 48 hours' notice prior to the start of construction of any improvements that are subject to inspection.

Section 506. Dedication of Improvements.

- A. All improvements shall be deemed to be private improvements and only for the benefit of the specific subdivision or land development until such time as the same have been offered for dedication and formally accepted by the Township by ordinance, resolution, deed or other formal action or document. The developer shall submit as-built plans of all improvements which will be dedicated to the Township. The Township shall not have any responsibility of any kind with respect to improvements shown on the final plan until the improvements have been formally accepted by the Township.
- B. The Township may require that the developer submit a maintenance guarantee to secure the structural integrity and functioning in accordance with the designs and specifications as depicted on the final plan for any improvement to be dedicated to the Township for a period of 18 months from the date of acceptance of dedication. Such maintenance guarantees shall be in a form acceptable to the Township Solicitor and shall be in the amount of 15% of the actual cost of installation of said improvements.

Section 507. Effect of Plan Recording on Dedication and Reservations.

Recording of the final plan after approval of the Board of Supervisors has the effect of an irrevocable offer to:

- A. Dedicate all streets and other public ways to public use, unless such streets are indicated on said plan as private streets.
- B. Dedicate all neighborhood parks and all areas shown on the plan as being local recreation sites for public use.

Section 508. As-Built Plans.

As-built plans of all street improvements, storm water management facilities, public or community water supply facilities, public or community sewage disposal facilities, and other public improvements shall be filed at the completion of construction and before any dedication for public use. One set of as-built plans shall be on Mylar and one set of as-built plans shall be in an electronic format acceptable to the Township Engineer. The as-built plan sets shall be filed with the Township Secretary. Such plans shall be filed prior to release of the guaranty and issuance of the completion certificate by the Township Engineer.

ARTICLE 6

DESIGN STANDARDS

Section 601. General.

The standards and requirements contained in this Article shall apply as minimum design standards for subdivisions and/or land developments.

- A. **Compliance with Township Ordinances Required.** All plans shall be designed in compliance with the Zoning Ordinance and all other applicable ordinances and requirements.
- B. **Zoning Approvals Required Prior to Plan Submission.** Whenever the Zoning Ordinance provides that the use proposed by the applicant for subdivision or land development approval shall constitute a use by special exception or conditional use, the applicant shall obtain such special exception or conditional use approval from the Board of Supervisors or Zoning Hearing Board, as applicable, prior to the submission of the Preliminary Plan. The plan shall be designed and developed in accordance with any conditions which have been imposed upon the grant of such special exception or conditional use by the Board of Supervisors or Zoning Hearing Board, as applicable.
- C. **Variances Required Prior to Plan Submission.** Whenever the plan indicates that a variance from the Zoning Ordinance shall be required, the applicant shall obtain such variance from the Zoning Hearing Board prior to the submission of the Preliminary Plan. The plan shall be designed and developed in accordance with any conditions which have been imposed upon the grant of such variance by the Zoning Hearing Board.
- D. **Compliance with Prior Plans Required.** Whenever all or a portion of the land contained within an application for subdivision or land development approval constitutes all or a portion of land included in a prior subdivision or land development plan approved by the Township or the County Planning Commission and recorded in the Office of the Recorder of Deeds in and for Lancaster County, Pennsylvania, the plan shall comply with all conditions, restrictions and notes imposed on the prior approval and/or included upon the recorded subdivision or land development plan. The applicant shall identify all prior recorded subdivision and/or land development plans of which all or a portion of the land contained in the plan was a part and all conditions, restrictions and notes which affect the current application. Failure to identify all applicable conditions, restrictions and notes of record on prior plans constitutes a violation of this chapter. The applicant shall submit with the application for preliminary plan approval a statement identifying the prior plans reviewed; the conditions, restrictions and notes which would impact development in accordance with the plan for which approval has been requested; and an explanation of the manner in which the proposed plan has been designed to comply with such conditions, restrictions and notes. This information shall be signed by the applicant or the applicant's engineer or landscape architect.

Section 602. Streets, Access Drives and Driveways.

- A. General Arrangement. The following criteria shall be considered in the design of streets in all subdivision and land development plans:
1. The arrangement of streets shall conform to the circulation plan of the County and Township Comprehensive Plans, to official maps, and to such County, Township and State road and highway plans as have been duly adopted.
 2. For streets not shown on the circulation plan or official map, the arrangement shall provide for the appropriate extension of existing streets and shall conform as closely as possible to the original topography.
 3. Residential local streets shall be arranged so as to minimize through traffic and discourage excessive speeds.
 4. Streets shall be designed with drainage grates that are safe for crossing by bicycles or horse-drawn vehicles.
 5. Adequate vehicular and pedestrian access shall be provided to all lots.
 6. Curvilinear streets and cul-de-sacs should be utilized only where their use will be consistent with adjoining development patterns, topography, and natural features of the site. Cul-de-sacs shall not be used where it is possible to provide loop streets that provide better access for emergency vehicles, fewer restrictions for snow removal, and improved pedestrian access. Curvilinear streets shall not be used immediately adjacent to an existing grid street system without providing a transition that continues and protects the historic grid. New project street systems, platted adjacent to an existing village, shall not be merely looped back on local access streets within the village, but shall connect with or be designed to connect with, in the future, streets of a higher class (See Appendix No. 3). Consideration shall be given to the dispersal of traffic from commercial and employment centers, and to the ultimate functioning of the street system.
 7. Streets shall be laid out to provide convenient and safe access to the property. Where appropriate, the Board of Supervisors may require additional cartway improvements and/or right-of-way width along existing street frontages to accommodate the anticipated traffic increases and to facilitate vehicular turning movements to and from individual lots.
 8. Where a development abuts an existing or proposed arterial street, the Board of Supervisors may require the use of marginal access streets, reverse frontage lots, or other such treatment that will provide protection for abutting properties, reduce the number of intersections with the arterial street, and separate the local and through traffic.

B. Street Hierarchy.

1. Streets shall be classified in a street hierarchy system with design tailored to function and ADT.
2. The street hierarchy system shall be defined by road function and ADT, calculated by trip generation rates prepared by ITE listed in the latest edition of the ITE Trip Generation Manual. Trip generation rates from other sources may be used if the applicant demonstrates that these sources better reflect local conditions.
3. Each street shall be classified and designed for its entire length to meet the standards for one of the street types defined in Appendix No. 3.
4. The applicant shall demonstrate to the Township's satisfaction that the distribution of traffic to the proposed street system will not exceed the ADT thresholds indicated in Appendix No. 3 for any proposed street type for a design period of ten years from the proposed date of completion of the road.
5. Private Streets. Private streets are prohibited unless such streets meet the design standards of these regulations for local access streets. All subdivision streets shall be dedicated to the public unless design objectives of the development warrant private ownership. Applications which propose a private street shall be accompanied by an agreement which shall be recorded with the Recorder of Deeds as part of the final plan. This agreement shall establish the conditions under which the street will be constructed and maintained, as well as conditions controlling an offer of dedication, and shall stipulate:
 - (a) That the street shall be constructed and maintained to conform to the specifications of this Ordinance.
 - (b) That the owners of the abutting lots will include, with any future offer for dedication, sufficient monies, as estimated by the Township, to restore the street to conformance with Township standards.
 - (c) That an offer for dedication of the street shall be made only for the street as a whole.
 - (d) The method of assessing maintenance and repair cost.
 - (e) That an agreement by the owners of fifty-one (51%) percent of the front footage thereon shall be binding on the owners of the remaining lots.
6. Arterial Street Design. The design standards for arterial streets shall be as specified by PennDOT for state roads, and by the Township road ordinances for municipal roads classified as arterial streets under the Federal Aid System. An arterial street is a street which provides for inter-community travel. Applications which propose developments or subdivisions along arterial streets must include

citations to appropriate current road specifications and standards or include notice of improvement and access approval from the appropriate agency.

C. Determination of Required Right-Of-Way and Cartway Width for Local and Collector Streets.

1. Right-of-way and cartway width for each local and collector street classification shall be determined by the proposed use, projected ADT and the intensity of development of each street.
2. Parking and shoulder requirements shall also be based on intensity of development. Intensity of development shall be determined by lot frontage and ADT as follows:

Table I

INTENSITY OF DEVELOPMENT

LOT FRONTAGE (IN FEET)	AVERAGE DAILY TRAFFIC		
	Less than 400	400 to 1000	Greater than 1000
Less than 149	Low	Medium	High
150 or More	Low	Low	Medium

3. Minimum right-of-way and cartway widths for each street classification are as shown in Appendix No. 3. Each street shall be designed for its entire length, to meet the design requirements of the most intense use with all non-residential uses designed to commercial/industrial street standards. All plans shall be designed to provide for the entire required right-of-way and cartway.
4. The right-of-way shall be measured from lot line to lot line and shall be sufficiently wide to contain the cartway, curbs, shoulders, sidewalks, graded areas, utilities and shade trees.
5. The right-of-way width of a new street that is a continuation of an existing street shall in no case be continued at a width less than the existing street. Where the right-of-way width of the new street is greater than the existing street, a transition area shall be provided, the design of which is subject to Township approval.
6. The right-of-way shall reflect future development as indicated by the Comprehensive Plan or Official Map.

D. Shoulders.

1. Shoulders and drainage swales shall be installed where curbs are not required.

2. Shoulder requirements shall vary according to street hierarchy and intensity of development in accordance with the requirements set forth in Appendix No. 3, or where non-motorized vehicle use is prevalent.

E. Curbs and Gutters.

1. Curbing may be required by the Township for:
 - (a) storm water management,
 - (b) road stabilization,
 - (c) to delineate parking areas,
 - (d) ten (10) feet on each side of drainage inlets,
 - (e) at intersections,
 - (f) at corners, and
 - (g) at tight radii.
2. Curb requirements shall vary according to street hierarchy and intensity of development in accordance with the requirements of Appendix No. 3. Curbing shall generally be required on streets with on-street parking.
3. Where curbing is required, this requirement may be waived and shoulders and/or drainage swales used when it can be shown that:
 - (a) shoulders are required,
 - (b) soil and/or topography make the use of shoulders and/or drainage swales preferable, and/or
 - (c) it is in the best interest of the community to preserve its rural character by using shoulders and/or drainage swales instead of curbs.

In cases of medium development intensity, the curbing requirement may be waived where front setbacks exceed forty (40) feet and it can be demonstrated that sufficient on-site parking exists.

4. Flexibility regarding curb type shall be permitted as long as the curb type accommodates the system of drainage proposed.
5. Curbs shall be constructed according to the specifications set forth in Appendix No. 5.
6. Curbing shall be designed to provide a ramp for bicycles and/or wheel chairs at

each intersection, at the principal entrances to buildings which front on parking lots, and at all crosswalks. All curb cuts and crosswalks shall meet the minimum requirements of the ADA.

F. Sidewalks.

1. Sidewalks and/or graded areas shall be required depending on road classification and intensity of development in accordance with the requirements set forth in Appendix No. 3.
2. Where sidewalks are optional, they may be required by the Township when the project is close to pedestrian generators such as schools, to continue a walk on an existing street, to link areas, or as indicated in the Comprehensive Plan.
3. In conventional developments, sidewalks shall be placed parallel to the street within the right-of-way unless a waiver has been granted to preserve topographical or natural features, or to provide visual interest, or unless the applicant shows that an alternative pedestrian system provides safe and convenient circulation. In commercial and in high density residential areas, sidewalks may abut the curb.
4. In planned developments, sidewalks may be located away from the road system to link dwelling units with other dwelling units, the street, and on-site activity centers such as parking areas and recreational areas. They may also be required parallel to the street for safety and other reasons.
5. Pedestrian way easements ten feet wide may be required by the Township through the center of blocks more than six hundred (600) feet long to provide circulation or access to schools, playgrounds, shopping, or other community facilities.
6. Sidewalk width shall be four (4) feet; wider widths may be necessary near pedestrian generators and employment centers. Where sidewalks abut the curb and cars overhang the sidewalk, widths shall be five (5) feet.
7. Sidewalks and graded areas shall be constructed according to the specifications set forth in Appendix No. 6.

G. Vertical Alignments. Vertical street alignments shall be measured along the centerline. The minimum grade and maximum grade of all streets shall be as specified in Appendix No. 3.

1. Vertical curves shall be used in changes in grade exceeding one (1%) percent. The minimum lengths (in feet) of vertical curves shall be fifteen (15) times the algebraic difference in grade. For example, if a 3% upgrade is followed by a 4% downgrade, the algebraic difference in grade is seven [$3 - (-4) = 7$]; the minimum length of the vertical curve would then be 105 feet [$15 \times 7 = 105$].
2. Where the approaching grade exceeds seven (7%) on any or all streets at a four-way street intersection, or the terminating street at a three-way intersection, a lev-

eling area shall be provided on the street(s) with such excessive grade. Such leveling area(s) shall have a maximum grade or four (4%) percent for a minimum length of seventy-five (75) feet measured from the intersection of the centerlines as specified in Appendix No. 3.

3. The grade within the diameter of a turnaround at the terminus of a permanent cul-de-sac shall be as specified in Appendix No. 3.

H. Horizontal Alignments. Horizontal street alignments shall be measured along the centerline. Horizontal curves shall be used at all angle changes in excess of two degrees. Single, long radius curves shall be used rather than a series of curves with varying radii and/or a series of short curves separated by short, straight segments. The minimum horizontal curve radius for streets shall be one hundred fifty (150) feet.

1. Perimeter Streets. Plans with street locations along the perimeter of a property shall be required to show building setback lines and clear sight triangles within the adjacent properties. Permission shall be obtained from the adjacent landowner.
2. Cartway Alignment. The centerline of the street cartway shall correspond with the centerline of the street right-of-way.

I. Street Intersections.

1. Multiple intersections involving the junction of more than two streets are prohibited.
2. The distance between the centerline of streets intersecting at grade with a local street shall be no less than one hundred fifty (150) feet measured along the centerline of the street being intersected based on the safe stopping distance of a road with a design speed of twenty-five (25) mph at a moderate grade.
3. The distance between the centerline of streets intersecting at grade with a collector street shall be no less than three hundred (300) feet measured along the centerline of the street being intersected based on the safe stopping distance of a road with a design speed of forty (40) mph at a moderate grade.
4. The distance between the centerline of streets intersecting at grade with an arterial street shall be no less than six hundred (600) feet measured along the centerline of the street being intersected based on the safe stopping distance of a road with a design speed of fifty-five (55) mph at a moderate grade.
5. Right angle intersections shall be used whenever possible. No street shall intersect another at an angle of less than seventy-five (75) degrees.
6. The cartway edge at street intersections shall be rounded by a tangential arc with a minimum radius as specified in Appendix No. 3. The right-of-way radii at intersections shall be substantially concentric with the edge of the cartway.

7. Where appropriate, the Township may require additional traffic lanes to facilitate vehicular turning movements at existing or proposed street intersections within or bordering subdivision or land development plans.
8. Clearly marked crosswalks shall be provided at all intersections when sidewalks or pedestrian easements are provided in a development. Crosswalks may also be required by the Township at other locations to promote the convenience and safety of pedestrian traffic. The design of crosswalks and the materials used shall be consistent with other crosswalks in the area.

J. Sight Distance at Intersections.

1. Proper sight distance shall be provided at all new street and all new access drive intersections in accordance with the latest edition of the PennDOT Design Manual - Part 2, Highway Design (Publication 13), Section 2.18.F. Sufficient design and plan information shall be submitted with the plan application proving that this minimum standard will be achieved. Such design information shall be sealed by a professional registered in Pennsylvania to perform such design work.
2. At all intersections where stop signs or other stop control devices are not proposed, sight triangle easements or dedicated right-of-way shall be required and shall include the area on each street corner that is bounded by the line which connects the sight or "connecting" points located on each of the right-of-way lines of the intersecting street. The planting of trees or other plantings or the location of structures exceeding thirty (30) inches in height that would obstruct the clear sight across the area of the easements or right-of-way shall be prohibited; and a public right-of-entry shall be reserved for the purpose of removing any object, material or otherwise, that obstructs the clear sight. The distances shown in Appendix No. 3 between the connecting points and the intersection of the right-of-way lines shall be required.

K. Lot Access.

1. The Township may disapprove any point of ingress or egress to any lot, tract, parcel, or development from any street or highway when the proposed ingress or egress would create unsafe conditions, reduce the capacity of the adjoining street or highway, or result in substandard circulation and impaired vehicle movement.
2. The Township may require the applicant to provide ingress and egress to a particular lot or tract through the remainder of his property or other properties over which he has control.
3. In approving ingress or egress from any State road or highway, the Township can only approve those access points that are not in conflict with safety standards of PennDOT. A HOP is required for each access point onto a state road or highway.
4. The receipt of a HOP does not assume direct approval of the Township. The

Township may require the applicant to reapply for a permit if the location of the permit approved access is in conflict with any provision of this Ordinance or if the Township believes the location of the access will hinder the safe and efficient movement on any state road or highway or the proper development of the site. In the event that, after such reapplication, PennDOT refuses to modify the HOP to conform with the provisions of this Ordinance, the PennDOT decision shall prevail.

L. Non-motorized Vehicle Lanes. All non-motorized vehicle lanes shall be designed according to one of the following standards:

1. Separate bicycle paths shall be required if such paths have been specified as part of an adopted municipal comprehensive plan.
2. Bicycle lanes, where required, shall be placed in the outside lane of a roadway, adjacent to the curb or shoulder. When on-street parking is permitted, the bicycle lane shall be between the parking lane and the outer lane of moving vehicles. The lanes shall be delineated with markings, preferably striping. Raised reflectors or curbs shall not be used.
3. Separate carriage lanes shall be required if such lanes have been specified as part of an adopted municipal plan or recommended in an adopted transportation study.
4. Carriage lanes, when required, shall be located adjacent to the outside travel lane of the cartway and may be contained within the shoulder. When on-street parking is permitted, the carriage lane shall be located between the outside travel lane and the parking lane.
5. Movement within the non-motorized lanes shall flow in the same direction as the adjacent travel lane.
6. Non-motorized vehicle lanes shall be constructed according to the specifications set forth in Appendix No. 3.

M. Street Provisions for Future Developments. Where appropriate, areas shall be reserved for future street usage in conjunction with the development of adjacent tracts. Areas reserved for future street usage will not be required to be improved; however, these areas shall be reserved for street improvements to be provided by the developer of the adjacent tract.

Wherever there exists a dedicated or platted area reserved for future street usage along the boundary of a tract being developed, the adjacent street shall be extended into the proposed project provided this use is not adverse to the man-made or natural features of the site.

N. Extension of Existing Streets. The extension of existing streets which are presently constructed with a cartway different from the standards of this Ordinance shall be provided with a transition area, the design of which is subject to Township approval.

- O. Street Improvements. All new local streets shall be designed with one of the following cross-sectional indicated below. Poor site conditions (sub-grade) may necessitate modification of the road section, but in no case shall the final section be less than that indicated on the approved plan. All materials shall be in accordance with PennDOT Publication 408. All pavement shall be a Superpave mixture using a Performance Grade Asphalt of PG 64-22. The aggregate size in the Superpave mix shall be as follows; Wearing Course nine and one half (9.5) mm; Binder Course nineteen (19) mm and Base Course twenty-five (25) mm.
1. Pavement section 1: Compacted and approved subgrade; eight (8) inch 2A stone subbase, four (4) inch base course, and a one and one half (1.5) inch wearing course, or;
 2. Pavement Section 2: Compacted and approved subgrade, six (6) inch 2A stone subbase, six (6) inch aggregate-bituminous base course, and a four (4) inch surface pavement consisting of a two and one half (2.5) inch binder course topped with a one and one half (1.5) inch wearing course.
- P. Cul-de-Sac Streets.
1. A cul-de-sac will not be permitted when a through street is feasible. The feasibility of a through street will be based on the physical features of the tract proposed for development, the potential for extension of the street to adjoining lands, restrictions imposed by other government regulations, and the ability of the design to meet all other requirements of this Ordinance. When cul-de-sac streets, are proposed, the application shall be accompanied by a written analysis of the merits of the design and the reasons that a through street would not be feasible. Approval of cul-de-sac streets shall be at the sole discretion of the Township.
 2. Permanent cul-de-sac streets, when permitted shall be designed to serve a maximum of two hundred fifty (250) AADT for residential development and a maximum of five hundred (500) AADT for non-residential development.
 3. All cul-de-sac streets shall have a minimum length of two hundred fifty (250) feet. Permanent cul-de-sac streets shall have a maximum length of six hundred (600) feet. Temporary cul-de-sac streets shall not exceed eight hundred (800) feet in length.
 4. The length of a cul de sac street shall be measured from the centerline intersection with the through street to the center point of the turnaround.
 5. Permanent cul de sacs shall have a paved, circular turnaround with a minimum radius of fifty (50) feet. The right of way for the turnaround shall maintain the same distance between the cartway edge and the right of way line as is maintained for the straight sections of the street.
 6. Temporary cul de sacs may have circular, "T" shaped or "hammerhead" shaped

turnarounds. Turnarounds shall be constructed completely within the right of way. Restoration of paved areas within the right of way shall be the responsibility of the developer connecting to the temporary cul de sac.

7. Any temporary cul de sac street designed for access to an adjoining property or for authorized phased development and which is greater than one lot deep shall be provided with a temporary all weather turnaround within the subdivision or land development. The use of such turnaround shall be guaranteed to the public until such time as the street is extended.
- Q. Future Access Strips. Future access strips and street plugs are rights-of-way reserved for future street improvements. They shall be designed in conformance with the design requirements of a street, and the contiguous parcels must contain proper setbacks and sight distance reservations.
- R. Special Purpose Street. Off-street parking must be provided for all parcels which abut a special purpose street, and the prohibition of on-street parking must be identified along the cartway.
- S. Access Drives. Access drives shall be designed to meet the following requirements
1. Any property which utilizes an access drive shall have frontage along a public or private street.
 2. The plan shall note that the access drive does not qualify for dedication to the Township and that the landowner assumes all responsibility for its maintenance.
 3. Access drives shall be designed for their intended function. All travel lanes shall be a minimum of ten feet wide, however, sufficient design information must be submitted to indicate that the number of travel lanes and width proposed have been designed to accommodate the anticipated traffic to and from the development. In addition, vertical and horizontal alignments of such drives must be designed to allow for the safe and convenient circulation of traffic within the development site. The Township may require additional cartway width or turning lanes if it is determined that the intended use and function of the access drive warrants such design to ensure safety and convenience.
 4. Parallel parking shall only be permitted along access drives when sufficient cartway width is proposed to accommodate both the travel lanes and parking stalls. Perpendicular parking which would require vehicles to back into the travel lanes of an access drive is prohibited.
 5. Access drives shall maintain a centerline separation distance of one hundred fifty (150) feet from all other access drives and streets along local streets; three hundred (300) feet along collector streets; and six hundred (600) feet along arterial streets. Access drive intersections with other access drives within the site shall not be subject to such restrictions.

6. Proper sight distance shall be provided at access drive intersections with existing streets according to the requirements of Section 602.J.
 7. The Township reserves the authority to disapprove the location of any access drive intersection with an existing or proposed street as stipulated in Section 602.K.
 8. Access drives shall be paved. The paving specification for access drives shall conform to the specification for parking compounds as set forth in Section 603.A.11.
- T. Driveways. Proposed driveways shall conform to any standards which may exist in the Zoning Ordinance or Driveway Ordinance. Additionally, all driveways shall, at a minimum, be designed in accordance with the following:
1. Driveway locations shall not interfere with the normal traffic movement nor be inconsistent with the design, maintenance, and drainage of the street.
 2. The Township may limit the number of driveways providing access to a single property or development from collector or arterial streets. Any access from such streets shall be designed in conformance with the safe stopping distance and respective intersection separation distance requirements specified in this Ordinance.
 3. Driveway access to a local street shall not be located less than fifty (50) feet from the edge of the cartway of any street intersection and shall provide adequate sight distance.
 4. Driveway access to lots shall be provided to the street of lesser classification.
 5. The Township may require the joint or shared use of driveways to provide ingress and egress when such design would increase traffic safety by decreasing the potential for vehicular conflicts.
 6. Every lot must be provided with at least one driveway location which meets the above criteria. Should a site contain more than one location which conforms to these requirements, the plan may delineate the range of available driveway locations. As an alternative, the plan may show locations where driveways are not permitted due to noncompliance with this or other applicable ordinance or regulation.
- U. Street Names. Continuations of existing streets shall be known by the same name. Names for new streets shall not duplicate or closely resemble names of existing streets. All new street names are subject to the approval of Lancaster County-Wide Communications. Notice that the proposed new street names are acceptable shall be submitted prior to final plan approval. All street names shall conform, where applicable, to the Township plan for street names. Private streets shall be named in conformance with this Section.
- V. Signs.

1. Design and placement of traffic signs shall follow the requirements specified in the Manual on Uniform Traffic Control Devices for Streets and Highways, published by the U.S. Department of Transportation.
2. At least two (2) street name signs shall be placed at each four-way street intersection and one at each "T" intersection. Signs shall be installed under light standards and free of visual obstruction. The design of street name signs should be consistent, of a style appropriate to the Township, of a uniform size and color, and erected in accordance with Township standards.

Private streets shall be provided with street name signs in conformance with this Section. The plan shall note that it is the responsibility of the developer to install the street name signs for private streets.

3. Parking regulation signs shall be placed along roadways within the right-of-way in areas that restrict parking.
4. Site information signs in planned residential developments shall follow a design theme related and complementary to other elements of the overall site design.

W. Utility and Shade Tree Areas.

1. Utilities and shade trees shall generally be located within the right-of-way on both sides of and parallel to the street. An alternative placement for shade trees is outside the public right-of-way.
2. Utility and shade areas shall be planted with grass, ground cover, or treated with other suitable cover material.

X. Lighting.

1. Lighting for highway safety may be provided at street intersections, entryways to commercial land developments, and in parking lots adjacent to public streets.
2. Lighting shall be provided in accordance with an illumination plan designed by Pennsylvania Power & Light or in conformance with the IES Lighting standards contained in Appendix No. 8.
3. Spacing of standards shall be equal to approximately four times the height of the standard.
4. The maximum height of standards shall not exceed the maximum building height permitted, or twenty-five (25) feet, whichever is less.
5. The height and shielding of lighting standards shall provide proper lighting without hazard to drivers or nuisance to residents, and the design of lighting standards shall be of a type appropriate to the development and the Township.

6. Spotlights, if used, shall be placed on standards pointing toward the buildings and positioned so as not to blind the residents, rather than on the buildings and directed outward which creates dark shadows adjacent to the buildings.

Y. **Underground Wiring.**

1. All electric, telephone, television, and other communication facilities, both main and service lines servicing new developments, shall be provided by underground wiring within easements or dedicated public rights-of-way, installed in accordance with the prevailing standards and practices of the utility or other companies providing such services.
2. Lots which abut existing easements or public rights-of-way where overhead electric or telephone distribution supply lines and service connections have heretofore been installed may be supplied with electric and telephone service from those overhead lines, but the service connections from the utilities' overhead lines shall be installed underground. In the case of existing overhead utilities, should a road widening, or an extension of service, or other such condition occur as a result of the subdivision and necessitate the replacement or relocation of such utilities, such replacement or relocation shall be underground.
3. Where overhead lines are permitted as the exception, the placement and alignment of poles shall be designed to lessen the visual impact of overhead lines as follows: Alignments and pole locations shall be carefully routed to avoid locations along horizons; clearing swaths through treed areas shall be avoided by selective cutting and a staggered alignment; trees shall be planted in open areas and at key locations to minimize the view of the poles and the alignments; and alignments shall follow rear lot lines and other alignments.
4. Year-round screening of any utility apparatus appearing above the surface of the ground, other than utility poles, shall be required.

Section 603. Vehicular Parking Facilities.

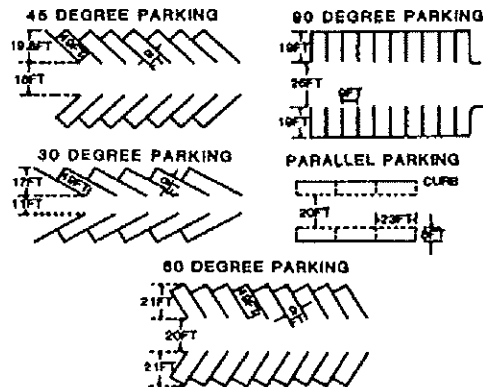
All vehicular parking facilities and internal drives within parking areas shall be designed to allow for the safe and efficient movement of vehicles within a development and on the adjacent street.

- A. **General Standards.** Off-street vehicular parking facilities shall be provided in accordance with the following standards unless such standards:
1. The number of parking spaces required shall be determined by the Zoning Ordinance.
 2. Off-street parking areas shall be oriented to and within a reasonable walking distance of the buildings they are designed to serve according to the following standards:

- (a) For commercial and industrial developments, the furthest space in a lot shall be a maximum of one thousand (1,000) feet for employee parking; five hundred (500) to eight hundred (800) feet for customers.
- (b) For single-family or two-family structures, off-street parking shall be provided behind the street right-of-way line and may be attached or separate garage(s), carport(s), or driveway(s).
- (c) For multi-family structures of more than two units, off-street parking shall be located within two hundred (200) feet of the structure.
- (d) Handicapped parking shall be provided for all non-residential developments and multi-family structures of more than two units. These spaces shall be located closest to the nearest accessible entrance. The number of spaces shall be provided according to the following chart:

Total Required Parking Spaces	Minimum Required Handicapped Spaces
5 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2% of total
1001 and over	20 + 1 for each 100

- 3. Parking facilities shall not be permitted within ten feet of a side or rear property line unless formal arrangements, satisfactory to the Township, have been made for the establishment of a common parking facility unless otherwise specified under the Zoning Ordinance.
- 4. Parking compound dimensions shall be no less than those listed in the following chart:



5. Each angled off-street parking space shall measure nine (9) feet in width by nineteen (19) feet in length. Parking spaces for the physically handicapped shall be twelve (12) feet wide. Parallel parking spaces shall measure eight feet wide and a minimum of twenty-three (23) feet long.
6. Where sidewalks occur in parking areas, parked vehicles shall not overhang or extend over the sidewalk unless an additional two feet are provided in order to accommodate such overhang.
7. Parking areas shall be suitably landscaped to minimize noise, glare and other nuisance characteristics as well as to enhance the environment and ecology of the site and surrounding area. Large parking lots, containing more than fifty (50) spaces, shall be broken down into sections, not to exceed fifty (50) spaces, separated from other sections by landscaped dividing strips, berms, and similar elements.
8. Not less than a four foot radius of curvature shall be permitted for horizontal curves in parking areas.
9. All dead end parking lots shall be designed to provide, when necessary, sufficient back-up area for all end stalls.
10. Painted lines, arrows, and dividers shall be provided and maintained to control parking, and when necessary to direct vehicular circulation.
11. The typical section of any parking compound shall be prepared to meet the following minimum standards:
 - (a) Crushed aggregate based course with a minimum thickness of six inches, as specified in the PennDOT Specifications, Form 408, and its latest revisions, or other PennDOT approved equivalent.
 - (b) Pavement shall consist of a minimum of one and one-half (1.5) inches of binder courses and one inch wearing surface. Material shall be equal or superior to PennDOT Specifications for Bituminous Surface Course ID-2

and shall be applied in accordance with the PennDOT Specifications, Form 408, and its latest revisions or other PennDOT approved equivalent.

B. Parking Facilities for Mixed-Use Developments.

1. For mixed-use developments, a shared parking approach to the provision of off-street parking shall be permitted following the methodology described in the publication Shared Parking (Urban Land Institute and Barton Aschman Associates, Inc., Urban Land Institute, 1984).
2. Where the total number of off-street parking spaces required may not be immediately required for a particular use, a staged development plan may be permitted which requires that only a portion of the parking area, but not less than sixty-five (65%) percent of the required spaces be completed initially.
3. The site plan shall clearly indicate both the portion of the parking area to be initially paved and the total parking needed to provide the number of spaces required.
4. The site plan shall provide for adequate drainage of both the partial and total parking areas.
5. The portion of the parking area not to be paved initially shall be landscaped.
6. The applicant shall post separate performance guarantees, in addition to the performance guarantees required for other improvements which shall reflect the cost of installing the additional parking facilities necessary to provide the total number of parking spaces required.
7. Prior to the expiration of a two (2) year period, the applicant may either install the additional parking shown on the site plan or apply to the Township after the use has been in operation a minimum of eighteen (18) months for a determination as to whether or not the initial parking area provided is adequate. If the Township determines that the parking facility is adequate as originally constructed, the performance guarantees shall be released. If, however, the Township determines that the partial off-street parking area is not adequate, the applicant shall be required to install the additional parking facilities in accordance with the terms of the performance guarantees.

Section 604. Blocks and Lots.

- A. Lot Configuration. The configuration of blocks and lots shall be based upon the minimum and maximum lot area requirements, the salient natural features, the existing improvements, the proposed improvements, and the adjacent development pattern. Lot configurations should provide for flexibility in building locations, while providing safe vehicular and pedestrian circulation. Lots with areas that are two or more times the minimum requirements shall be designed with configurations which allow for additional subdivision.

B. Residential Blocks.

1. All blocks in a residential subdivision shall have a minimum length of three hundred (300) feet and a maximum length of ten times the minimum required lot width, not to exceed two thousand (2,000) feet.
2. Blocks along arterial streets shall not be less than eight hundred (800) feet in length.
3. The design of blocks longer than eight hundred (800) feet shall give special consideration to the requirements of fire protection, pedestrian access, and utility service. The Township may require easements as necessary for these purposes.

C. Nonresidential Blocks. Blocks in nonresidential areas may vary from the requirement of Section 604.B when required by the nature of the use. Adequate provisions shall be made for off-street parking, loading areas, and traffic circulation.

D. Specific Lot Configuration Requirements.

1. In order to avoid jurisdictional problems, lot lines shall, wherever feasible, follow municipal boundaries rather than cross them. Where a lot is divided by a municipal boundary, the minimum standards of both municipalities shall apply.
2. Generally, side lot lines shall be radial to street right-of-way lines. Exceptions may include cases where proposed lot lines follow existing lot lines, improvements, or natural features.
3. All lots shall front on a public street, unless a private street is approved for access pursuant to Section 602.B.5. Principal vehicular access to lots shall be provided from the frontage along the approved street.
4. Lots resulting from a proposed subdivision that will be large enough to be further subdivided shall be configured to facilitate such future subdivision. Adequate street right-of-way shall be provided as necessary. The Township may require a sketch plan of such large lots that indicates the potential future subdivision generally in conformance with the design standards of this Ordinance.
5. Subdivisions shall be designed to accommodate the current and future development of the tract being subdivided, the development potential of adjacent lands, the development goals and policies of the Comprehensive Plan and requirements of the Zoning Ordinance. Flag lots shall not be created when lots can be designed that directly access an existing or proposed public or private street. Whenever possible, lots shall be designed with adequate access by providing the required lot width at the street right of way line. Flag lots shall not be created when such design would limit or restrict the development potential of lands or would prevent a landowner from using the land at the maximum lawful densities.

Notwithstanding the above, flag lots may, in limited situations, represent a viable design alternative. In such cases the Township may, at its sole discretion, approve the platting of flag lots when:

- (a) Flag lots are designed for infill situations in which a court is to be created by the placement of not more than two flagpoles side-by-side and where up to four lots are oriented to a common private street easement. "Infill" shall mean the development of remnants of land created by previous development of a site. Such areas shall be served by public sewer and water and the flag lot design shall maximize the permitted density; or
 - (b) Flag lots proposed to create lots for home sites which are to be located to the rear of an existing tract of land where there is no potential for the construction of a public or private street to provide access to the proposed lot. In such cases, the applicant must demonstrate that there is no potential to construct a street due to (a) severe topographic or other environmental constraints which limit the design of a street, or (b) other factors inherent in the site which make the construction of a public or private street impractical. In such cases, evidence shall be submitted to the Township which documents the above circumstances and demonstrates that the platting of flag lots shall not restrict the development potential and pattern of development of the tract and adjacent lands, shall not result in unsafe driveway locations on public streets, and shall not restrict future development at the maximum lawful density, or
 - (c) Flag lots proposed on land within the Agricultural District so as to create building lots on the least agriculturally suitable portion of the tract. Evidence shall be presented which demonstrates why the area of the proposed flag lot is less productive or inappropriate for agricultural uses. The proposal shall identify how the proposed flag lot will be coordinated with any further development of the farming operation permitted by the Zoning Ordinance.
6. No more than two contiguous flag lots shall be permitted.
 7. The "flagpole" or access portion of the flag lot shall maintain a minimum width of twenty-five (25) feet and shall not change direction more than once. The area of the flagpole shall not be included with the area of the "flag" or the body of the lot in satisfying Zoning Ordinance requirements for minimum lot size.
 8. No portion of any "flagpole", shall be used for on-site sewage disposal or other improvements other than access improvements.
 9. The Township may attach any reasonable conditions to the creation of flag lots as it finds necessary or desirable to provide for the orderly development of land and street systems.
 10. Double frontage lots are prohibited except where provided as reverse frontage

lots. Reverse frontage lots are only permitted when a reduction of driveway intersections along a street with a high volume of vehicular movements is desired. Additionally, reverse frontage lots may be permitted when rear alleys are proposed to provide vehicular access to lots. All reverse frontage lots shall include an identification of the frontage for use as a road access.

11. All residential reverse frontage lots shall have within every rear yard that is adjacent to any street right-of-way, other than an alley, a planted buffer easement of at least ten feet in depth, running the entire width of the proposed lot, across which there shall be no vehicular access.

Section 605. Easements.

Easements for sanitary sewer facilities, storm water drainage facilities, public or private utilities, or pedestrian access shall meet the following standards:

- A. Location of Easements. To the fullest extent possible, easements shall be adjacent to property lines.
- B. Easement Conflicts Prohibited. Nothing shall be placed, planted, set, or put within the area of an easement that would adversely affect the function of the easement or conflict with the easement agreement.
- C. Width of Pedestrian Easements. Pedestrian easements shall have a minimum width of six (6) feet. Pedestrian easements located in the middle of the block pursuant to Section 602.F shall have a minimum width of ten (10) feet.
- D. Width of Utility Easements. Public utility easements shall have a minimum width of twenty (20) feet, and private utility easements shall have a minimum width of ten feet. All utility companies are encouraged to use common easements.
- E. Stormwater Drainage Easements Required. The applicant shall reserve easements where storm water or surface water drainage facilities are existing or proposed, whether located within or beyond the boundaries of the property. Easements shall have a minimum width in accordance with the requirements of the Storm Water Management Ordinance and shall meet design requirements of the Storm Water Management. The easements shall clearly identify who has the right-of-access and responsibility of maintenance.
- F. Variable Petroleum Easement Widths. Where any petroleum or petroleum product transmission line traverse a subdivision or land development, the applicant shall confer with the applicable transmission or distribution company to determine the minimum distance which shall be required between each structure and the centerline of such petroleum or petroleum product transmission line. The applicant shall provide with the final plan application, a letter from the owner of the tract and the right-of-way, a copy of the recorded agreement which shall contain the above data.

Section 606. Survey Monuments and Markers.

- A. Sufficient concrete monument locations must be shown on the final plan to define the exact location of all streets and to enable the re-establishment of all street lines. In general, they shall be set on the street line on one side of the street at the beginning and ending of all curves and at those points on the curve at the street intersections necessary to establish the actual intersection.
- B. Permanent stone or concrete monuments shall be accurately placed along at least one side of each street at the beginning and end of all curves and at all angles.

As an alternative to permanent stone or concrete monuments for streets with concrete curbs, holes may be drilled in the curb along at least one side of each street at the beginning and end of all curves and at all angle points. In the event that any of these points are inaccessible, drilled holes in the curb, offset and referenced from lot corners may be substituted providing there is no more than three hundred (300) feet between drilled hole locations.

- C. Markers shall be set at all points where lot lines intersect curves, at all angles in property lines and at the intersection of all other property lines.
- D. Monuments shall be of concrete or stone, with a flat top having a minimum width or diameter of four inches and a minimum length of thirty (30) inches. Concrete monuments shall be marked with a three-quarter (3/4) inch copper or brass dowel; stone or precast monuments shall be marked on the top with an identifiable inscription and a drill hole. Markers shall consist of iron pipes or steel bars at least thirty (30) inches long and not less than three-quarters (3/4) of an inch in diameter.

Drill Hole Specifications. Holes shall be drilled in concrete curbs (with or without PK nails or discs) having a minimum diameter of one-quarter (1/4) inch. The depth of the holes shall be such that a PK nail or disc, if used, can be set in as close to the surface of the curb as possible. Minimum depth without the use of PK nail or disc shall be one-half (1/2) inch. In the absence of PK nails or discs, chisel or saw marks shall be used to facilitate and identify the drill hole locations.

- E. All monuments, markers, and drilled holes shall be placed by a registered professional land surveyor so that the scored marked point, or center of the drilled hole shall coincide with the point of intersection of the lines being monumented or marked.
- F. All existing and proposed monuments, lot line markers, property corners, and drill holes shall be shown on the final plan. Those that are proposed shall be labeled as such. Drilled holes in curbing shall be referenced mathematically to a point on the right-of-way line.

Section 607. Storm Water Management.

- A. All plans shall comply with Storm Water Management Ordinance.

- B. Wetlands. In addition to the above requirements no subdivision or land development shall involve uses, activities or improvements which would entail encroachment into, the regrading of, or the placement of fill in wetlands in violation of state or federal regulations. Applicants must submit evidence to the Township that, if wetlands are present on the site, the DEP (Bureau of Waterways Engineering and Wetlands) and the COE have been contacted to determine the applicability of state and federal wetland regulations. Any approval of the Township shall be contingent on full compliance with any requirements of any regulatory agency, and no action by the Township shall be relied on in lieu of a permit issued by the appropriate agency.

Section 608. Landscaping.

Landscaping shall be provided, consistent with the standards of this Ordinance, in all subdivisions and land developments.

A. Buffer Planting.

1. Buffer planting shall be provided along the rear of reverse frontage lots and along the side and rear lot lines of commercial or industrial properties where such lots abut residentially zoned property. Parking and buildings are prohibited within the buffer area. The use of the buffer area for accessways shall be limited. Buffer areas shall consist of one row, staggered, of mixed evergreen and deciduous trees which shall be at least six (6) feet in height when planted and shall be spaced not more than ten (10) feet apart on center and two rows, staggered, of mixed broad leaf and needle evergreen shrubs which shall be at least three (3) feet in height when planted and shall be spaced not more than five (5) feet apart on center. The trees shall be of such species so as to attain a height at maturity of not less than twenty (20) feet. The shrubs shall be of such species as to provide continued screening from the ground to a height of six feet at maturity. Deciduous plant materials shall comprise no more than thirty (30%) percent of the number of plants in the buffer. The required height of the buffer planting may be achieved in part by mounding or installation of plants along a berm.
2. Service loading and trash disposal areas such as dumpster or compactor sites shall be effectively screened so as not to be visible from parking areas, roadways, or adjacent properties. Such areas shall be screened with a combination of architectural masonry (or fencing) and landscaping with a height of at least six (6) feet.
3. Parking and storage of vehicles in front yards of properties, other than lots in single-family subdivisions, shall be screened from the public right-of-way by an earthen berm and/or plant matter which provides a dense visual screen to four (4) feet in height at maturity. Plant matter shall consist of two rows of mixed broad leaf and needle evergreen shrubs planted in staggered rows. Plants shall be spaced not more than five (5) feet apart on center and shall be at least three (3) feet in height when planted. Additional planting in the form of non-canopy trees and deciduous shrubs is acceptable.

4. All planting shall be performed in conformance with good nursery and landscape practice. Plant materials shall conform to the standards recommended by the American Association of Nurseryman, Inc., in the American Standard of Nursery Stock, ANSI Z60, current edition, as amended.
- B. Existing Wooded Areas. Existing wooded areas shall be protected to prevent unnecessary destruction. At least twenty-five (25%) percent of the number of trees (minimum trunk caliper of five (5) inches at six (6) inches above ground) that exist at the time of Plan submission shall be maintained or replaced immediately following construction. Replacement trees shall be a minimum trunk caliper of two (2) inches at a height of six (6) inches above finished grade and located within unbuildable sections of the site (i.e., floodplain, steep slope, and setback areas). Plans shall be submitted showing existing trees and proposed construction and which indicate conformance with this Section.
- C. Street Trees. Street trees shall be provided in all residential subdivisions with densities greater than one dwelling per acre and all commercial and residential land developments. Street trees may be required by the Township in other developments. All street trees shall be provided by the applicant in accordance with the following standards:
1. The trees shall be nursery grown in a climate similar to that of the locality of the project. Varieties of trees shall be subject to the approval of the Board of Supervisors.
 2. All trees shall have a normal habit of growth and shall be sound, healthy, and vigorous; they shall be free from disease, insects, insect eggs, and larvae.
 3. The trunk diameter, measured at a height of six (6) inches above finish grade, shall be a minimum of two (2) inches.
 4. Trees shall be planted between the street right-of-way line and the building setback line except where the Township has authorized placement of trees within the street right-of-way. The trees' growth shall not interfere with the street cartway, sidewalk, or utility line. Street tree branching shall not interfere with clear sight triangles. Typical branching shall not be within ten (10) feet of ground level after ten (10) years of growth.
 5. All planting shall be performed in conformance with good nursery and landscape practice and to the standards established by the authority which accepts ownership of the planting.
 6. Requirements for the measurements, branching, grading, quality, balling, and the burlapping of trees shall follow the code of standards recommended by the American Association of Nurserymen, Inc., in the American Standard for Nursery Stock, ANSI Z60, current edition, as amended.
 7. A minimum of two canopy street trees shall be provided for every one hundred (100) feet of public right-of-way. Street trees shall be placed a minimum of forty (40) feet apart along the right-of-way, and shall be located so as to maximize the

growth potential of the plant material, minimize the potential for root interference with public infrastructure, and enhance the quality of the development. Street trees shall be one of the following species:

Acer rubrum cultivars	Red Maple
Acer saccharum	Sugar Maple
Aesculus hippocastanum	Common Horse Chestnut
Aesculus x cornea	Red Horsechestnut
Cladrastus lutea	American Yellowwood
Gleditsia triacanthos inermis	Thornless Honey Locust
Liquidambar styraciflua	Sweet Gum
Ostrya virginiana	Hop Hornbeam
Quercus acutissima	Sawtooth Oak
Quercus palustris	Pin Oak
Quercus rubra	Red Oak
Tilia cordata	Littleleaf Linden
Tilia x euchlora	Crimean Linden
Tilia tomentosa	Silver Linden
Ulmus parvifolia	Lacebark Elm
Zelkova serrata	Japanese Zelkova

Other tree species may be used provided acceptable information is submitted to indicate that the species are hardy street trees. No one species shall comprise more than twenty-five (25%) percent of the entire number of street trees in a particular development.

8. Street trees are to be maintained and guaranteed for a minimum of two (2) years. Planting of trees shall occur within the standard planting season (March through November). No more than one-third (1/3) of the tree shall be damaged or dead without replacement. Replacement trees shall conform to all requirements of this Section and shall be maintained and guaranteed for a minimum of two (2) planting seasons.
- D. Ground cover. Ground cover shall be provided on all areas of the project to prevent soil erosion. All areas which are not covered by paving, stone, or other solid material shall be protected with a suitable ground cover, consisting of spreading plants including sods and grasses less than eighteen (18) inches in height.

Section 609. Sanitary Wastewater Disposal and Water Supply.

- A. Sanitary Wastewater Disposal. The applicant shall provide the highest type of sanitary wastewater disposal facility consistent with existing physical, geographical, geological, and economic conditions. The following types of sanitary sewage wastewater disposal facilities are listed in order of desirability:
 1. Publicly owned sanitary wastewater disposal system.
 2. Privately owned sanitary wastewater system used by one unit of occupancy with

subsurface absorption.

3. Community sewer system used by two or more units of occupancy with treatment other than subsurface absorption or holding tank which is owned by a single individual.
4. Community sewer system with subsurface absorption or drainage fields used by two or more units of occupancy.
5. If the project is located within an Urban Growth Area or if the site is within an area planned for sewer service by the Act 537 Plan and if public sewer service is available within the following distances, subdivisions and land developments shall be connected to an existing public sanitary sewer system: two hundred (200) feet for one-unit; four hundred (400) feet for two-unit; six hundred (600) feet for three-unit; eight hundred (800) feet for four-unit; and one thousand (1,000) feet for five-unit to 15-unit developments. For developments of greater than fifteen (15) units which are within one mile from an existing public sanitary sewer system, adequate justification shall be provided as to why they should not provide a connection to the existing public sanitary sewer system. For developments of greater than fifteen (15) units which are more than one mile from an existing system, the sanitary sewer strategy shall be determined on a case-by-case basis, taking into consideration the density of development, economic considerations, and the requirements of the Act 537 Plan.
6. If a public sanitary sewer system is not in place or cannot be extended, the developer may provide individual subsurface disposal systems subject to applicable regulations of the DEP. Provided that, if a public sanitary sewer system will be provided to such areas within a six-year period as indicated in the Act 537 Plan, the Township may require installation of a capped system within the road right-of-way.
7. The Township shall require that approval from DEP be granted prior to approval of the final plan:
 - (a) When appropriate, the Township may condition approval of the final plan on the receipt of the approval of the Plan Revision Module prior to the sale of lots or commencement of construction.
 - (b) When a Plan Revision Module for Land Development is not required, or such approval has been waived by the appropriate authority, written notice of such action shall be submitted.
8. When connection to an existing public sanitary sewer system or community sewer system is proposed:
 - (a) The preliminary plan application shall include a statement from the authority or organization providing such service that sufficient capacity to service the proposed development is available. Such notice shall:

- (1) be dated within six months of the plan application
 - (2) identify the term of the reservation
 - (3) provide capacity for the entire development [partial capacity, based on phases of development, will not be acceptable].
 - (b) The final plan application shall include a statement from the authority or organization providing such service indicating approval of the plans for design, installation and financial guarantees as well as indicating the reservation of sufficient capacity to accommodate the project.
 9. Where on-site sanitary wastewater disposal facilities are to be utilized, each lot so served shall be of a size and shape to accommodate the necessary subsurface wastewater disposal system at a safe distance from building and water supply in accordance with Title 25, Chapter 73, of the DEP regulations. Testing to prove that each lot is suitable for on-site wastewater disposal shall be completed prior to the submission of the final plan. No lot shall be created in an area without public sewer, unless such lot is suitable for on-site wastewater disposal.
- B. Water Supply. Whenever an existing or approved water system is accessible to a proposed project, a distribution system shall be provided to furnish an adequate supply of water to each unit.
1. Applicants shall submit to the Township documentation in the form of a copy of a Certificate of Public Convenience from the Pennsylvania Public Utility Commission that the project is located in an area served by a public utility and a statement that the utility has the capacity to serve the project at this time; or a cooperative agreement or an agreement to serve the project from a bona fide cooperative association of lot owners or from a municipal corporation, authority, or utility. A water system shall be considered accessible to a project, and shall be connected to the project, if public service is available within the following distances: two hundred (200) feet for one unit; four hundred (400) feet for two units; five hundred (500) feet for three to ten (10) units; and within one thousand (1,000) feet for any development resulting in ten (10) or more units of occupancy.
 2. Whenever the water supply system contains sufficient capability or is planned to have such capability within two years from the date of final plan approval, fire hydrants shall be provided; when provided, the location and kind of fire hydrant shall meet the specifications of the local fire company and the Township when applicable. A copy of the approval of such system by the appropriate agency or utility company which provides the service shall be submitted with the final plan. Suitable agreements shall be established for the ownership and maintenance of such a distribution system.
 - (a) Hydrants shall be spaced to provide necessary fire flow, and the average area per hydrant typically should not exceed 120,000 square feet. In addi-

tion, hydrants shall be spaced so that each residence shall be within six hundred (600) feet of a hydrant.

- (b) A hydrant shall be located at all low points and at all high points with adequate means of drainage provided.
 - (c) If an approved water system will be extended to the sub-division within six years, the Township may require installation of a capped water distribution system.
- 3. Where a public system is not accessible, particularly where on-site sanitary disposal systems are to be used, a community water supply may be required. If a community water system is provided, it shall be approved by the DEP, and appropriate measures shall be provided to ensure adequate maintenance.
 - 4. When connection to an existing community water supply system or public water system is proposed, the final plan application shall include a statement from the authority or organization providing such service indicating the approval of the plans for design, installation, and financial guarantee.
- C. Aquifer Test Required. Prior to installation of any new water system or the subdivision of land into lots which would be served by individual wells in areas or in proximity to areas of known groundwater contamination or inadequate yields of potable supplies, aquifer and water quality tests shall be performed. Areas of known groundwater problems shall be mapped and such information shall be maintained in the offices of the Township.
- 1. Areas of known ground water problems shall include:
 - (a) Areas underlain by serpentinic or schistostic geologic formations.
 - (b) Areas in proximity (one (1) mile) of sinkholes, ghost lakes, or drainage entering the ground.
 - (c) Contaminated aquifers, including designated clean-up sites.
 - (d) Other areas with documented water quantity or quality problems, including pollutants in excess of federal safe drinking water standards.
 - 2. Aquifer Test Standards and Procedures. No person shall develop land within an area of known groundwater quantity problems without administering and passing on said land the aquifer test required by this Section in compliance with the following objectives, standards, methods and procedures:
 - (a) Test Objective. The objectives of an aquifer test shall be one or more of the following:
 - (1) To obtain sufficient data for the calculations of aquifer performance, including the coefficients of transmissibility and storage,

permeability, and specific yield.

- (2) To determine the location and character of geologic boundaries.
 - (3) To ascertain the effects of well interference.
 - (4) To provide a guide in the spacing of wells for the development of a well field.
- (b) **Test Standard.** The aquifer test shall establish that the proposed well is capable of supplying potable water at the minimum rate of four hundred (400) gallons per day per unit of occupancy at a demand rate of not less than eight (8) gallons per minute for one (1) hour, either with or without the use of a storage system.
- (c) **Test Supervision and Evaluation.** The aquifer test shall be conducted under the supervision of a qualified geologist or professional engineer, using testing procedures hereinafter set forth. The geologist or engineer shall be responsible for notifying the Township five working days prior to the start of the test. He or she will also summarize the test and its significance and make recommendations as to the suitability of the well or wells for the intended uses. The final report of the supervising person shall include an opinion as to whether the proposed use of the well will have an impact upon other existing wells in the immediate surrounding area. The supervising person shall provide the Township with a copy of all field notes and test results.
- (d) **Test Method.** The method for conducting the aquifer test shall be as follows:
- An aquifer test shall be conducted for a minimum of twelve (12) hours at a constant rate of pumping. The pumped well shall be the one proposed for the specific subdivision or land development for which the test is conducted. Two observation wells which have hydraulic continuity with the pumped well are required. The preferred method of analysis of the aquifer test data is the non-equilibrium formula, although other methods are available and may be used. These include various methods of analysis of either the drawdown or recovery data.
- (e) **Collection of Data.** Data shall be collected in conjunction with the aquifer test as follows:
- (1) Prior to the test:
 - [a] Collection of geologic data of the area to be tested including well logs, if available.
 - [b] History of water level fluctuations in the area when availa-

ble.

[c] The location, relative elevations and static water levels in the pumped well and the observation well or wells.

[d] The expected discharge of the pumped well.

(2) During the test: A standard aquifer test field data sheet will be required for a pumped well and each observation well. The data sheet shall include columns for listing:

[a] The date.

[b] Clock time.

[c] Elapsed time since pumping started/stopped (in minutes + seconds).

[d] Depth to water below land surface.

[e] Drawdown or recovery (in feet) + 10ths.

[f] Observed discharge at specified intervals

(3) Following the test:

In accordance with recognized principles of well hydraulics, graphs shall be prepared to show time drawdown and time recovery for the pumped well and the observation wells. A distance drawdown graph will be required for anticipated rates of pumping. Computation of the coefficients of transmissibility and storage as well as the rate of pumping, time and drawdown are required as well as other data which may be considered necessary to satisfy the test objectives.

D. Water Quality Test. No person shall develop land within an area of known groundwater quality problems without conducting a water quality test. In addition, a water quality test shall be conducted concurrently with any aquifer test required in Section 609.C. Such tests shall be conducted by a certified laboratory. The quality of the water tested shall meet the minimum public health drinking water standards as set forth in the National Safe Drinking Water Regulations of the EPA or be capable of treatment to attain said standard of quality. No person shall divide or use land unless the water to be supplied by the proposed water system meets the minimum standards set forth herein.

E. Criteria for a Request of Exemption. A proposed land development or subdivision which intends to use a groundwater source to supply water to the property may be exempted from these requirements by the Township if one or more of the following criteria are satisfied:

1. The proposed project is located one quarter (1/4) mile or less, in the same geologic unit, from a previous aquifer test, within the past two years, and the previous test showed transmissibility (T) values greater than one thousand (1,000).
 2. The proposed project has had two aquifer tests on different sides of the proposed project within one-half (1/2) mile in the same geologic unit within the past two years, with "T" values greater than one thousand (1,000).
 3. The proposed land development or subdivision is recommended for exemption by a qualified geologist based upon certified hydrogeological information.
 4. If Section 609.D applies to the proposed project and the documented water problem relates to quality and not quantity, then the aquifer test may be exempted. However, a water quality test must be conducted.
- F. Hazards Associated with Carbonate Rocks. All subdivisions and land developments located in areas underlain by carbonate geologic formations shall be designed and constructed to minimize any impacts which may affect, increase, diminish, or change any natural drainage, natural springs, or water table. No development that in the opinion of the Township poses significant risks in stimulating the formation of sinkholes or in causing hydrologic connection of contaminated surface water with subsurface aquifers shall be approved.
1. Hydrogeologic Report Required. When, in the opinion of the Township, there is a probable likelihood that a project will affect or be affected by carbonate geologic hazards the Township shall require submission of a hydrogeologic report. In reaching a determination of whether a project will affect or be affected by carbonate geologic hazards, the Township shall consider the presence or absence of carbonate features in the vicinity of the project, the testimony of qualified expert witnesses, the recommendation of the affected municipality, and such other reasonable information as may be available. Any hydrogeologic report shall be prepared at the applicant's expense by a hydrogeologist or professional engineer qualified in such matters. Each hydrogeologic report shall contain:
 - (a) A map showing all sinkholes, depressions, lineaments, faults, outcrops, springs, drainage entering the ground, water table, soil mottling and ghost lakes, and all features that may relate to the quality and availability of groundwater within one mile distance.
 - (b) A map outlining all wells, or drinking water supplies within a radius of three miles of the proposed site.
 - (c) A listing of all referenced data, published and otherwise.
 - (d) A topographic site map with the site clearly outlined.
 - (e) A map indicating the location and design of all on-site wastewater dis-

posal systems.

- (f) A description of anticipated water quality impacts to areas located down-gradient and areas located along the geologic strike.
- (g) A description of any mitigation measures that could be applied to minimize impacts of the project or to correct existing problems.

2. Specifications for Stormwater Management Basins.

- (a) No stormwater management basin shall be placed in or over the following features:
 - (1) sinkholes.
 - (2) closed depressions.
 - (3) lineaments in carbonate areas.
 - (4) fracture traces.
 - (5) caverns.
 - (6) ghost lakes.
 - (7) disappearing streams.
- (b) Stormwater management basins shall not be located closer than one hundred (100) feet from the rim of sinkholes or closed depressions, nor within one hundred (100) feet from disappearing streams; nor shall these basins be located closer than fifty (50) feet from lineaments or fracture traces; nor shall these basins be located closer than twenty-five (25) feet from surface or identified subsurface pinnacles.

Section 610. Historic and Cultural Resources.

- A. Archaeologic Investigations. No project shall be developed on a site identified by the PHMC as containing features of archaeological significance until:
 - 1. A complete level 1 and level 2 archeological survey of the site is completed; or
 - 2. The State Historic Preservation Officer determines that the project will not disturb the cultural significance or artifacts on the site.
- B. Method of Survey. If a complete archaeological survey is required, it shall be conducted under the supervision of a professional archeologist in compliance with standards prescribed by the PHMC. Even if a complete survey is not required, the Township may, upon advice of the State Historic Preservation Officer, require the developer to retain the

services of, and have present at the site during any excavations or trenching, an archeologist with authority to investigate and document any cultural material that might be unearthed.

- C. **Report Required.** A complete copy of the report of the archeologist, including a copy of the field notes shall be submitted to the Township and the State Historic Preservation Officer. Arrangements shall be made by the developer for transfer of any significant artifacts to a depository where such items can be conserved and made available for future study.
- D. **Preservation of Historic Features.** Subdivisions and land developments shall be designed to preserve, adaptively reuse, or otherwise provide for the historic features of Lancaster County and the Township. Modifications or exterior alterations to historic features or sites or new construction adjacent to historic features shall be consistent with the Secretary of the Interior's Standards for Rehabilitation of Historic Properties as published by the National Park Service. Subdivisions and land developments shall also be designed so that new structures do not block historic views, or obstruct the view of historic properties, and new construction should be visually complementary to historic structures, consistent with the Secretary of the Interior's Guidelines. If because of size, scale, construction material, or type of use a proposed land development or subdivision would jeopardize the historic value of a site or structure, such new construction shall be screened or otherwise visually buffered.
- E. **Demolition Restricted.** No historic feature as defined of this Ordinance shall be demolished or moved from its original foundations without approval of the Township. The applicant shall submit to the Township a letter from either the State Historic Preservation Officer or from the Preservation Trust of Lancaster County identifying the significance of the property, potential effects of the project that would be adverse, and possible mitigation measures that could be employed. In evaluating any request for demolition of a historic feature the Township shall take into account the significance of the property, the condition of the feature the potential for repair, restoration, stabilization, and reuse, the impact of the feature in relation to the total project, and the hardship, if any, on the applicant.
- F. **Retention of Local Names.** Applicants are encouraged to perpetuate historic names or geographic references that are traditionally associated with the area in which a project is located, rather than proposing project names that are not consistent with Lancaster County and the Township traditions or culture.

ARTICLE 7

MOBILE HOME PARKS

Section 701. Processing Procedures.

Mobile home park plans shall be processed in accordance with the procedures set forth in Article 3 and the Zoning Ordinance. Mobile home park plans shall comply with the requirements of Article 6.

Section 702. Water Supply; Sewage Disposal.

- A. All mobile home parks shall be connected to a public or community water supply in accordance with the requirements of Article 6. Adequate provision shall be made to protect the water service lines from damage, including a shutoff valve on each mobile home lot below the frost line.
- B. All mobile home parks shall be connected to a sewage disposal system in accordance with the requirements of Article 6, and each mobile home shall be connected to the sewage disposal system. Adequate provisions shall be made to protect the sanitary sewer lines from stormwater infiltration and breakage.

Section 703. Streets, Curbs and Sidewalks.

Streets, curbs and sidewalks shall be provided in accordance with the requirements of Article 6.

Section 704. Lot Size and/or Density.

Lot size and density shall comply with the Zoning Ordinance.

Section 705. Storm Drainage; Erosion and Sedimentation; Floodplain Controls.

All mobile home parks shall conform to the requirements of the Storm Water Management Ordinance and Zoning Ordinance with respect to stormwater drainage, erosion and sedimentation and floodplain controls.

Section 706. Lighting.

All streets, alleys and parking lots shall be lighted to provide an average minimum two foot-candle level of illumination at an elevation of three (3) feet above the grade for the safe movement of pedestrians and vehicles at night. All lighting shall be so arranged as to reflect the light away from adjoining premises and public rights-of-way. Lighting shall comply with the Zoning Ordinance.

Section 707. Landscaping.

Landscaping shall comply with the Zoning Ordinance and Section 605.

Section 708. Solid Waste Disposal.

Solid waste disposal shall be the responsibility of the operator of the mobile home park, travel trailer park or campground and shall be performed in accordance with the requirements of the DEP.

Ordinance.

- D. Records. The Township shall keep a written record of all action on all requests for modifications or waivers.

Section 802. Enforcement.

- A. It shall be the duty of the Zoning Officer, Township Engineer, and/or other such duly authorized representative of the Township, and such officer is hereby given the power and authority, to enforce the provisions of this Ordinance.
- B. The Zoning Officer shall require that the application for a zoning permit contain all information necessary to enable him to ascertain whether the proposed building, alteration or use is located in an approved subdivision or land development. No zoning permit shall be issued until the Zoning Officer has determined that the site for the proposed building, alteration or use complies with all the provisions of this Ordinance and conforms to the site description as indicated on the approved and recorded final plan.

Section 803. Appeals.

All appeals from decisions of the Board of Supervisors in the administration of this Ordinance shall be made in accordance with the provisions of the MPC.

Section 804. Violations and Penalties; Preventative Remedies.

- A. Any person, partnership or corporation, or the members of such partnership or the officers of such corporation, who or which being the owner or agent of the owner of any lot, tract or parcel of land, shall: 1) lay out, construct, open and/or dedicate any street, sanitary sewer, storm sewer, water main or other improvement for public use, travel or other purposes or for the common use of occupants of buildings abutting thereon; 2) sell, transfer or agree to enter into an agreement to sell or transfer any land in a subdivision or land development, whether by reference to or by use of a plan of such subdivision or land development or otherwise; 3) erect any building or buildings which constitute a land development thereon; 4) commence site grading or construction of improvements prior to approval of an improvement construction plan or recording of a final plan; 5) fail to comply with any condition imposed upon approval of a preliminary plan or a final plan or any condition imposed upon the granting of any waiver; 6) fail to comply with any agreement with the Township relating to development in accordance with a preliminary plan or a final plan; 7) fail to comply with any note included on an approved preliminary plan or final plan; 8) construct or permit the construction of any improvement or develop or permit the development of any property in a manner which does not fully comply with the approved improvement construction plan or final plan, as applicable; 9) knowingly provide false information on any plan, report, certification or other document required to be submitted by this Ordinance; or 10) in any other way takes action or permits another to take action not authorized by this Ordinance or contrary to the provisions of this Ordinance commits a violation of this Ordinance. Such person shall be subject to all of the penalties and remedies set forth in Article V of the MPC.

- B. In addition to other remedies, the Township may institute and maintain appropriate actions at law or in equity to restrain, correct or abate violations of this Ordinance, to prevent unlawful construction, to recover damages and/or to prevent illegal occupancy of a building, structure or premises.
- C. The description by metes and bounds in the instrument of transfer or other documents used in the process of selling or transferring shall not exempt the seller or transferor from such penalties or from the remedies herein provided.
- D. The Township may further refuse to issue any permit or grant any approval necessary to further improve or develop any real property which has been developed or which has resulted from a subdivision of real property in violation of this Ordinance. The authority to deny such permit or approval shall apply to any of the following applicants:
 - 1. The owner of record at the time of such violation.
 - 2. The vendee or lessee of the owner of record at the time of such violation without regard to whether such vendee or lessee had actual or constructive knowledge of the violation.
 - 3. The current owner of record who acquired the property subsequent to the time of the violation without regard as to whether such current owner had actual or constructive knowledge of the violation.
 - 4. 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 constructive knowledge of the violation.
- E. As an additional condition for the 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, the Township may require compliance with the conditions that would have been applicable to the property at the time the applicant acquired an interest in such real estate.

Section 805. Fees and Charges.

The Township may impose fees and charges to recover all costs incurred in the administration of this Ordinance. All fees and charges may be adopted by resolution or ordinance. These fees may include, but not be limited to, application fees; appeal fees; fees for consideration of waivers; fees for the review of the plans, studies, financial security and associated documentation by the Township Engineer, Township Solicitor or other professional consultant; fees for the inspection of improvements installed in connection with development authorized by a plan; and fees for the acceptance of dedication of improvements.

Section 806. Construal of Provisions.

In the interpretation and application of the provisions of this Ordinance, said provisions shall be deemed to be the minimum requirements necessary for the promotion and protection of the public health, safety and welfare. Where the provisions of this Ordinance and all standards and

specifications implementing it impose greater restrictions upon subdivision or land development than those of any other Township ordinance or any regulation or any applicable land development agreement, the provisions of this Ordinance and its standards and specifications shall be controlling. Where the provisions of any statute, regulation, other Township ordinance or applicable land development agreement impose greater restrictions upon subdivision or land development than this Ordinance, the provisions of such statute, regulation, other ordinance or applicable land development agreement shall be controlling.

Section 807. Severability.

In the event any provision, section, sentence, clause or part of this Ordinance shall be held to be invalid, illegal or unconstitutional by a court of competent jurisdiction, such invalidity, illegality or unconstitutionality shall not affect or impair the remaining provisions, sections, sentences, clauses or parts of this Ordinance, it being the intent of the Board of Supervisors that the remainder of the Ordinance shall be and shall remain in full force and effect.

Section 808. Effective Date.

This Ordinance shall take effect and be in force five (5) days after enactment as provided by law.

DULY ORDAINED AND ENACTED this ____ day of _____, 2016, by Board of Supervisors of the Township of Martic, Lancaster County, Pennsylvania, in lawful session duly assembled.

TOWNSHIP OF MARTIC
Lancaster County, Pennsylvania

Attest: _____
(Assistant) Secretary

By: _____
(Vice) Chairman
Board of Supervisors

[TOWNSHIP SEAL]

APPENDIX NO. 1

CERTIFICATES, ACKNOWLEDGMENTS, AND VERIFICATIONS

CERTIFICATION OF ACCURACY - PLAN

I hereby certify that, to the best of my knowledge, the plan shown and described hereon is true and correct to the accuracy required by the Martic Township Subdivision and Land Development Ordinance.

_____, 20____ * _____

**

* Signature of the engineer or surveyor responsible for the preparation of the plan.

** Seal of the engineer or surveyor.

CERTIFICATION OF ACCURACY - SURVEY

I hereby certify that, to the best of my knowledge, the survey shown and described hereon is true and correct to the accuracy required by the Martic Township Subdivision and Land Development Ordinance.

_____, 20____ * _____

**

* Signature of the surveyor responsible for the survey.

** Seal of the surveyor.

STORM DRAINAGE PLAN CERTIFICATION

I hereby certify that, to the best of my knowledge, the storm drainage facilities shown and described hereon are designed in conformance with the Martic Township Subdivision and Land Development Ordinance.

_____, 20____ * _____

**

* Signature of the registered professional responsible for the preparation of the storm drainage plan.

** Seal of the individual.

DRIVEWAY CERTIFICATION

I hereby certify that, CONSISTENT WITH THE REGULATIONS OF THE Pennsylvania Department of Transportation, a permit can be issued to allow driveway(s) and/or street(s) to be constructed at the locations shown.

_____, 20____ * _____

**

* Signature of the registered professional responsible for the preparation of the plan.

** Seal of the individual.

**CERTIFICATE OF REVIEW BY
MARTIC TOWNSHIP PLANNING COMMISSION**

At a meeting on _____, 20____, the Martic Township Planning Commission reviewed this plan, and a copy of the review is in file in the Martic Township Offices.

* _____ *

* Signatures of the Chairman and Vice Chairman or their designee(s).

**CERTIFICATE FOR PRELIMINARY PLAN APPROVAL BY
MARTIC TOWNSHIP BOARD OF SUPERVISORS**

At a meeting on _____, 20____, the Martic Township Board of Supervisors granted PRELIMINARY PLAN APPROVAL of this project, including the complete set of plans marked sheet(s) _____ through _____ which form a part of the application dated _____, last revised _____, and bearing Township File No. _____. This plan may not be recorded in the Office of the Lancaster County Recorder of Deeds, nor may any construction be initiated.

[TOWNSHIP SEAL]

* _____

* _____

* Signatures of the Chairman and Vice Chairman or their designee(s).

**CERTIFICATE FOR IMPROVEMENT CONSTRUCTION PLAN APPROVAL BY
MARTIC TOWNSHIP BOARD OF SUPERVISORS**

At a meeting on _____, 20____, the Martic Township Board of Supervisors granted IMPROVEMENT CONSTRUCTION PLAN APPROVAL of this project, including the complete set of plans marked sheet(s) _____ through _____ which form a part of the application dated _____, last revised _____, and bearing Township File No. _____. This plan may not be recorded in the Office of the Lancaster County Recorder of Deeds.

[TOWNSHIP SEAL]

* _____

* _____

* Signatures of the Chairman and Vice Chairman or their designee(s).

**CERTIFICATE FOR LOT LINE CHANGE/LOT ADD-ON PLAN APPROVAL BY
MARTIC TOWNSHIP BOARD OF SUPERVISORS**

At a meeting on _____, 20____, the Martic Township Board of Supervisors granted APPROVAL of this Lot Line Change/Lot Add-On Plan, including the complete set of plans marked sheet(s) _____ through _____ which form a part of the application dated _____, last revised _____, and bearing Township File No. _____.

[TOWNSHIP SEAL]

* _____

* _____

* Signatures of the Chairman and Vice Chairman or their designee(s).

**CERTIFICATE FOR FINAL PLAN APPROVAL BY
MARTIC TOWNSHIP BOARD OF SUPERVISORS**

At a meeting on _____, 20____, the Martic Township Board of Supervisors granted FINAL PLAN APPROVAL of this project, including the complete set of plans marked sheet(s) _____ through _____ which form a part of the application dated _____, last revised _____, and bearing Township File No. _____.

[TOWNSHIP SEAL]

* _____

* _____

* Signatures of the Chairman and Vice Chairman or their designee(s).

**LANCASTER COUNTY PLANNING COMMISSION
REVIEW CERTIFICATE**

The Lancaster County Planning Commission, as required by the Pennsylvania Municipalities Planning Code, reviewed this plan on _____, 20____, and a copy of the review is on file in the office of the Lancaster County Planning Commission bearing LCPC File No. _____. This Certificate does not indicate approval or disapproval of the Lancaster County Planning Commission, and the Lancaster County Planning Commission does not represent nor guarantee that this plan complies with the various ordinances, rules, regulations or laws of the local municipality, the Commonwealth or the Federal Government.

* _____ *

* Signatures of the Chairman and Vice Chairman or their designee(s).

LANCASTER COUNTY RECORDER OF DEEDS CERTIFICATE

Recorded in the Office of the Recorder of Deeds in and for Lancaster County, Pennsylvania, at Document No. _____, on _____, 20____. Witness my hand and seal of the Officer this _____ day of _____, 20____.

Recorder

**CERTIFICATE OF OWNERSHIP, ACKNOWLEDGMENT OF PLAN,
AND OFFER OF DEDICATION**

INDIVIDUAL(S)

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF LANCASTER

On this, the _____ day of _____, 20____, before me, the under-
signed officer, personally appeared _____ who being duly sworn according
to law, deposes and says that he/she/they is/are the * _____ of the property
shown on this plan, that he/she/they acknowledges the same to be his/her/their act and plan, that
he/she/they desire(s) the same to be recorded, and that all streets and other property identified as
proposed public property (excepting those areas labeled "NOT FOR DEDICATION") are hereby
dedicated to the public use.

** _____

*** _____

My Commission Expires _____, 20____

- * Identify Ownership or Equitable Ownership.
- ** Signature of the Individual.
- *** Signature and Seal of Notary Public or Other Officer Authorized to Acknowledge Deeds.

PARTNERSHIP

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF LANCASTER

On this, the ____ day of _____, 20____, before me, the undersigned officer, personally appeared _____ being all of the partners of _____, who being duly sworn according to law, deposes and says that the partnership is the * _____ of the property shown on this plan, that the plan thereof was made at its direction, that it acknowledges the same to be its act and plan and desires the same to be recorded, and that all streets and other property identified as proposed public property (excepting those areas labeled "NOT FOR DEDICATION") are hereby dedicated to the public use.

** _____

*** _____

My Commission Expires _____, 20____

- * Identify Ownership or Equitable Ownership.
- ** Signature of the Individual.
- *** Signature and Seal of Notary Public or Other Officer Authorized to Acknowledge Deeds.

CORPORATION

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF LANCASTER

On this, the ____ day of _____, 20____, before me, the undersigned officer, personally appeared _____, being * _____ of _____ who being duly sworn according to law, deposes and says that the corporation is the *** _____ of the property shown on this plan, that he/she is authorized to executed said plan on behalf of the corporation, that the plan is the act and deed of the corporation, that the corporation desires the same to be recorded and on behalf of the corporation further acknowledges that all streets and other property identified as proposed public property (excepting those areas labeled "NOT FOR DEDICATION") are hereby dedicated to the public use.

**** _____

[CORPORATE SEAL]

My Commission Expires _____, 20__

- * Individual's Title.
- ** Name of corporation.
- *** Identify Ownership or Equitable Ownership.
- **** Signature of the Individual.
- ***** Signature and Seal of Notary Public or Other Officer Authorized to Acknowledge Deeds.

LIMITED LIABILITY COMPANY

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF LANCASTER

On this, the _____ day of _____, 20____, before me, the undersigned officer, personally appeared _____, being *_____ of ** _____ who being duly sworn according to law, deposes and says that the limited liability company is the *** _____ of the property shown on this plan, that he/she is authorized to executed said plan on behalf of the limited liability company, that the plan is the act and deed of the limited liability company, that the limited liability company desires the same to be recorded and on behalf of the limited liability company further acknowledges that all streets and other property identified as proposed public property (excepting those areas labeled "NOT FOR DEDICATION") are hereby dedicated to the public use.

**** _____

[CORPORATE SEAL]

***** _____

My Commission Expires _____, 20____

- * Individual's Title.
- ** Name of limited liability company.
- *** Identify Ownership or Equitable Ownership.
- **** Signature of the Individual.
- ***** Signature and Seal of Notary Public or Other Officer Authorized to Acknowledge Deeds.

VERIFICATION

(If no Improvement Construction Plan has been approved)

I/We, _____, do hereby verify that I/We have reviewed the Final Plan. I/We further verify that the Final Plan correctly and accurately depicts the condition of the land and there has been no site grading or construction of improvements on the property and that such statements are true and correct to the best of my/our knowledge, information and belief. These statements are being given by me/us to induce official action on the part of the Township, its agents, officers servants and employees. I/We understand that any false statements made herein are being made subject to the penalties of 18 Pa. C.S. Section 4904 relating to unsworn falsification to authorities and that any false statement made herein shall be deemed to be a violation of the Martic Township Subdivision and Land Development Ordinance, as amended, and subject to the penalties provided therein.

Date: _____
Landowner

Date: _____
Developer

VERIFICATION

(If an Improvement Construction Plan has been approved)

I/We _____, do hereby verify that I/We have reviewed the Final Plan. I/We further verify that the Final Plan correctly and accurately depicts the condition of the land and all site grading and construction of improvements on the property have been undertaken in accordance with an Improvement Construction Plan approved by Martic Township on _____ and that such statements are true and correct to the best of my/our knowledge, information and belief. These statements are being given by me/us to induce official action on the part of the Township, its agents, officers servants and employees. I/We understand that any false statements made herein are being made herein are being made subject to the penalties of 18 Pa. C.S. Section 4904 relating to unsworn falsification to authorities and that any false statement made herein shall be deemed to be a violation of the Martic Township Subdivision and Land Development Ordinance, as amended, and subject to the penalties provided therein.

Date: _____
Landowner

Date: _____
Developer

**APPENDIX NO. 2
FORMS OF FINANCIAL SECURITY**

LETTER OF CREDIT TO SECURE COMPLETION OF REQUIRED IMPROVEMENTS

Letter of Credit No. _____(1)

Dated: _____(2)

Township of Martic
370 Steinman Farm Road
Pequea, PA 17565

Dear Members of the Board:

We hereby issue our irrevocable Letter of Credit in favor of the Township of Martic, Lancaster County, Pennsylvania (the "Township") for any sum or sums not exceeding \$ _____(3) for the account of _____(4) (hereinafter called "Developer"). This Letter of Credit pertains to the plan of _____(5) which was prepared by _____(6).

Intending to be legally bound, we hereby agree:

1. That demands, in an aggregate amount not exceeding \$ _____(7) accompanied by a document in the form attached hereto and marked Exhibit X (executed by the Chair or Vice Chair of the Board of Supervisors), shall be duly honored if presented to us at our office at _____(8), Pennsylvania, in person or by a recognized overnight delivery service provider on or before _____(9) (such date hereinafter referred to as the "expiration date").

2. That the expiration date of this Letter of Credit shall be automatically extended for additional one (1) year periods beginning with the expiration date and upon each anniversary of such date unless at least sixty (60) days prior to such expiration date or each anniversary of such date we notify the Township in writing, by certified mail, addressed to the Township at 370 Steinman Farm Road, Pequea, PA 17565, that we elect not to renew this Letter of Credit. Upon receipt of such notice, the Township may immediately draw upon this Letter of Credit for the full amount outstanding.

3. That for each yearly period that this Letter of Credit is automatically extended beyond _____(10), the amount of this Letter of Credit shall be increased by an additional \$ _____(11) or ten (10%) percent of the outstanding balance, whichever is less, but such increases shall not exceed a total of more than \$ _____(12) in the aggregate in any event.

This Letter of Credit shall not in any way be modified, amended, or amplified by reference to any plan(s), document(s), instrument(s), permit(s), contract(s), or agreement(s) referred to herein or in which this Letter of Credit is referred to or to which this Letter of Credit relates, and any such reference shall not be deemed to incorporate herein by reference any plan(s), document(s), instrument(s), permit(s), contract(s), or agreement(s).

Payment of this Letter of Credit shall be made without determination of conditions or facts pertaining to related contractual agreements between the Developer and the Township.

In the event of any disputes, we submit to the jurisdiction of the Court of Common Pleas in and for the County of Lancaster, Pennsylvania.

Except as otherwise provided herein, this Letter of Credit is subject to the Uniform Customs and Practice for Documentary Credits (2007 Revision), International Chamber of Commerce Publication No. 600 ("UCP"). As to matters not covered by the UCP and to the extent not inconsistent with the UCP, this Letter of Credit shall be governed by and construed in accordance with the laws of the Commonwealth of Pennsylvania, including the Pennsylvania Uniform Commercial Code.

Upon presentation to us of the certificate attached hereto as Annex A appropriately completed and signed by the Chair or Vice Chair of the Board of Supervisors of the Township, the amount available under this Letter of Credit shall be irrevocably reduced as authorized in such certificate.

Intending to be legally bound hereby, this Letter of Credit has been executed by a duly authorized officer of the undersigned Bank.

Sincerely,

_____(13)

By: _____(14)

_____(15)

_____(16)

EXHIBIT X

TO: _____(17)

RE: Demand for payment under Letter of Credit No. _____

We hereby demand payment to the Township of Martic, Lancaster County, Pennsylvania (the "Township"), of the sum of \$ _____, and certify that this demand is made because of the failure or refusal of _____(18) to complete and in order to enable us to complete, to our satisfaction, streets, curbs, sidewalks, storm water management facilities, erosion and sedimentation control facilities, landscaping, and/or other improvements, and/or to perform any other work including the repair of any damage to any improvements during the course of development, and/or to pay any engineering, legal, plan review and inspection fees, and/or submitted required as-constructed plans, and/or to make any payments or capital contributions to the Township in accordance with plan approvals or contractual agreements between the Township and _____(19) in connection with the development known as _____(20), and/or because of the receipt by the Township of notice that this Letter of Credit will not be renewed and _____(21) has not completed all improvements, repaired any damage, submitted required as-constructed plans, paid all engineering, legal, plan review and inspection fees, and made all capital contributions.

TOWNSHIP OF MARTIC
Lancaster County, Pennsylvania

By: _____
(Vice) Chairman
Board of Supervisors

A. INSTRUCTIONS TO COMPLETE LETTER OF CREDIT

- (1) Number assigned to Letter of Credit by lending institution.
- (2) Date of Letter of Credit.
- (3) Amount of Letter of Credit (must be at least 110% of the cost of streets, storm water management facilities and/or other improvements and capital contributions estimated as of ninety (90) days following the date scheduled for completion by the Developer; this cost estimate must be certified by the Developer's Engineer to be fair and reasonable as required by the Pennsylvania Municipalities Planning Code).
- (4) Full name of developer.
- (5) Name of subdivision or land development.
- (6) Name of firm which prepared subdivision or land development plan.
- (7) Same as No. 3 above.
- (8) Address of lending institution (must be within Pennsylvania).
- (9) Expiration date of Letter of Credit (may not be less than one (1) year from the date of the Letter of Credit).
- (10) Same as No. 9 above.
- (11) This amount should not be less than ten (10%) percent of the amount of the Letter of Credit (e.g. if the Letter of Credit is for \$100,000.00, this amount should be \$10,000.00).
- (12) This amount should not be less than twenty (20%) percent of the Letter of Credit (e.g. if the Letter of Credit is for \$100,000.00, this amount should be \$20,000.00).
- (13) Name of the lending institution issuing Letter of Credit.
- (14) Signature of officer of lending institution executing the Letter of Credit.
- (15) Printed name of officer executing the Letter of Credit.
- (16) Printed title of officer executing the Letter of Credit.
- (17) Same as No. 13 above.
- (18) Same as No. 4 above.
- (19) Same as No. 4 above.

(20) Same as No. 5 above.

(21) Same as No. 4 above.

ANNEX A

Authorization for Reduction

Name of Bank
Address of Bank

RE: Letter of Credit No. _____

To Whom it May Concern:

The undersigned hereby certifies on behalf of the Township of Martic, Lancaster County, Pennsylvania (the "Township"), that a portion of the work for _____(1) has been completed by _____(2) to the satisfaction of the Township.

In recognition of the satisfactory completion of this portion of the work, the Township hereby agrees to the reduction of Letter of Credit No. _____(3) by \$ _____(4). The balance available under the Letter of Credit after such reduction is \$ _____(5).

This authorization to reduce the amount of the Letter of Credit should not be construed as final acceptance of the work or a waiver of the Township's right to obtain and enforce a maintenance guarantee upon the completion of the work.

TOWNSHIP OF MARTIC
Lancaster County, Pennsylvania

By: _____
(Vice) Chairman
Board of Supervisors

Instructions to Complete Annex A

- (1) Name of subdivision or land development.
- (2) Full name of developer.
- (3) Number assigned to Letter of Credit by lending institution.
- (4) Amount of reduction of Letter of Credit.
- (5) New outstanding balance after the reduction.

ESCROW AGREEMENT

THIS ESCROW AGREEMENT made and entered into as of _____, 20____, by and between the **TOWNSHIP OF MARTIC**, a second class township under the laws of the Commonwealth of Pennsylvania with municipal offices at 370 Steinman Farm Road, Pequea, Pennsylvania 17565, hereinafter called the "Township", and _____ of _____, hereinafter called "Developer".

WITNESSETH:

WHEREAS, Developer is developing _____ (the "Development") located at _____ within the Township (the "Property"), as set forth on plans submitted to the Township identified as Subdivision and/or Land Development Plan for _____, prepared by _____, Project Number _____, dated _____, last revised _____ (the "Plans"); and

WHEREAS, as a part of the Development, Developer is required by the provisions of the Pennsylvania Municipalities Planning Code ("MPC") and the Martic Township Subdivision and Land Development Ordinance (the "Ordinance") to construct certain improvements hereinafter more fully described in Exhibit "A", which is attached hereto and incorporated herein (the "Improvements"); and

WHEREAS, in accordance with the requirements of the MPC and the Ordinance, Developer is required to post financial security to secure completion of the Improvements; and

WHEREAS, the Township is willing to maintain a cash escrow fund in accordance with Section 509 of the MPC at the request of Developer to insure construction in compliance with the Township's ordinances, resolutions, rules and regulations.

NOW, THEREFORE, intending to be legally bound hereby and in consideration of receiving approval of the Development from the Board of Supervisors of Martic Township and/or the Martic Township Planning Commission, and in consideration of receiving permits from the Township to develop the Property, Developer and the Township agree as follows:

1. The foregoing recitals are incorporated herein and constitute a substantive part of this Agreement.

2. Developer will deposit with the Township a cash escrow fund in the amount of _____ (\$ _____) Dollars. The fund created by this deposit shall be held by the Township as an escrow fund for the exclusive benefit of the Township for the construction of required Improvements, including storm drainage facilities, in accordance with Township and other applicable specifications in an interest-bearing account, which amount and the interest earned thereon (the "Fund") shall be held by the Township in accordance with the terms and conditions of this Agreement. Said Improvements are those specifically outlined on the Plans and any accompanying plans which are incorporated herein by reference and which are on file with the Township.

3. The Township will hold the Fund as the property of Township, and it is the intention of the parties that the Fund shall not be subject to the claims of the Developer's creditors.

4. The Township will release to the Developer sums from the Fund upon completion and satisfactory inspection by Township representatives of the Improvements. In the event that the Developer has defaulted or abandoned the construction of the Improvements, then the Township may draw upon the Fund. In such event, the Township's sole obligation to Developer is to advise Developer of the withdrawal of the Fund by the Township.

5. The Township by its Engineer, Road Superintendent or other designated person will inspect the construction of the Improvements at progressive stages of completion as shall be agreed upon.

6. In the event there is a difference of opinion as to the quality of the work completed, or as to the completion of the work to meet Township and other applicable specifications, the decision of the Township representative shall control, and no portion of the Fund will be released until such portion of the work is in compliance with Township and other applicable specifications.

7. In the event any portion of the previously inspected Improvements is removed for any purpose, the reconstructed portion thereof must be reinspected in the same manner as provided for the original construction.

8. Upon satisfactory completion of the Improvements under this Agreement, the Township agrees to make a final inspection and release any and all sums remaining in the Fund to Developer if the Improvements meet Township and other applicable specifications and if all inspection, legal fees, and administrative costs of the Township to open and maintain the Fund

have been paid by the Developer. A satisfactory final inspection is not intended to mean that the Township will accept dedication of the Improvements.

9. Legal, engineering and other costs incurred by the Township under this Agreement, including the legal expense to prepare this Agreement, engineering and other fees for inspections of the Improvements to be constructed hereunder, and the administrative costs incurred by the Township to open and maintain the escrow account shall be paid by Developer. All such fees, costs and expenses shall be paid prior to the release of money in the Fund to Developer. Developer expressly agrees that the Township may retain as much of the Fund as necessary to reimburse itself for fees, costs and expenses, and Developer further agrees that should the Fund be insufficient to reimburse the Township for fees, costs and expenses incurred, Developer shall pay such fees, costs and expenses. The Township is irrevocably authorized to draw upon the Fund to reimburse itself for such fees, costs, and expenses.

10. The specifications for the Improvements are those set forth on the Plans and any profiles, utility plans and storm drainage plans which accompanied Developer's Plans. All of the aforesaid plans are incorporated herein by reference. All street and storm drainage Improvements are to be constructed in compliance with the ordinances, resolutions and regulations of the Township, all of which are by reference made a part hereof.

11 This Agreement will be construed, performed and enforced in accordance with the laws of the Commonwealth of Pennsylvania.

12. This Agreement is not transferable without the written permission of the Township.

13. All Improvements shall be completed on or before _____, which time for completion shall be of essence of this Agreement. Should the Improvements not be completed, or should Developer commence development and thereafter cease reasonable prosecution of installation of the Improvements, or should Developer fail or refuse to pay legal and/or inspection and/or administrative expenses as agreed herein, then, in that event, the Township may withdraw the moneys remaining in said Fund to the extent necessary for the completion of the remaining Improvements which are required to be made hereunder and for the reimbursement of Township expenses.

14. Sections 509, 510 and 511 of the Pennsylvania Municipalities Planning Code shall control and govern this Agreement.

15. Developer acknowledges that if the Fund created hereunder is insufficient to pay the cost of installing or making repairs or corrections to all of the Improvements covered by this Agreement and to pay all inspection and legal fees, the Township may, at its option, install all or part of said Improvements and may institute appropriate legal or equitable actions against Developer, its successors and assigns, to recover the monies necessary to complete the remainder of the Improvements and to collect any inspection, legal or administrative fees or expenses.

16. Developer may at any time post substitute financial security in an amount acceptable to the Township Engineer and in a form acceptable to the Township Solicitor. Should Developer elect to post other financial security, the remainder of the Fund created hereunder shall be released to Developer.

17. With respect to any of the Improvements which are dedicated to and accepted by the Township following completion, Developer, if requested to do so by the Township, shall post financial security or otherwise guarantee the structural integrity of said improvements in accordance with the design and specifications as depicted on the Plans for a term not to exceed 18 months from the date of acceptance of dedication. Said financial security, if required, shall be in the form and in the amount required by Section 509 of the Pennsylvania Municipalities Planning Code. The Township and the Developer agree that the storm water management facilities (except those located within a public right-of-way) shall not be dedicated to nor accepted by the Township.

18. The Township, its agents, servants and employees, shall have no responsibility or liability with regard to the design and/or installation of the Improvements which are to be installed in connection with the development of the Property, and Developer shall indemnify and hold harmless the Township, its agents, servants and employees, from any claims or damages arising therefrom.

19. In the event it becomes necessary to disturb any existing Township streets, curbs, drainage structures or other facilities during the course of the installation of the Improvements, Developer agrees, at its cost, to restore such Township facilities to a condition equal to or better than their existing condition.

20. This Agreement sets forth the entire agreement and understanding between the parties as to the subject matter thereof and may only be amended subsequent to the date hereof by a written instrument signed by the party to be bound thereby.

21. The provisions of this Agreement shall be binding upon and inure to the benefit of the heirs, personal representatives, permitted assigns, grantees, lessees and successors of the parties hereto and shall constitute covenants running with the land.

22. For the purpose of this Agreement, the masculine gender shall be deemed to include the feminine and the neuter, and vice versa. Unless the context otherwise requires, the use of the singular and plural shall be interchangeable.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed as of the day and year first above written.

TOWNSHIP OF MARTIC

Attest: _____
Secretary

By: _____
(Vice) Chairman,
Board of Supervisors

[TOWNSHIP SEAL]

(Individual or Husband and Wife Developer)

Witness:

(Signature of Individual) (SEAL)

(Signature of Spouse if Husband and Wife are Co-Developers) (SEAL)

Trading and doing business as:

(Partnership Developer*)

(Name of Partnership)

Witness:

_____ By: _____ (Seal)
Partner

_____ By: _____ (Seal)
Partner

_____ By: _____ (Seal)
Partner

_____ By: _____ (Seal)
Partner

*All Partners must execute this Agreement

(Corporation Developer)

(Name of Corporation)

ATTEST:

By: _____
(Assistant) Secretary

By: _____
(Vice) President

[CORPORATE SEAL]

(Limited Liability Company Developer)**

(Name of Limited Liability Company)

Witnesses:

By: _____
Member

By: _____
Member

By: _____
Member

**All members must sign

**SUBDIVISION AND LAND DEVELOPMENT BOND
TO
MARTIC TOWNSHIP**

Bond No. _____

KNOW ALL PERSONS BY THESE PRESENTS that _____,
with its principal offices and places of business at _____,
hereinafter called the "Principal", and _____, a corporation
organized and existing under the laws of the State of _____ and
authorized to do business in the Commonwealth of Pennsylvania and currently listed in the
United States Department of the Treasury Circular 570, with its principal office and place of
business at _____, and whose contact person and telephone
number are _____ at _____, hereinafter called
the "Surety", are jointly and severally held and firmly bound to Martic Township, Lancaster
County, Pennsylvania, hereinafter sometimes referred to as the "Township", a second class
township organized and operating under the laws of the Commonwealth of Pennsylvania with a
mailing address of 370 Steinman Farm Road Pequea, Pennsylvania 17565, in the full sum of
_____ Dollars lawful money of the United States of America, for which
payment, well and truly to be made, the Principals and the Surety, jointly and severally, bind
themselves, their successors and assigns, firmly by these presents.

WITNESSETH:

WHEREAS, the Principal is the developer of a certain development within the Township of
Martic, Lancaster County, Pennsylvania, located _____, commonly
referred to as _____ (the "Development"); and

WHEREAS, the Development requires the installation of certain improvements (the
"Improvements") as shown on the _____ prepared by
_____, Project No. _____ dated _____, last
revised _____ (the "Final Plan"); and

WHEREAS, the Pennsylvania Municipalities Planning Code ("MPC") and the Martic Township
Subdivision and Land Development Ordinance (the "Subdivision Ordinance") mandate that a
developer install all required improvements shown on a subdivision or land development plan
before the recording of such plan or post financial security to secure completion of the required
improvements; and

WHEREAS, this Bond is intended to provide for and secure to the public, the proper and timely
completion of the Improvements.

NOW, THEREFORE, with the foregoing recitals incorporated herein and made a substantive
part of this Bond, the terms and conditions of this Bond are, and shall be, that if:

- A. The Principal shall conform with, comply with, fulfill and perform all work, duties and items in accordance with all terms and conditions of all agreements between the Principal and the Township relating to the Development and the Final Plan (collectively the “Agreements”); and
- B. The Principal shall install the Improvements in accordance with the Final Plan and all plans and specifications approved by the Township Engineer and in accordance with the Subdivision Ordinance and all other ordinances, policies, rules, resolutions, standards and specifications of the Township; and
- C. The Principal shall install all of the Improvements and fulfill all of the duties imposed upon them by the Agreements on or before the dates required by the Agreements; and
- D. The Principal shall duly prosecute work on the Improvements with no interruptions or delays; and
- E. The Principal shall promptly pay to the Township all fees and expenses incurred by the Township in, inter alia, the review and approval of plans for the Improvements, inspection of the Improvements during and after installation, testing of the Improvements, and preparation of documents to transfer title of the Improvements to the Township; and
- F. The Principal shall indemnify completely and shall save harmless the Township and all of its officers, agents and employees from any and all costs and damages which the Township and all of its officers, agents and employees may sustain or suffer by reason of the failure of the Principal to fully comply with each and every term and condition of the Agreements or with each and every term and condition of this Bond; and
- G. The Principal shall reimburse completely and shall pay to the Township any and all costs and expenses which the Township and all of its officers, agents and employees may incur by reason of any failure to properly and promptly install all of the Improvements in accordance with the Final Plan and all Township Ordinances and regulations or any default under the Agreements or under this Bond, such costs and expenses to include, but not be limited to, all costs of investigation and all attorneys’ fees incurred relating to any proceedings under this Bond; and
- H. The Principal shall remedy, without cost to the Township, all defects which may develop during the period of eighteen (18) months from the date of final completion by the Principal of all of the Improvements or the date of acceptance of dedication by the Township of such Improvements whichever date is later, which defects, in the sole judgement of the Township or its legal successors in interest, shall be caused or shall result from defective or inferior materials or workmanship; and
- I. The Principal shall provide the Township with as constructed plans for the Improvements together with all legal documentation necessary to provide the Township with clear title to such Improvements,

then this Bond shall be void; otherwise this Bond shall be and remain in full force and effect.

THIS BOND is executed and delivered under and subject to the MPC and the Subdivision Ordinance and the Agreements between the Principal and the Township relating to the Final Plan and to the Development to which reference is hereby made.

The Principal and Surety agree that any alterations, changes and/or additions to the Improvements to be installed pursuant to the Agreements and/or the Final Plan, and/or the giving by the Township of any extensions of time for the performance of the Principal's duties with respect to the installation of the Improvements or any other term, duty or requirement of the Agreements or the Final Plan shall not release, in any manner whatsoever, the Principal and the Surety, or any of them, or their successors and assigns, from any liabilities and obligations under this Bond, and the Surety, for value received, does waive notice of any such alterations, changes, additions or extensions of time.

Payment of or performance under this Bond shall be made without determination of the conditions or facts pertaining to related contractual agreements between the Principal and the Township, including, but not limited to, the Agreements.

Whenever the Township issues written notice declaring the Principal to be in default under the Agreements, the Surety shall within thirty days of receipt of such written notice elect complete the work, and provide the Township with written notice of the contractor to be used to complete the work and a proposed schedule of work completion; or pay to the Township such amount, up to the amount of the bond, which will allow the Township to complete the improvements in accordance with the Agreements and the Final Plan. Failure to so elect within the said time shall constitute authorization to the Township to complete the improvements at the Surety's expense.

This Bond is not intended to and shall not waive any rights which the Township has or may have pursuant to the MPC, the Subdivision Ordinance, the Final Plan, and the Agreements.

For the purpose of this Bond, the neuter gender shall be deemed to include the feminine and the masculine, and vice versa. Unless the context clearly otherwise requires, the use of the singular and plural shall be interchangeable.

IN WITNESS WHEREOF, the Principal and the Surety have caused these presents to be signed and their seals to be hereunto affixed in binding execution hereof, each intending to be legally bound under the laws of the Commonwealth of Pennsylvania.

SIGNED, SEALED AND DATED this _____ day of _____, 20__.

(Individual or Husband and Wife Principal)

Witnesses:

(Signature of Individual) (SEAL)

(Signature of Individual) (SEAL)

Trading and Doing Business As

(Partnership Principal)*

Witnesses:

(Name of Partnership)

By: _____
Partner

By: _____
Partner

By: _____
Partner

* All general partners must sign

(Corporation Principal)

(Name of Corporation)

Attest: _____
(Assistant) Secretary

By: _____
(Vice) President

(Limited Liability Company Principal)**

(Name of Limited Liability Company)

Witnesses:

By: _____
Member

By: _____
Member

By: _____
Member

**All members must sign

(Corporation Surety)

(Name of Corporation)

Attest: _____
Title

***By: _____
Attorney-in-Fact

[CORPORATE SEAL]

***Attach an appropriate power of attorney, dated as of the same date as the Bond, evidencing the authority of the Attorney-in-Fact to act on behalf of the Corporation.

Prepared By: Morgan, Hallgren, Crosswell & Kane, P.C.
700 N. Duke St. P. O. Box 4686
Lancaster, PA 17604-4686
(717)-299-5251
Return To: Morgan, Hallgren, Crosswell & Kane, P.C.
700 N. Duke St. P. O. Box 4686
Lancaster, PA 17604-4686

**AGREEMENT CONCERNING INSTALLATION OF
STORM WATER MANAGEMENT FACILITIES**

THIS AGREEMENT made as of this _____ day of _____, 20____,
by and between _____, a _____ with
a mailing address of _____ (hereinafter
referred to as the “Developer”), and **MARTIC TOWNSHIP**, Lancaster County, Pennsylvania, a
second class township duly organized under the laws of the Commonwealth of Pennsylvania,
with its municipal offices located at 370 Steinman Farm Road, Pequea, Pennsylvania 17565
(hereinafter referred to as the “Township”).

BACKGROUND

Developer is the legal owner of premises located at or known and numbered as
_____ in Martic Township, Lancaster County,
Pennsylvania, as more specifically described in a deed recorded at Record Book _____, Page
_____, or Document No. _____ in the Office of the Recorder of Deeds in
and for Lancaster County, Pennsylvania (hereinafter referred to as the “Premises”), and as shown
on the _____, prepared by _____,
Drawing No. _____, dated _____, 20____, last
revised _____, 20____ (hereinafter referred to as the “Plan”).

The Plan proposes the subdivision of _____ residential lots, identified as
_____ (collectively the “Lots” and individually a “Lot”), from the
Premises. Storm water management will be provided for the proposed dwellings on the Lots
through the construction of individual infiltration facilities located on each Lot, grading to direct
storm water flows, and piping of storm water from the proposed dwellings to the individual
infiltration facilities (collectively the “Storm Water Management Facilities”). In accordance
with the requirements of the Martic Township Stormwater Management Ordinance and the
Pennsylvania Municipalities Planning Code (“MPC”) Developer is required to post financial
security with the Township to secure installation of the Storm Water Management Facilities.
Developer does not propose the immediate development of the residential Lots. Developer has

represented to the Township and hereby reaffirms the representation that the Storm Water Management Facilities only affect the individual Lot upon which they are to be constructed or installed and therefore are only necessary for storm water management on the individual Lot where they are to be constructed or installed and not at any other location on the Premises. Developer has requested that the Township allow the recording of the Plan without the posting of financial security for the Storm Water Management Facilities.

Developer has agreed that the Township shall have no obligation to issue any permits or approvals for the development of a Lot until Developer or the successor owner of a Lot makes application for a permit under the Martic Township Stormwater Management Ordinance and posts financial security to secure the installation of Storm Water Management Facilities on such Lot. The Township is willing to allow the recording of the Plan after recording of this Agreement to provide notice to future landowners of their responsibilities relating to the installation of the Storm Water Management Facilities, reimbursement of Township expenses, and posting of financial security.

NOW, THEREFORE, for and in consideration of the mutual promises contained herein, and intending to be legally bound hereby, the parties agree as follows:

1. The foregoing background recitals are incorporated into and made a substantive part of this Agreement.

2. Developer, for itself and for successor owners of each Lot, agrees that the Township shall have no obligation to issue any permits or approvals required for the construction of a dwelling or the installation of a driveway on any Lot, including, but not limited to, a permit under the Zoning Ordinance or a permit under the Uniform Construction Code (“UCC”) until the owner of the Lot to be developed (a) has submitted an application for the installation of Storm Water Management Facilities on the Lot in accordance with the recorded Plan or, if such application is submitted more than five years after the recording of the Plan, in accordance with the Storm Water Management Ordinance in effect at the time such application is filed, and paid all required application fees; (b) obtains approval of such application; and (c) posts financial security in the amount of 110 percent of the cost to install all of the Storm Water Management Facilities serving the Lot to be developed.

3. Developer, for itself and successor owners of the Lots, agrees that the Township shall have no obligation to issue a certificate of use and occupancy under the Zoning Ordinance or a certificate of occupancy under the UCC for a dwelling on any Lot until the individual infiltration facility has been installed in accordance with the Plan, all other Storm Water Management Facilities on the Lot conveying the storm water from the dwelling to be constructed on such Lot

have been constructed, the Township Engineer has inspected and approved all Storm Water Management Facilities installed in accordance with Paragraph 2, and all outstanding application and inspection fees and charges have been paid.

4. Developer agrees to provide each prospective purchaser of a Lot within the Premises with a disclosure document (the "Disclosure Statement") before any purchaser signs an agreement to purchase a Lot. The Disclosure Statement shall be signed and dated by all purchasers of the Lot. The Disclosure Statement shall acknowledge that all purchasers have received a full copy of the approved Plan; that they have read the Notes on the approved Plan; that they understand the Township shall have no responsibility for the installation, maintenance, repair, or replacement of the Storm Water Management Facilities; that the purchasers shall not have the right at any time now or in the future to request that the Township install, maintain, repair or replace the Storm Water Management Facilities; and that they have been provided with a copy of this Agreement. The Township shall not be required to issue a zoning or building permit for any Lot until the Township has received the properly signed and dated Disclosure Statement.

5. The owner of each Lot shall be responsible for the payment of all costs associated with the review and approval of the application under the Martic Township Stormwater Management Ordinance for such Lot and all costs associated with the installation of and inspection of the storm water management facility on the Lot.

6. Developer, for itself and all successor owners of any of the Lots, expressly waives all time periods within which the Township is required to act upon applications for permits or approvals under the MPC, Zoning Ordinance, UCC, or any other applicable statute, ordinance or regulation until the owner of a Lot is in full compliance with this Agreement. Developer, for itself and all future owners of each of the Lots, hereby waives all claims of deemed approvals, vested rights or estoppel or any other claims relating to a refusal by the Township to issue permits under the UCC or the Zoning Ordinance or a certificate of use and occupancy or a certificate of occupancy due to the failure to comply with the items to which Developer has agreed herein. Developer, for itself and all future owners of each of the Lots, additionally waives any claims that such action violates the Pennsylvania Construction Code Act, the MPC, the UCC, the Zoning Ordinance, or any other applicable statute, law, ordinance, rule or regulation.

7. Developer agrees to indemnify the Township and all of its elected and appointed officials, agents, and employees (hereinafter collectively referred to as "Indemnitees") against and hold Indemnitees harmless from any and all liability, loss or damage, including reasonable attorneys' fees and costs of investigation and defense, as a result of any claims, demands, costs or

judgments against Indemnitees which may arise from or be related in any manner to this Agreement.

8. This Agreement may be amended only by written agreement signed on behalf of all owners of the Lots and the Township.

9. All words used herein shall be construed to be of such gender and number as the circumstances require.

10. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective heirs, legal representatives, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed or caused this Agreement to be executed as of the day and year first above written.

(Individual or Husband and Wife Developer)

Witness:

(Signature of Individual) (SEAL)

(Signature of Spouse if Husband and Wife are Co-Developers) (SEAL)

IF APPLICABLE
Trading and doing business as:

(Partnership Developer*)

(Name of Partnership)

Witness:

By: _____ (SEAL)
Partner

By: _____ (SEAL)
Partner

By: _____ (SEAL)
Partner

*All Partners must execute this Agreement

(Corporate Developer)

(Name of Corporation)

ATTEST:

By: _____
(Assistant) Secretary

By: _____
(Vice) President

[CORPORATE SEAL]

(Limited Liability Company Developer**)

(Name of Limited Liability Company)

Witnesses:

By: _____
Member

By: _____
Member

By: _____
Member

**All members must sign.

MARTIC TOWNSHIP
Lancaster County, Pennsylvania

Attest: _____
(Assistant) Secretary

By: _____
(Vice) Chairman
Board of Supervisors

[TOWNSHIP SEAL]

APPENDIX No. 3

ROADWAYS

RESIDENTIAL STREET HIERARCHY: DEFINITION

GUIDELINE STREET TYPE	FUNCTION	MAXIMUM ADT
1) Principal Arterial	An interregional road in the street hierarchy system: carries vehicle traffic to and from the region as well as any through traffic. This street may be a controlled access street.	3000+
2) Minor Arterial	The Minor arterial street system should interconnect with the principal arterial system. It provides connections between boroughs, larger villages, major resort areas and other traffic generators which develop substantial volumes of traffic.	3000+
3) Collector	This classification includes streets that provide connections with local access roads and arterial. They may serve a traffic corridor connecting villages, small boroughs, shopping points, mining and agricultural areas on an intra-county or municipal basis.	3000
4) Local Access	This classification provides direct access to adjacent land and includes connections to farms, individual residences and commercial properties, and to higher classes of highway systems.	800
5) Special Purpose Streets		
a) Rural Residential Lane*	A Street serving a very low-density area [minimum 2-acre zoning]. The maximum ADT level limits the number of single-family homes on this road to 20. Lanes shall be designed as a two lane street.	200
b) Alley (Service Street)	A service road that provides secondary means of through access to lots. Alleys function as special purpose streets, and are used in cases of narrow lot frontages. No parking shall be permitted within the right-of-way, and alleys should be designed to discourage through traffic. ADT level shall not exceed that of a local access street. Alleys shall be designed as one or two lane streets.	
c) Cul-de-sac*	A street with a single means of ingress and egress and having a turnaround. Design of turnaround may vary. Cul-de-sacs shall be classified and designed according to anticipated ADT level: Residential street will use the design standards of a local access street; non-residential will the design standards for Commercial/Industrial streets.	250 (Residential) 500 (Non Residential)

d) Marginal Access street	A service street that runs parallel to a higher-order street and provides access to abutting properties and separation from through traffic. Shall be designed as local access street or collector according to anticipated daily traffic.	500 (Local Access Total) 1,000 (Collector Total)
e) Divided Street	Municipalities may require streets to be divided in order to provide alternate emergency access, to protect environmental features, or to avoid grade changes. Design standards should be applied to the combined dimensions of the two-street segments as required by the street class.	800 (Local Access Total) 3,000 (Collector Total)
f) Stub Street	A portion of a street which has been approved in its entirety. Permitted as part of phased development; may be required if part of overall adopted master plan of the municipality.	800 (Local Access Total) 3,000 (Collector Total)
g) Driveway*	A private drive providing access between a public or private street or access drive and a parking area for a single unit of occupancy.	10 (Residential Access)
h) Access* Drive	A private drive providing access between a public or private street to 2 or more dwelling units, up to a maximum of 10 dwelling units. An access drive may not be connected to an alley, cul-de-sac or parking loop.	100 (Residential Access)

*Can be privately owned

CARTWAY/RIGHT-OF-WAY WIDTH

Street Intensity	Type/ Projected ADT	Cartway			Parking / Shoulder			Total Width (ft)	Right-of-Way Width
		# lanes	x width	=(ft)	# lanes	x width	=(ft)		
COMMERCIAL/ INDUSTRIAL Local Access/Collector									
Low	0-799	1	16	16	0/2	0/6	12	28	40
Medium - High		1	16	16	1/1	10/6	16	32	40
Low		2	12	24	0/2	0/6	12	36	60
Medium - High		2	12	24	2/0	10/0	20	44	60
Medium - High	800-3000	2	12	24	2/0	10/0	20	44	60
High		2	12	24	0/2	0/8	16	40	60
Medium - High		3	12	36	0/2	0/8	16	52	70
RESIDENTIAL STREETS									
<u>Local Access</u>									
Low ¹	0-249	1	10	10	0/0	0/0	10	0	16
Low		1	16	16	0/2	0/2	4	20	34
Low		2	8	16	0/2	0/2	4	20	34
Low	250-399	1	16	16	0/2	0/2	4	20	40
Medium		1	16	16	1/1	8/2	10	26	40
Low		2	10	20	0/2	0/2	4	24	40
Medium		2	10	20	1/1	8/2	10	30	50
High	400-800	2	10	20	0/2	0/4	8	28	50

CURB AND SIDEWALK REQUIREMENTS

The following standards shall be used in determining curb and sidewalk requirements. The graded area is an area graded the same as a sidewalk but left in grass. This area can be used later for sidewalks if the intensity of development increases.

Street Type	Curb	Sidewalk or Graded Area
INDUSTRIAL/COMMERCIAL		
Local Access		
Low Intensity	Not Required	Graded Area (1 each side)
Medium-High Intensity	Curb	Graded Area (1 each side)
Collector		
Low Intensity	Not Required	Graded Area (1 each side)
Medium-High Intensity	Curb	Graded Area (1 each side)
On-street Parking	Curb	Graded Area (1 each side)
Off-street Parking	Not Required	Graded Area (1 each side)
RESIDENTIAL		
Local Access		
Low Intensity	Not Required	Graded Area (1 each side)
Medium Intensity	Curb	Graded Area (1 each side)
High Intensity	Curb	Graded Area (1 each side)
On-street Parking	Curb	Graded Area (1 each side)
Off-street Parking	Not Required	Graded Area (1 each side)
Collector		
Low Intensity	Not Required ¹	Graded Area (1 each side)
Medium Intensity	Curb	Graded Area (1 each side)
On-street Parking	Not required	Graded Area (1 each side)
Off-street Parking	Not required	Graded Area (1 each side)
High Intensity	Curb	Graded Area (1 each side)
On-street Parking	Curb	Graded Area (1 each side)
Off-street Parking	Not Required	Graded Area (1 each side)

SPECIAL PURPOSE STREETS

All special purpose streets (lanes, alleys, cul-de-sacs, marginal access, divided streets, and stub streets) shall conform to either local access or collector streets as dictated by ADT and Intensity of Development.

Notes:

1. Curbing is not required except on single lane roads with on street parking.

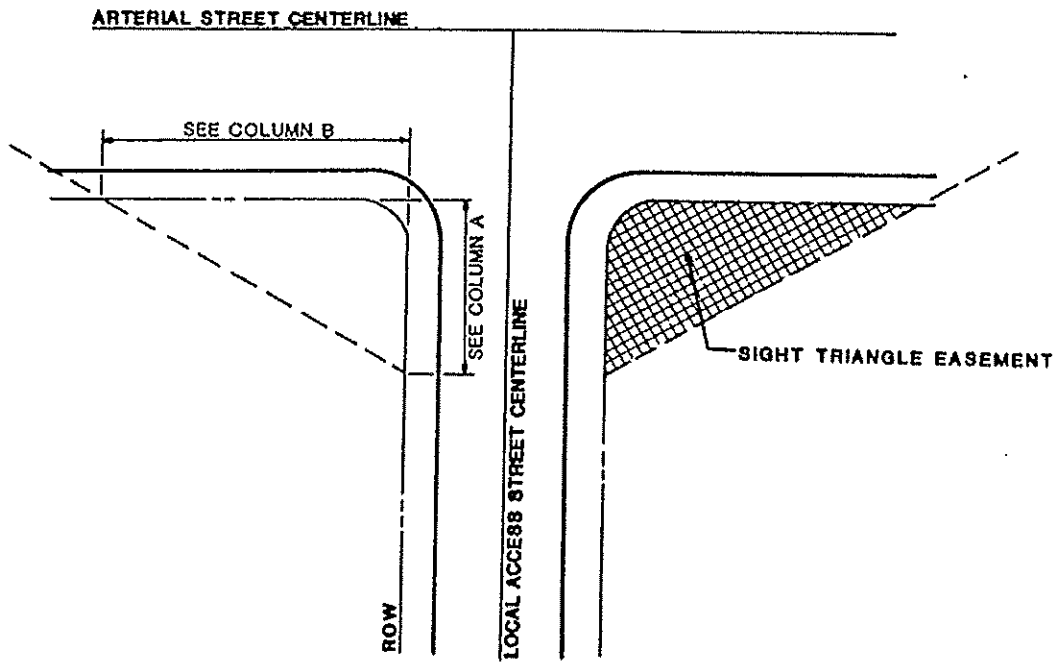
STREET GRADE AND INTERSECTION STANDARDS

STREET HIERARCHY

	Special Purpose		Local Access Street	Collector
	Alley Lane	Cul-de-sac Access Drive		
INTERSECTION STANDARDS				
Minimum Grade	0.5%	0.5%	0.5%	0.5%
Maximum Grade	15%	12%	12%	8%
Maximum Grade Within 75' of Intersection of Centerlines	4%	4%	5%	5%
Minimum Centerline Radius	50'	50'	100'	300'
Minimum Tangent Length Between Reverse Curves	0'	50'	50'	150'
Cartway Radii	10'	15'	20'	35'

SIGHT TRIANGLES

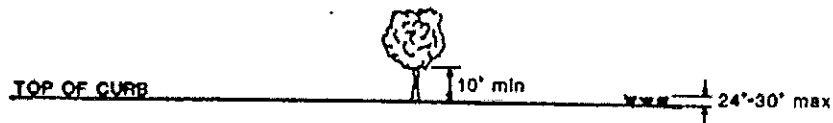
TYPICAL INTERSECTION SIGHT TRIANGLE



TYPICAL DISTANCE REQUIREMENTS ALONG ROW LINE

COLUMN A		COLUMN B
LOCAL ACCESS	30'	30', 100', 120', 130-150'
RESIDENTIAL COLLECTOR	120'	120', 130-150'
ARTERIAL	130-150'	130-150'

PLANTINGS WITHIN EASEMENTS



SIGHT DISTANCE

Access drive sight distance based on ten (10) feet off of edge of cartway, at an eye height of four (4) feet to an object at four (4) foot height.

Street sight distance based on fifteen (15) feet off of edge of Cartway, at an eye height of four (4) feet to an object at four (4) foot height.

		HIGHWAY GRADE IN %																											
		0		+1		+2		+3		+4		+5		+6		+7		+8		+9		+10		+11		+12		+13	
SPEED (MPH)		0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13
15	75'	75'	74'	75'	73'	76'	73'	77'	73'	77'	73'	78'	72'	79'	72'	79'	71'	80'	71'	81'	71'	82'	71'	83'	70'	84'	70'	85'	
20	109'	109'	108'	110'	107'	111'	106'	112'	105'	113'	105'	114'	104'	115'	103'	117'	102'	118'	102'	119'	101'	121'	101'	123'	100'	125'	100'	127'	
25	147'	147'	145'	148'	144'	150'	143'	151'	142'	153'	140'	155'	139'	157'	138'	159'	137'	161'	136'	164'	135'	166'	134'	169'	134'	172'	133'	175'	
30	196'	196'	194'	198'	191'	201'	189'	204'	187'	207'	185'	210'	183'	214'	182'	217'	180'	221'	178'	226'	177'	230'	175'	235'	174'	241'	173'	247'	
35	249'	249'	245'	252'	242'	256'	238'	260'	236'	265'	233'	269'	231'	274'	228'	280'	226'	286'	224'	292'	221'	294'	219'	306'	217'	314'	215'	323'	
40	314'	314'	309'	319'	304'	325'	299'	331'	295'	337'	291'	345'	287'	352'	284'	360'	280'	369'	277'	379'	274'	389'	271'	401'	268'	414'	266'	428'	
45	383'	383'	376'	390'	370'	398'	364'	405'	358'	415'	353'	425'	348'	435'	343'	447'	338'	459'	334'	472'	330'	487'	325'	503'	322'	521'	319'	560'	
50	452'	452'	453'	471'	444'	481'	436'	492'	429'	504'	421'	517'	415'	531'	409'	547'	403'	563'	397'	581'	392'	600'	388'	622'	382'	647'	378'	678'	
55	538'	538'	527'	550'	517'	562'	508'	576'	491'	590'	490'	605'	482'	622'	475'	641'	467'	660'	461'	682'	454'	706'	443'	733'	442'	762'	437'	795'	

Proper sight distance shall be provided for horse and buggies when non-motorized vehicle use is prevalent. Access drive, driveway, and street sight distance shall be based on fifteen (15) feet (distance between the buggy driver and the horses head at the edge of cartway) off the edge of cartway, an eye height of five and one half (5.5) feet (height of a non-motorized driver) to an object at 4 foot height.

NON-MOTORIZED VEHICLE LANES

Non-motorized vehicle lanes shall be constructed to one of the following specifications:

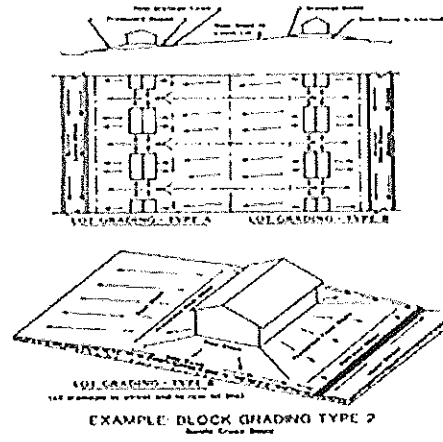
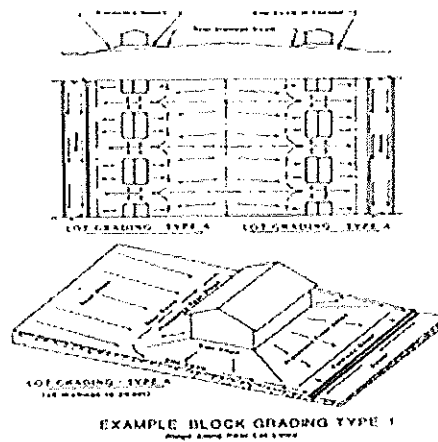
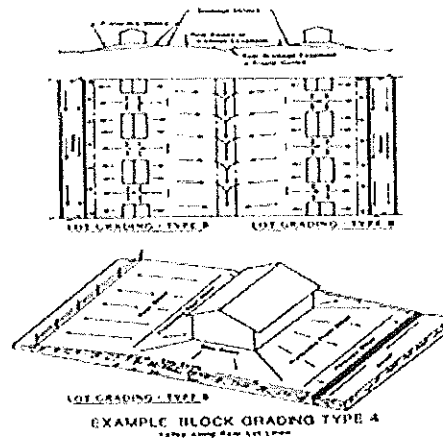
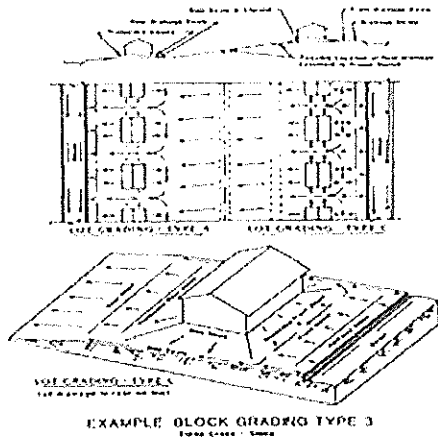
1. Bicycle Paths - A two-way off-street bike path should have a minimum paved width of eight (8) feet and a maximum width of twelve (12) feet.
 - a. Choice of surface materials, including bituminous mixes, concrete, gravel, soil cement, stabilized earth, and wood planking, shall depend on the intensity of the development and shall be determined by the developer and approved by the Township.
 - b. Gradients of bicycle paths should generally not exceed a grade of five (5%) percent, except for short distances where the grade shall not exceed fifteen (15%) percent.
 - c. The radius of curvature shall be based on the grade of the path entering the curve. The following table shall be used to determine the radius:

Table 1	
Percent Grade	Minimum Radius
0 - 5%	70 ft
5% - 15%	125 ft

- d. Design consideration shall consider the intersection of a bicycle path and a street to provide maximum safety.
2. Bicycle Lanes - Bicycle lanes shall be designed to one of the following standards:
 - a. A one-way bicycle lane on a curbed street shall have a minimum width of four (4) feet measured from the face of the curb. The paving material and construction shall be the same as the adjacent street.
 - b. A one-way bicycle lane next to a parking lane shall be located between the parking lane and the travel lane and have a minimum width of five (5) feet. The paving material and construction shall be the same as the adjacent parking lane.
 - c. A one-way bicycle lane on a street without a curb or gutter shall be a minimum of four (4) feet. The shoulder can and should be used when possible. The shoulder shall be kept clear of any obstructions and clean to remove any excess gravel or other debris. The paving material and construction shall be the same as the shoulder. If the lane is being constructed on an existing road that has no shoulder or if the shoulder is in poor condition the lane shall be constructed to the standards set forth in Section 602.D.

3. Carriage Lanes - Carriage lanes shall be constructed to the following standards:
- a. Carriage lanes shall be a minimum width of six (6) feet and shall not exceed a width of eight (8) feet.
 - b. Carriage lanes shall be constructed with a four (4) inches bituminous stabilized course or a three (3) inches base course and a one (1) inch binder course of materials specified in the latest edition of PennDOT Publication 408. An additional eight (8) inches gravel course is recommended if the subbase is in poor condition. The finished lane shall maintain a one-fourth (1/4) inch per foot slope draining toward the outside edge of the lane.
 - c. All carriage lanes shall be subject to the approval of the roadmaster and/or a certified engineer before occupancy is permitted.

APPENDIX No. 4
LOT GRADING PLAN EXAMPLES



Source: Iowa Department of Soil Conservation, Soil and Water Conservation in Urban Areas.

APPENDIX No. 5

CURB IMPROVEMENTS

Introduction.

All curbs must conform to the following specifications.

Construction Method.

All curbs shall be provided in accordance with Section 602.E of this Ordinance.

All curbs shall be of marble, granite, or concrete construction. All Concrete used in Construction of curbs shall be certified to develop a compressive stress of at least three thousand (3,000) P.S.I. at twenty-eight (28) days. Certification of the mix shall be furnished, if requested by the Township.

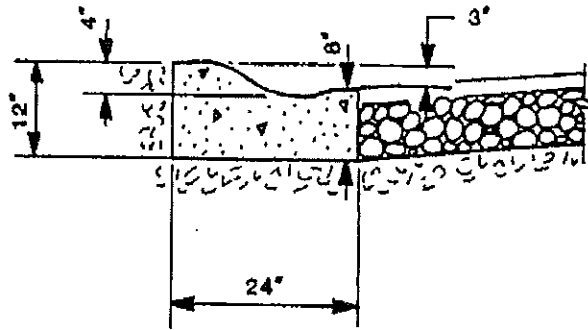
Concrete shall be placed in forms that are straight and securely braced, unless a curbing machine is used. Care shall be taken to control the water content to prevent separation of the aggregates. All concrete shall be thoroughly tamped into any forms, if used. After the concrete has set sufficiently, any forms if used, shall be removed and the exposed surface shall be rubbed to provide an even finish.

Vertical curbs shall be twenty-four (24) inches deep, seven (7) inches wide at the top, and nine (9) inches wide at the base. The distance from the top of the curb to flow line of the gutter shall be eight (8) inches.

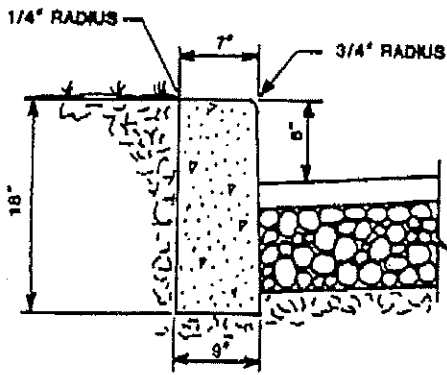
Rolled curb and gutter shall be twelve (12) inches deep at the back, eight (8) inches at the front, and twenty-four (24) inches wide at the top and base. The distance from the top of the curb to flow line of the gutter shall be four (4) inches. A four (4) inch crushed stone or cinder base shall be installed under rolled curb and gutter.

Curbs shall be built in ten (10) foot lengths; construction joints of asphalt impregnated paper of one-sixteenth (1/16) inch shall be provided at ten (10) foot intervals, and expansion joints of one-quarter (1/4) inch premoulded filler shall be placed at intervals of one hundred (100) feet.

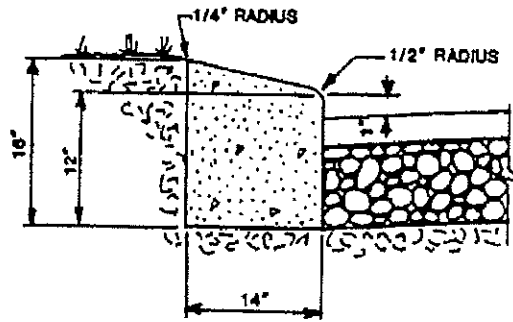
To provide for driveways, depressions in vertical curb may be constructed and finished during the time of pouring.



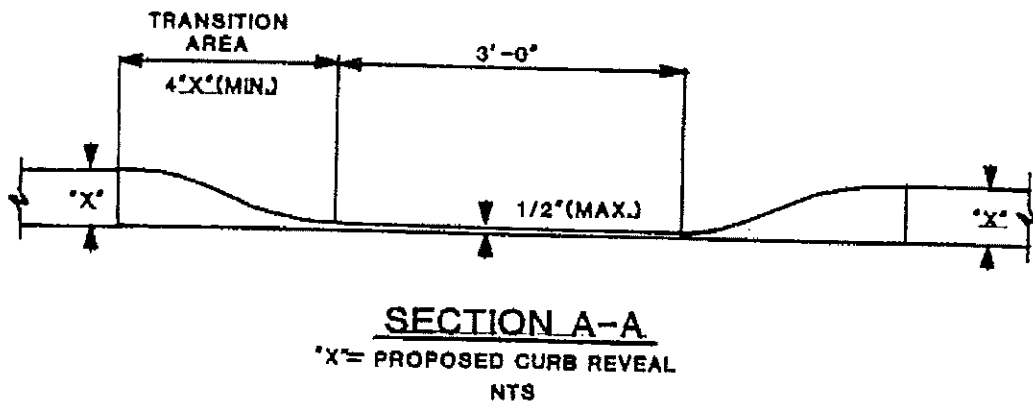
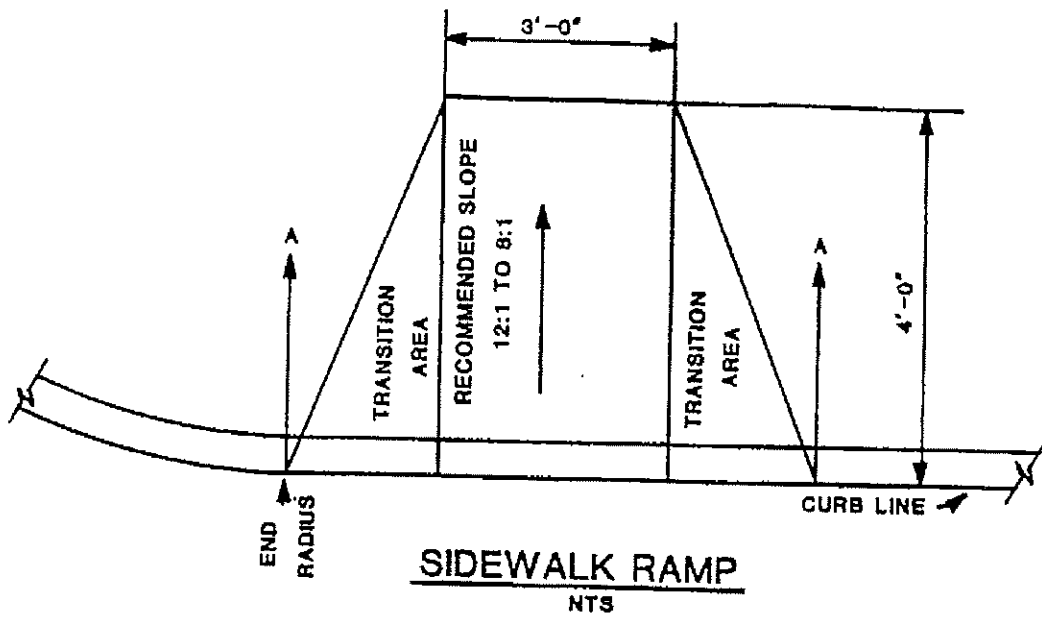
ROLLED CURB
NTS



VERTICAL CURB
NTS



SLANT CURB
NTS



APPENDIX NO. 6

SIDEWALK IMPROVEMENTS

Introduction.

All sidewalks must conform to the following specifications.

Construction Method.

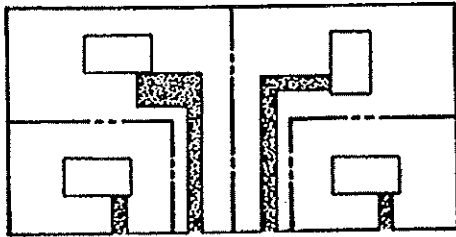
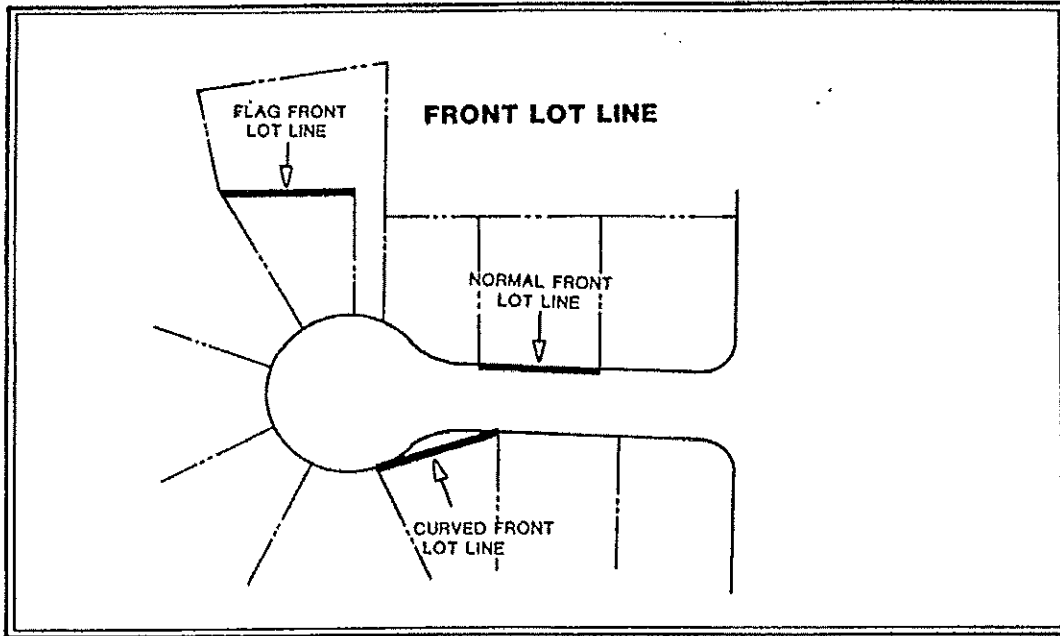
All sidewalks shall have a width of four (4) feet. Sidewalks shall be constructed so as to discharge drainage. Sidewalks shall be constructed of concrete. Concrete used in sidewalk work shall be certified to develop a compressive stress of at least three thousand (3,000) P.S.I. at twenty-eight (28) days. Certification of the mix shall be furnished, if requested by the Township. Concrete shall be placed in forms that are straight and securely braced. Care shall be taken to control the water content to prevent separation of the aggregates. The concrete shall have a broom finish, and the edge shall be finished with an edging tool.

All concrete sidewalks shall be constructed on a four (4) inch crushed stone or gravel base to insure proper drainage. The concrete shall be placed so that there is a separate joint every five (5) feet. There shall be one-half (1/2) inch premoulded expansion joints between every fifth section and between all points where the concrete sidewalk abuts a concrete curb.

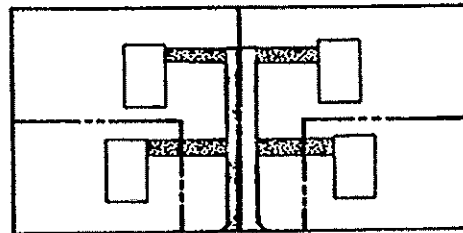
All concrete sidewalks shall have a minimum thickness of four (4) inches, except where driveways cross sidewalks and for driveway apron areas. These areas shall have a minimum thickness of six (6) inches and shall contain one layer of No. 6 wire forming six (6) inch squares. The wire shall be installed so that it is not closer than one (1) inch from the top or bottom surface of the driveway.

APPENDIX NO. 7

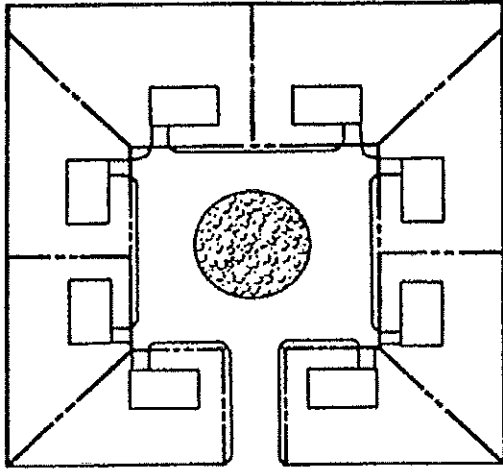
LOT LAYOUTS



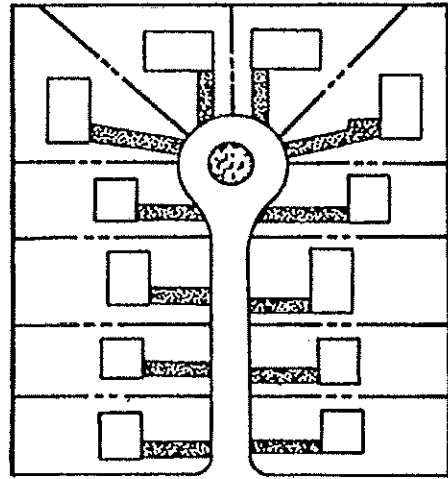
POOR DEVELOPMENT OF FLAG LOTS



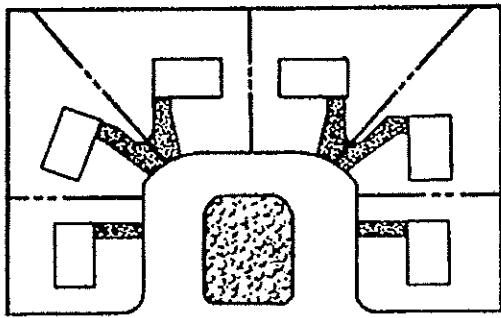
BETTER DEVELOPMENT OF FLAG LOTS
THROUGH THE USE OF A PRIVATE COURT



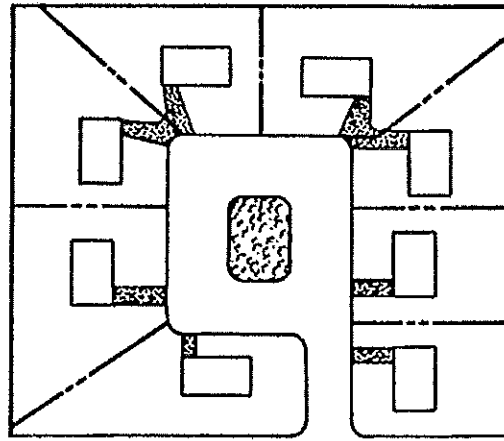
'AUTO COURT' WITH LANDSCAPED ISLAND



**PUBLIC CUL-DE-SAC
WITH LANDSCAPED ISLAND**



PUBLIC EYE BROW WITH LANDSCAPED ISLAND



'COMMONS' WITH LANDSCAPED ISLAND

APPENDIX NO. 8

Illumination of streets, parking areas, and pedestrian ways shall be provided as specified in the following table:

ILLUMINATION GUIDELINES FOR STREET, PARKING, AND PEDESTRIAN AREAS

A.

Street Illumination

Area Classification						
Street Hierarchy	<u>Commercial</u>		<u>Intermediate</u>		<u>Residential</u>	
	Lux	Footcandles	Lux	Footcandles	Lux	Footcandles
Collector	13	1.2	10	0.9	6	0.6
Minor-Residential	10	0.9	6	0.6	4	0.4
Subcollector						
Local	6	0.6	4	0.4	4	0.4

B.

Parking Illumination (Open Parking Facilities)

Illumination Objective						
Level of Activity	<u>Vehicular Traffic</u>		<u>Pedestrian Safety</u>		<u>Pedestrian Security</u>	
	Lux	Footcandles	Lux	Footcandles	Lux	Footcandles
Low activity	5	0.5	2	0.2	9	0.8
Medium activity	11	1	6	0.6	22	2
High activity	22	2	10	0.9	43	4

C.

Pedestrian Way Illumination

Walkways & Bikeway Classification	Minimum Average Level		Average Levels for Special Pedestrian Security			
	Lux	Footcandles	Mounting Heights 3 to 5 meters (9 to 15 feet)		Mounting Heights 5 to 10 meters (15 to 30 feet)	
			Lux	Footcandles	Lux	Footcandles

Sidewalks (Roadside) and Type A Bikeways:						
Commercial Areas	10	0.9	22	2.0	43	4.0
Intermediate	6	0.6	11	1.0	22	2.0
Residential Areas	2	0.2	4	0.4	9	0.8
Walkways Distant From Roadways and Type B Bikeways:						
Park Walkways and Bikeways						
	5	0.5	6	0.6	11	1.0
Pedestrian Tunnels	43	4.0	54	5.0	--	--
Pedestrian Overpasses	3	0.3	4	0.4	--	--
Pedestrian Stairways	6	0.6	9	0.8	--	--

ILLUMINATION GUIDELINES FOR STREET, PARKING, AND PEDESTRIAN AREAS

IES Lighting Handbook definitions:

I. Area classification:

1. Commercial

That portion of a municipality in a business development where ordinarily there are large numbers of pedestrians during business hours.

2. Intermediate

That portion of a municipality often characterized by a moderately heavy nighttime pedestrian activity such as in blocks having libraries, community recreation centers, large apartment buildings or neighborhood retail stores.

3. Residential

A residential development, or a mixture of residential and commercial establishments, characterized by a few pedestrians at night. This definition includes areas with single family homes, townhouses and/or small apartment buildings.

II. Activity level:

1. High activity

Major league athletic events, major cultural or civic events, and major regional shopping centers.

2. Medium activity

Fast food facilities, area shopping centers, hospital parking areas, transportation parking (airports, etc.), cultural, civic or recreational events, and residential complex parking.

3. Low activity

Local merchant parking, industrial employee parking, educational facility parking.

III. Bikeway classification

1. Type A bikeway - a strip within or adjacent to a public roadway or shoulder, used for bicycle travel.

2. Type B bikeway - an improved strip identified for public bicycle travel and located away from a roadway or its adjacent sidewalk system.

Source: Illuminating Engineering Society of North America, IES Lighting Handbook (New York, NY: IES, 1981)