

GREENWICH TOWNSHIP

BERKS COUNTY, PENNSYLVANIA

SUBDIVISION AND LAND DEVELOPMENT ORDINANCE

Ordinance No. 1996-1

As Amended

Ordinance No. 2001-1 dated April 2, 2001

Ordinance No. 2005-2 dated November 7, 2005

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ARTICLE I TITLE, SHORT TITLE, AND PURPOSE

Section 101 Title

An Ordinance establishing rules, regulations, and standards governing the subdivision of land and/or land development within the Township of Greenwich, Berks County, Pennsylvania, pursuant to the authority set forth in Article V of the Pennsylvania Municipalities Planning Code as amended, superseding the Township of Greenwich Subdivision Regulations of 1972, and setting forth procedures to be followed by the Municipal Planning Commission and the Governing Body in applying, administering, and amending these rules, regulations, and standards and prescribing penalties for the violation thereof.

Section 102 Short Title

This Ordinance shall be known, and may be cited as, the "Township of Greenwich Subdivision and Land Development Ordinance of 1996."

Section 103 Purpose

These regulations are adopted to protect and create conditions favorable to the health, safety, morals, and general welfare of the citizens by:

- 103.1 Assuring sites suitable for building purposes and human habitation.
- 103.2 Providing for the harmonious, orderly and efficient development of the Municipality.
- 103.3 Providing for the coordination of existing streets and highways with proposed streets, parks, and other public facilities.
- 103.4 To provide for adequate open space for traffic, recreation, light and air.
- 103.5 Assuring equitable and just processing of subdivision plans by providing uniform procedures and standards for the observance of both the subdivider and Municipal officials.
- 103.6 Providing for design standards and appropriate improvements and assuring prompt installation of said improvements.

ARTICLE II DEFINITIONS

Section 201 Tense, Gender and Number

Words in the singular include the plural and those in the plural include the singular; words in the present tense include the future tense; words used in the masculine gender include the feminine and neuter.

Section 202 General Terms

The words "person", "subdivider" and "owner" include a corporation, unincorporated association and a partnership, or other legal entity, as well as an individual. The word "street" includes thoroughfare, avenue, alley, boulevard, court, expressway, highway, lane, arterial, and road. The word "building" includes structure and shall be construed as if followed by the phrase "or part thereof." The word "watercourse" includes channel, creek, ditch, drain, dry run, spring and stream. The words "should" and "may" are permissive; the words "shall" and "will" are mandatory and directive.

Section 203 Terms or Words Not Defined

Where terms or words are not defined, they shall have their ordinarily accepted meanings or such as the context may imply.

Section 204 Specific Terms

Terms or words used herein, unless otherwise expressly stated, shall have the following meanings:

Alley: See "Service Street".

Architect: An architect licensed in the Commonwealth of Pennsylvania.

Available sight distance: The distance from the driver to an approaching vehicle, measured from a height of 3.5 feet above the road surface to the driver's eye to a height of 4.25 feet on the approaching vehicle.

Block: A tract of land, a lot, or groups of lots, bounded by streets, public parks, railroad rights-of-way, watercourses, boundary lines of the Municipality, unsubdivided land or by any combination of the above.

Building: Any combination of materials forming any structure which is erected on the ground and permanently affixed thereto, designed, intended, or arranged for the housing, sheltering, enclosure, or structural support of persons, animals, or property of any kind.

Building Reserve (Setback) Line: The line within a property defining the minimum required distance between any building to be erected and an adjacent right-of-way. Such line shall be measured at right angles from the street right-of-way line which abuts the property upon which said building is located and shall be parallel to said right-of-way line.

Cartway (Roadway): The portion of a street right-of-way, paved or unpaved, intended for vehicular use.

Clear Sight Triangle: An area of unobstructed vision at the street intersection defined by lines of sight between points at a given distance from the intersection of street centerlines.

County: The County of Berks, Commonwealth of Pennsylvania.

County Planning Commission: The Berks County Planning Commission.

Crosswalk (Interior Walk): A publicly or privately owned right-of-way for pedestrian use extending from a street into a block or across a block to another street.

Dedication: The deliberate appropriation of land by its owner for any general and public use, reserving to himself no other rights than those that are compatible with the full exercise and enjoyment of the public uses to which the property has been devoted.

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

Dwelling Unit: Any structure, or part thereof, designed to be occupied as living quarters for a single housekeeping unit not including hotel or motel rooms designed for transient use.

Easement: A right-of-way granted, but not dedicated, for limited use of private land for a public or quasi-public purpose, and within which the lessee or owner of the property shall not erect any permanent structure, but shall have the right to make any other use of the land which is not inconsistent with the rights of the grantee.

Endorsement: The application of the reviewing and/or approving authority's stamp and the signatures of the appropriate authority on the Record Plan.

Engineer: A licensed professional engineer registered in the Commonwealth of Pennsylvania.

Governing Body: The Greenwich Township Board of Supervisors, Berks County, Pennsylvania.

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

Land Development: Any of the following activities:

- (1) The improvement of one or two or more contiguous lots, tracts or parcels of land for any purpose involving (a) a group of two or more residential or nonresidential buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot or lots regardless of the number of occupants or tenure, or (b) the division or allocation of land or space, whether initially or cumulatively, between or among two or more existing or prospective occupants

by means of or for the purpose of streets, common areas, leaseholds, condominiums, building groups or other features.

(2) A subdivision of land;

(3) Certain land development is excluded from the definition of land development only when such land development involves (a) 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; (b) the addition of an accessory building, including farm buildings, on a lot or lots subordinate to an existing principal building or (c) the addition or conversion of buildings or rides within the confines of an enterprise which would be considered an amusement park. For purposes of this sub-clause, an amusement park is defined as a tract or area used principally as a location for permanent amusement structures or rides. This exclusion shall not apply to acreage newly acquired by an amusement park until initial plans for the expanded area have been approved by proper authorities.

Landowner: The legal or beneficial owner or owners of land including the holder of an option or contract to purchase (whether or not such option or contract is subject to any condition), a lessee 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 landscape architect licensed in the Commonwealth of Pennsylvania.

Lot: A tract or parcel of land, regardless of size, intended for transfer of ownership, use, lease, or improvements or for development, regardless of how it is conveyed. Lot shall also mean parcel, plot, site, or any similar term.

Lot Area: The area contained within the property lines of a lot, excluding space within all street rights-of-way and all permanent drainage easements, but including the areas of all other easements.

Marker: A metal pipe or pin of at least 3/4" in diameter and at least 24" in length.

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

Mobile Home Lot: A parcel of land for the placement of a single mobile home for the exclusive use of its occupants.

Mobile Home Park: A parcel of land under single ownership which has been planned and improved for the placement of two or more mobile homes for non-transient use.

Monument: A stone or concrete marker with a flat top at least 4" in diameter or square and at least 30" in length. Stone monuments shall contain an indented cross or 1/4" drill hole. Concrete monuments shall contain an iron bar. The bottom width or diameter shall be at least 2" greater than the top, to minimize upward movement caused by frost.

Multi-family Building: A building providing separate dwelling units for three or more families.

Municipality: Greenwich Township, Berks County, Pennsylvania.

Municipal Engineer: A duly registered professional engineer employed by the Municipality or engaged as a consultant thereto or his duly authorized representative.

Municipal Solicitor: The attorney appointed by the Governing Body or his duly authorized representative.

Municipal Zoning Officer: The agent or official designated by the Municipality to administer and enforce the Municipal Zoning Ordinance.

Official Plans: The Comprehensive Development Plan and/or Official Map and/or Topographical Survey and/or such other Plans, or portions thereof, as may have been adopted by the Municipality pursuant to statute, for the area in which the subdivision or land development is located.

Plan, Sketch: A tentative plan drawn to exact scale, indicating salient existing features of the tract and showing approximate street and lot layout as a basis for consideration, prior to preparation of a Preliminary Plan.

Plan, Preliminary: A tentative subdivision or land development plan (and including all required supplementary data), in lesser detail than a Final Plan, showing approximate proposed street and lot layout as a basis for consideration prior to preparation of a Final Plan, prepared by a registered Professional Land Surveyor.

Plan, Final: A complete and exact subdivision or land development plan (and including all required supplementary data), prepared for official recording as required by statute, to define property rights and proposed streets and other improvements prepared by a registered Professional Land Surveyor.

Plan, Record: The copy of the Final Plan which contains the original endorsements of the County Planning Commission and the municipality(ies) and which is intended to be recorded with the County Recorder of Deeds and prepared by a registered Professional Land Surveyor.

Planning Commission or Municipal Planning Commission: The Planning Commission of the Township of Greenwich, Berks County, Pennsylvania.

Plat: A map or plan of a subdivision, whether preliminary or final.

Public Grounds: Includes (1) parks, playgrounds and other public areas, and (2) sites for publicly owned buildings and facilities.

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

Reserve Strip: A parcel of ground in separate ownership separating a street from other adjacent properties, or from another street.

Resubdivision: Any replatting or resubdivision of land, limited to changes in lot lines on the approved Final Plan or Recorded Plan as specified in Article III, Section 312.3, of these regulations. Other plattings shall be considered as constituting a new subdivision of land. See 'Subdivision'.

Reverse Frontage Lot: A lot extending between and having frontage on two generally parallel streets, (excluding service streets), with vehicular access solely from one street.

Review: Whenever the County Planning Commission possesses such review jurisdiction, the action of review shall not limit the appropriate authorities of the Municipality in their ultimate and final decisions.

Right-of-Way: The total area and width of any land reserved or dedicated as a street, alley, crosswalk, or for other public or semi-public purposes.

Roadway: See "Cartway".

Sanitary Sewage Disposal, On-Site: Any structure designed to biochemically treat sanitary sewage within the boundaries of an individual lot.

Sanitary Sewage Disposal, Community: A sanitary sewage system in which sewage is carried from individual lots by a system of pipes to a central treatment and disposal plant, generally serving a neighborhood area.

Sanitary Sewage Disposal, Public: A sanitary sewage system in which sewage is carried from individual lots by a system of pipes to a central treatment and disposal plant.

Septic Tank: A covered watertight monolithic concrete settling tank in which raw sewage is biochemically changed into solid, liquid, and gaseous states to facilitate further treatment and final disposal.

Sight Distance (Stopping): The required length of roadway visible to the driver of a passenger vehicle at any given point on the roadway when the view is unobstructed by traffic. Sight distance measurements shall be made from a point 3.5' above the centerline of the road surface to a point 0.5' above the centerline of road surface.

Soil Absorption Area: A system of pipes laid in stone to distribute sewage effluent into the soil for absorption.

Soil Percolation Test: A field test conducted to determine the suitability of the soil for on-site sanitary sewage disposal facilities by measuring the absorptive capacity of the soil at a given location and depth.

Stopping sight distance: The distance required by a driver traveling at a given speed to stop the vehicle after an object on the roadway becomes visible to the driver.

Street: A strip of land, including the entire right-of-way (i.e. not limited to the cartway) to provide access to more than one (1) lot. The word "street" includes street, avenue, boulevard, road, highway, freeway, parkway, lane, alley, viaduct and other ways used or intended to be used by vehicular traffic or pedestrians whether public or private. Streets are further classified according to the function they perform.

Boulevard Street: A street with two lanes in each direction separated by a median strip of grass and other natural cover. Boulevard streets are required for connecting an existing Township road to an interior circulation loop and should be considered for streets with no direct driveway access within residential developments.

Collector Street: A street which, in addition to providing access to abutting properties, intercepts minor streets to provide a route and give access to community facilities and/or other collector and major streets. (Streets in industrial, multi-family building, and commercial subdivisions shall generally be considered collector streets.)

Cul-de-Sac Street: A minor street intersecting another street at one end and terminating at the other end with a permanent vehicular turnaround.

Half (Partial) Street: A street, generally parallel and adjacent to a property line, having a lesser right-of-way width than normally required for improvement and use of the street.

Internal Street: A minor street on private property used for circulation and access within a development project involving multi-residence or commercial or industrial use.

Major Street: A street serving a large volume of comparatively high speed and long distance traffic, including all facilities classified as main and secondary highways by the Pennsylvania Department of Transportation.

Marginal Access Street: A minor street, parallel and adjacent to a major street (but separated from it by a reserve strip) which provides access to abutting properties and controls intersections with the major street.

Minor Street: A street used primarily to provide access to abutting properties.

Private Street: A minor street not offered for dedication. Private streets receive no municipal services.

Service Street: A minor public right-of-way providing secondary vehicular access to the side or rear of two or more properties.

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

Subdivider: See "Developer".

Subdivision: The division or redivision of a lot, tract or parcel of land by any means into two or more lots, tracts, parcels or other divisions of land including changes in existing lot lines for the purpose, whether immediate or future, of lease, partition by the court for distribution to heirs or devisees, transfer of ownership or building or lot development; provided however, that the subdivision by lease of land for agricultural purposes into parcels of more than ten (10) acres, not involving any new street, structure or easement of access or any residential dwelling, shall be exempted. The term subdivision shall refer, as appropriate in these regulations, to the process of subdividing land or to the proposal to be subdivided.

The term subdivision shall also include any development of a parcel of land including: mobile home parks, industrial parks, shopping centers or multi-family buildings which front on existing streets or involves installation of streets and/or alleys, even though the streets and/or alleys might not be dedicated to public use and the parcel might not be divided immediately for purposes of conveyance, transfer, or sale, or even though the owner does not transfer legal or equitable title.

Surveyor: A licensed surveyor registered in the Commonwealth of Pennsylvania.

Township: Township of Greenwich, a municipal corporation of Berks County, Pennsylvania.

Water Distribution System, On-Site: A system for supplying and distributing water to a single dwelling or other building from a source located on the same lot.

Water Distribution System, Community: A system for supplying and distributing water from a common source to two or more dwellings and/or other buildings within a single neighborhood.

Water Distribution System, Public: A system for supplying and distributing water from a common source to dwellings and other buildings, but generally not confined to one neighborhood.

Zoning Map: The official zoning map of the Township of Greenwich, Berks County, Pennsylvania.

Zoning Ordinance: The Township of Greenwich Zoning Ordinance, as amended.

ARTICLE III SUBMISSION AND REVIEW PROCEDURES

Section 301 General

Hereafter all plans for subdivision or land development within the corporate limits of the Municipality shall be reviewed by the Municipal Planning Commission and other Municipal, State, or County officials as deemed necessary and shall be approved or disapproved by the Governing Body in accordance with procedures specified in this Ordinance. The provisions and requirements of this Ordinance shall apply to and control all land subdivisions which have not been recorded in the Office of the Recorder of Deeds in and for Berks County, Commonwealth of Pennsylvania, prior to the effective date of this Ordinance provided, however, that any change in a recorded plan, except as noted in Article III, Section 312.3, shall constitute a resubdivision and shall make said plan subject to any and all requirements of this Ordinance. Any approval not processed as required hereafter shall be null and void unless it was made prior to the adoption of this Ordinance.

301.1 Special Procedures for Land Development Plans

Land Development plans shall be reviewed and approved or disapproved in accordance with the procedures specified in this Ordinance. Occasionally situations involving only one lot may arise whereby it is unclear whether or not a Land Development plan is required by the Ordinance. In this event the Developer may present information regarding the development to the Planning Commission. The information shall be sufficient to illustrate the type and extent of development and potential impact of the proposal on traffic, stormwater management, sewage disposal, water supply, or similar concerns. The Planning Commission shall review the information and make a recommendation to the Governing Body as to whether or not the Land Development procedures of this Ordinance should be followed. The Planning Commission may wish to consult with the Municipal Engineer or Solicitor prior to making its recommendation. The Governing Body shall, after consideration of Planning Commission's recommendation, make the final decision as to whether or not the Ordinance shall apply.

Section 302 Submission of a Sketch Plan

- 302.1 Plan to be Filed with the Municipality – Copies of the Sketch Plan for all proposed subdivisions and all required supporting data shall be submitted to the Municipal Secretary (or representative) by the subdivided or his representative authorized in writing to submit the plan.
- 302.2 Number of Copies - Nine (9) legible black-line or blue-line paper prints of the Sketch Plan shall be required. Plans shall fully comply with requirements of Article IV, Section 401 of this Ordinance.
- 302.3 Filing Fee - The Municipal Secretary (or representative) shall collect a filing fee as established by the Governing Body for all subdivisions or land developments. Fees shall be charged in order to cover the costs of examining plans and other expenses incidental to the approval of subdivisions or land

developments. The subdivider or developer shall pay the fee due at the time of submission of a Sketch Plan.

302.4 Distribution of Sketch Plan - The Municipal Secretary (or representative) shall refer the Sketch Plans to the following:

- A. Five (5) copies to the Municipal Planning Commission.
- B. One (1) copy to the Governing Body.
- C. One (1) copy to the Municipal Engineer.
- D. One (1) copy to the Municipal Zoning Officer.
- E. One (1) copy to the Municipal Solicitor.

302.5 Number of Copies and Distribution of Sketch Plan of Record

Twelve (12) legible black-line or blue-line paper prints of the Sketch Plan of Record shall be required. Plans shall fully comply with requirements of Section 401. The Municipal Secretary (or representative) shall refer the Sketch Plan of Record to the following:

- A. Five (5) copies to the Municipal Planning Commission.
- B. One (1) copy to the Governing Body.
- C. One (1) copy to the Municipal Engineer.
- D. One (1) copy to the Zoning Officer.
- E. One (1) copy to the Municipal Solicitor.
- F. Two (2) copies to the County Planning Commission.
- G. One (1) copy to the Sewage Enforcement Officer.

Section 303 Review of Sketch Plan

A Sketch Plan shall be considered a submission for discussion between the Subdivider and the Township. Submission of a Sketch Plan shall not constitute official submission of a plan except in the case of the exemptions identified in Section 312.

303.1 With respect to any Sketch Plan submitted less than fourteen (14) calendar days prior to the next scheduled meeting of the Planning Commission, the Planning Commission may decline to review the plan at such meeting.

303.2 At one or more regularly scheduled or special meetings the Planning Commission shall review the Sketch Plan to determine its conformance to the requirements of this Ordinance and determine whether the proposed

development is permitted under the Zoning Ordinance. The Planning Commission shall suggest any modifications of the Plan which it deems necessary to secure conformance to the regulations of this Ordinance or which it believes are in the public interest.

- 303.3 The action of the Planning Commission shall be made within seventy-five (75) days following the date of its next regular meeting following the date the application is filed, provided that should the next regular meeting occur more than thirty (30) days following the filing of the application, the said seventy-five (75) day period shall be measured from the thirtieth day after the date the application was filed.
- 303.4 Within fifteen (15) calendar days after the final meeting at which the Sketch Plan is reviewed by the Planning Commission, the Planning Commission shall send to the Subdivider or his agent written notice of the Planning Commission's action in regard to the Sketch Plan, and any prerequisites to the review of the Preliminary Plan by the Planning Commission.
- 303.5 In the case of a Sketch Plan of Record, the Plan shall be reviewed by the Governing Body at one or more regularly scheduled or special meetings and shall be either approved or disapproved by the Governing Body after consideration of the comments from the Planning Commission. The Governing Body shall act on the Plan within the ninety (90) day time period measured from the thirtieth day after the date the application was filed.
 - A. Before acting on the plan, the Governing Body may hold a public hearing thereon after public notice.
 - B. Before acting on the plan, the Township shall have received the Penn PADEP approval letter for the required Planning Module.
 - C. If the plan is disapproved by the Governing Body, the Township Secretary shall notify, in writing, the Subdivider or his agent of such action within fifteen (15) days after the meeting at which the action was taken. This notification and the minutes for the meeting at which the action was taken, shall specify the requirements and sections of this Ordinance which have not been met.
 - D. If the Governing Body approves the Sketch Plan of Record, the Record Plan shall be signed by the Chairman or Vice Chairman with the Secretary so attesting, or it shall be endorsed by a majority of the Governing Body, together with the date of action.

Section 304 Official Submission of Preliminary Plan

- 304.1 Submission to Municipality - Within one (1) year of the Municipal Planning Commission's approval of the Sketch Plan, a Preliminary Plan shall be officially submitted to the Municipality. However, an extension of time may be granted by the Governing Body upon written request. Preliminary Plans submitted after this expiration of time for which no time extension has been

granted shall be considered as a new Sketch Plan. Copies of the Preliminary Plan and all required supporting data shall be officially submitted to the Municipal Secretary (or representative) by the subdivider/developer or his representative authorized in writing to submit the plan, but only after action by the Municipal Planning Commission pursuant to Section 303.4 above.

304.2 Official Submission of Preliminary Plan shall comprise:

- A. Four (4) completed copies of the Application for Review of Preliminary Subdivision Plan/Land Development Plan.
- B. Twelve (12) legible black-line or blue-line paper prints of the Preliminary Plan which shall fully comply with the requirements of Article IV, Section 402 of these regulations.
- C. Five (5) completed copies of the appropriate PADEP Planning Modules, signed by the Sewage Enforcement Officer.
- D. Four (4) copies of all other required information including the proposed soil erosion and sedimentation control plan.
- E. Township Filing Fee - The Municipal Secretary (or representative) shall collect a filing fee as established by the Governing Body for all subdivisions or land developments. Fees shall be charged in order to cover the costs of examining plans and other expenses incidental to the approval of subdivisions or land developments.
- F. County Filing Fee - The Municipal Secretary (or representative) shall collect a filing fee as established by the County for all subdivisions or land developments. County fees shall be in the form of a separate check or money order made payable to the County of Berks.

The subdivider or developer shall pay the fees due at the time of official submission of a Preliminary Plan and official submission shall not be deemed to have been made until receipt of all of the above (Sections 304.2A through and including 304.2F), by the Municipal Secretary, or representative.

304.3 Distribution of Preliminary Plan - The Municipal Secretary (or representative) shall refer the Preliminary Plan, after all required fees have been collected, to the following:

- A. Five (5) copies to the Municipal Planning Commission, including two (2) copies of the application form and other required reports.
- B. Two (2) copies of the plan to the County Planning Commission and one (1) copy of all required supporting documents.
- C. One (1) copy to the Governing Body including one (1) copy of the application form and other required reports.

- D. One (1) copy to the Municipal Engineer.
- E. One (1) copy to the Municipal Zoning Officer.
- F. One (1) copy to the Sewage Enforcement Officer.
- G. One (1) copy to the Municipal Solicitor.

Section 305 Review of Preliminary Plan

305.1 Review by the Municipal Engineer

The Municipal Engineer shall review the Preliminary Plan to determine its conformance to the Municipal Subdivision and Land Development Ordinance. The Engineer may recommend changes, alterations or modifications as he may deem necessary. The report of the Engineer shall be submitted to the Municipal Planning Commission prior to or at the regularly scheduled or special meeting at which the Preliminary Plan is to be considered by the Planning Commission.

305.2 Review by the Municipal Zoning Officer

The Municipal Zoning Officer or a designated agent shall review the Preliminary Plan to determine its conformance to the Municipal Zoning Ordinance. The Zoning Officer shall check all zoning data as required to be shown under Article IV, Section 402, to determine if information shown is in accordance with the latest amendments to the Zoning Ordinance. The report from the Zoning Officer as to the accuracy of the information shown shall be submitted to the Municipal Planning Commission prior to or at the regularly scheduled or special meeting at which the Preliminary Plan is to be considered by the Planning Commission.

305.3 Review by the Municipal Sewage Enforcement Officer

The Municipal Sewage Enforcement Officer shall review the Preliminary Plan to determine its conformance to the requirements of the Pennsylvania Department of Environmental Resources if on-lot sewage disposal is proposed to be utilized for the subdivision. The report of the Sewage Enforcement Officer shall be submitted to the Municipal Planning Commission prior to or at the regularly scheduled or special meeting at which the Preliminary Plan is to be considered by the Planning Commission.

305.4 Review by the Municipal Planning Commission

- A. When a Preliminary Plan has been officially submitted, such plan shall be reviewed by the Municipal Planning Commission at a regularly scheduled or special meeting, provided that such submission has been received no less than fourteen (14) calendar days prior to such meeting. Preliminary Plans received within said fourteen (14) day period may be

reviewed at the next scheduled meeting at the discretion of the Planning Commission.

- B. During review of the Preliminary Plan, the Municipal Planning Commission shall consider the reports of the Municipal Engineer and the Municipal Zoning Officer, before making its final decision.
- C. No official action shall be taken by the Municipal Planning Commission with respect to a Preliminary Plan until the Municipality has received the report of the County Planning Commission, provided, however, that if the report is not received within thirty (30) days after transmittal to the County Planning Commission then the Municipal Planning Commission may officially act without having received and considered such report.
- D. If review by the Municipal Planning Commission is unfavorable because the requirements of this Ordinance have not been met, or the Planning Commission deems changes or modifications of the plan submitted are advisable or necessary, such decision and the reasons therefore shall be given in written form by the Planning Commission to the Subdivider or his Agent within fifteen (15) days after the meeting at which the Preliminary Plan is reviewed.

In addition, the Municipal Planning Commission shall make available to the Governing Body copies of all reports received from County Planning Commission, Department of Transportation, Municipal Zoning Officer and Municipal Engineer.

305.5 Review by the Governing Body

- A. When a Preliminary Plan has been officially referred to the Governing Body by the Municipal Planning Commission together with its recommendation, such Plan shall be reviewed at a regularly scheduled meeting or at the discretion of the Governing Body at a special meeting.
- B. The Governing Body shall review the Preliminary Plan and the reports and recommendations thereon of the Municipal Planning Commission, the County Planning Commission, the Municipal Engineer, and by any other officials and official boards of the Municipality, to determine the Preliminary Plan's conformance to the standards contained in this Ordinance. The Governing Body may require or recommend such changes and modifications as it shall deem necessary or advisable in the public interest.
- C. No official action shall be taken by the Governing Body with respect to a Preliminary Plan that proposes five (5) or more residential units until the Township has received a letter from the appropriate electric utility indicating receipt of plans for the proposed subdivision.

- D. The action of the Governing Body approving the Preliminary Plan shall be noted with the date of such action and the signature of the Chairman or Vice Chairman on two (2) sets of plans. One copy of the Plan shall be maintained for the permanent records of the Municipality, and one copy shall be sent or given to the subdivider or his agent.
- E. The findings and reasons upon which the action is based and citing provisions of the statute or ordinance relied upon shall also be stated in the minutes. Subject to the requirements of Section 305.5B, within fifteen (15) days after the meeting at which the Preliminary Plan is reviewed and a rejection decision is rendered, the Municipal Secretary shall send written notice of the findings, action taken, and reasons thereof to the Subdivider or his Agent.
- F. In any event, the Governing Body shall render its decision and communicate it to the applicant no later than ninety (90) days following the date of the regular meeting of the Planning Commission next following the date the application is filed, provided that should the said next regular meeting occur more than thirty days following the filing of the application, the said ninety-day period shall be measured from the thirtieth day following the day the application has been filed. Failure of the Governing Body to render a decision and communicate it to the applicant within the time and in the manner required shall be deemed an approval unless the applicant has agreed, in writing, to an extension of time.
- G. Approval of a Preliminary Plan shall not constitute acceptance of a subdivision or land development for recording. Approval of a Preliminary Plan is only an expression of approval of a general plan to be used in preparing the Final Subdivision or Land Development Plan for final approval and recording upon fulfillment of all requirements of this Ordinance.
- H. When a Preliminary Plan has been approved or approved subject to conditions acceptable to the applicant, no subsequent change or amendment in the zoning, subdivision/land development or other governing ordinance or plan shall be applied to affect adversely the right of the applicant to commence and to complete any aspect of the approved development in accordance with the terms of such approval within five (5) years from such approval.

Section 306 Submission of Final Plan

Within one (1) year of the Governing Body's approval of the Preliminary Plan, a Final Plan shall be officially submitted to the Municipality. However, an extension of time may be granted by the Governing Body upon written request. Final Plans submitted after this expiration of time for which no time extension has been granted shall be considered as a new Preliminary Plan.

The Final Plan shall conform in all respects to the Preliminary Plan as previously reviewed by the Municipal Planning Commission and the Governing Body except that it shall incorporate all modifications required by the Municipality in its review of the Preliminary Plan.

The Municipality may permit submission of the Final Plan in sections; however, 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 as depicted on the Preliminary Plan, unless a lesser percentage is approved by the Governing Body.

- 306.1 Plans to be filed with the Municipality - Copies of the Final Plan and all required supporting data shall be officially submitted to the Municipal Secretary (or representative) by the subdivider or his representative authorized in writing to submit the plan.
- 306.2 Official submission of Final Plan shall comprise:
- A. Four (4) completed copies of the Application for Review of a Final Plan.
 - B. Twelve (12) legible black-line or blue-line paper prints of the Final Plan which shall fully comply with Article IV, Section 403 of this Ordinance.
 - C. Three (3) copies of all other required information, including the following, if applicable:
 - 1. All offers of dedication and covenants governing the reservation and maintenance of undedicated open space which shall be approved by the Municipal Solicitor as to their legal sufficiency.
 - 2. Such private deed restrictions, including building reserve lines, as may be imposed upon the property as a condition of sale together with a statement of any restrictions previously imposed which may affect the title to the land being subdivided.
 - 3. Wherever approval by the Pennsylvania Department of Environmental Resources is required for the water supply system(s) for a proposed subdivision, the Municipal Planning Commission shall require that two (2) copies of such certification of approval be submitted before action be taken on the Final Plan.
 - 4. Whenever required under the rules and regulations of the Department of Environmental Resources, a copy of the approved Erosion and Sedimentation Control Plan or permit shall accompany the Final Plan submission.
 - 5. Any proposed intersection of a new street with a state legislative route must receive an "Occupancy Permit" from the Pennsylvania Department of Transportation (Penn DOT). A letter from Penn DOT indicating approval of the intersection as proposed must accompany Final Plan submission.

6. Whenever a sewage facilities Planning Module is required under the rules and regulations of the Department of Environmental Resources, a copy of Penn PADEP's letter approving the Planning Modules shall accompany the Final Plan.
 7. Whenever approval is required for water supply or sanitary sewage disposal from a Municipal Authority or Private Water Company, two (2) copies of such approvals shall be submitted with the Final Plan.
 8. If applicable, letters from utility companies (electric, gas, telephone, cable T.V., etc.) indicating that they have received Final Plans shall be submitted with Final Plans.
- D. Township Filing Fee - The Municipal Secretary (or representative) shall collect a filing fee as established by the Governing Body for all subdivisions or land developments. Fees shall be charged in order to cover the costs of examining plans and other expenses incidental to the approval of subdivisions or land developments.
- E. County Filing Fee - The Municipal Secretary (or representative) shall collect a filing fee as established by the County for all subdivisions or land developments that require Final Plan submission. County fees shall be in the form of a separate check or money order made payable to the County of Berks.

The subdivider or developer shall pay the fees at the time of official submission of a Final Plan and official submission shall not be deemed to have been made until receipt of all of the above (Sections 306.2A through and including 306.2E), by the Municipal Secretary, or representative.

306.3 Distribution of Final Plan - The Municipal Secretary (or representative) shall refer the Final Plan, after all required fees have been collected, to the following:

- A. Five (5) copies to the Planning Commission, including two (2) copies of the application form and other required reports.
- B. One (1) copy to the Governing Body, including one (1) copy of the application form and other required reports.
- C. One (1) copy to the Municipal Engineer.
- D. One (1) copy to the Municipal Zoning Officer.
- E. One (1) copy to the Municipal Solicitor.
- F. One (1) copy to the Sewage Enforcement Officer.

Section 307 Review of Final Plan

307.1 Review by the Municipal Engineer

The Final Plan shall be reviewed and a report submitted as required under Article III, Section 305.1 for Preliminary Plans.

307.2 Review by the Municipal Zoning Officer

The Final Plan shall be reviewed and a report submitted by the Municipal Zoning Officer or his designated agent as required under Article III, Section 305.2 for Preliminary Plans.

307.3 Review by the Municipal Planning Commission

The Final Plan shall be reviewed in accordance with the procedure required under Article III, Section 305.4 of this Ordinance for Preliminary Plans. In addition:

- A. Before acting on any Final Plan, the Planning Commission may hold a public hearing thereon after public notice.
- B. If all the requirements of this Ordinance are met and the review is favorable, the Planning Commission shall authorize its Chairman, with the secretary so attesting, to endorse the Record Plan, or it shall be endorsed by a majority of the Planning Commission members, together with the date of such action.
- C. The Record Plan, with the Municipal Planning Commission's endorsement, shall be forwarded to the Governing Body.

307.4 Review by the Governing Body

The Final Plan shall be reviewed in accordance with the procedures as required under Article III, Section 305.5 of this Ordinance for Preliminary Plan. In addition:

- A. Before acting on any Final Plan, the Governing Body may hold a public hearing thereon after public notice.
- B. Before acting on any Final Plan, the Township shall have received the PADEP approval letter for the required Planning Module.
- C. Before acting on any Final Plan that proposes five (5) or more residential units the Township shall have received an approval letter from the electric utility company for the plans for the underground electric system. (Section 513.5B)
- D. When requested by the developer in order to facilitate financing, the Governing Body, or the planning agency if designated, may furnish the

developer with a signed copy of a letter indicating approval of the final plat contingent upon the developer obtaining a satisfactory financial security. The final plat or record plan shall not be endorsed or recorded until the financial improvements agreement is executed. The letter of contingent approval shall expire and any approval shall be deemed revoked if the financial security agreement is not executed within 90 days unless a written extension is granted by the Governing Body; such extension shall not be unreasonably withheld and shall be placed in writing at the request of the developer.

- E. In the event that a Final Plan satisfies all the requirements of this Ordinance except for the provision of the necessary financial security, which process is either anticipated or proposed to be delayed for an extended period of time, the Governing Body may require that the subdivider submit ten (10) signed and notarized copies of the plan(s). The Governing Body shall then furnish the subdivider with a signed copy of a resolution indicating approval of the final plan, contingent upon the subdivider obtaining satisfactory financial security. All ten (10) copies of the plan(s) shall then be signed by only one member of the Planning Commission and returned to the subdivider for retention until such time as the required financial security has been arranged for and the improvements agreement is ready to be executed. At that time evidence of financial security shall be furnished to the Township, the subdivider shall submit signed and notarized copies of the improvements agreement for execution by the Governing Body, and the ten (10) copies of the previously signed plans shall be presented to the Township for signature by the Planning Commission, for signature by the Governing Body, and for the application of the Township Seal.

It shall be the responsibility of the subdivider to advise the Governing Body if the provision of the required financial security may delay the granting of Final Plan approval for an extended period of time so that the Governing Body has the option to recommend the preceding procedure. Failure by the Subdivider to so advise the Governing Body of a known or likely delay does not relieve the Subdivider of the obligation to have a long-inactive plan thoroughly reviewed upon its return to the active project list.

- F. If the Governing Body approves the Final Plan(s), the Record Plan(s) shall be signed by the Chairman or Vice Chairman with the Secretary so attesting, or it shall be endorsed by a majority of the Governing Body, together with the date of action.
- G. A performance guarantee or a certificate of satisfactory installation, as required under Article III, Section 309, shall be required before plans are released for recording.

Section 308 Recording of Final Plan

- 308.1 After approval by the Governing Body and the Municipal Planning Commission, and with all endorsements indicated on the Record Plan, the subdivider or developer shall record his plan. No subdivision or land development plan may be legally recorded unless it bears the Municipal approval and seal.
- 308.2 After the Final Plan has been approved by the appropriate Municipal authorities, the County Planning Commission shall be provided with five (5) signed prints, from which the Municipality shall receive one (1) print bearing the County Recorder's stamp.
- 308.3 The subdivider shall file an approved Record Plan with the County Recorder of Deeds within (90) days of the date of final approval by the Governing Body. The Recorder's Certificate that the approved plan has been recorded, with Deed Book and page numbers indicated, shall be submitted to the Municipality as stated in Section 308.2. If the subdivider fails to record within such period, the action of the Governing Body and Municipal Planning Commission shall be null and void unless an extension of time is granted in writing by the Governing Body after written request to do so by the subdivider.

Section 309 Completion of Improvements or Guarantee Thereof

- 309.1 No plan shall be finally approved unless all improvements have been installed or guaranteed in accordance with this Ordinance.
- 309.2 All required improvements must be installed to the satisfaction of the Municipal Engineer and the Governing Body.
- 309.3 In lieu of completing all required improvements, the Governing Body shall require that a Subdivision Improvements Agreement be executed by the Subdivider and a performance guarantee be posted. The Governing Body may exercise its discretion as to the types of financial security it may approve.
- 309.4 Financial security shall secure the completion of required improvements within one (1) year of the date fixed in the subdivision improvements agreement for their completion. The financial security shall be equal to 110 percent of the estimated cost of these required improvements and related engineering and solicitor's fees. The Governing Body may, prior to final release, require retention of ten percent of the estimated cost of these improvements.
- 309.5 The cost of these improvements shall be established by submission in writing to the Governing Body of an estimate prepared by a professional engineer licensed as such in the Commonwealth of Pennsylvania and certified by such engineer to be a fair and reasonable estimate of such cost. If an estimate is not submitted within a reasonable time, the costs of these improvements shall be established by the Municipality's Engineer.

- 309.6 If more than one (1) year from the date of originally posting financial security is required for completion, the financial security may be increased: (1) by an additional ten (10) percent for each one (1) year period beyond the original date of posting the financial security; or (2) to an amount not exceeding 110 percent of the cost of completing the remaining required improvements by using the procedure in 309.5 above. Any extension or the total of any extensions shall not be for more than three (3) years. All requests for extensions shall be submitted to the Governing Body in writing.
- 309.7 If required improvements are to be installed under the jurisdiction of a public utility or municipal authority, financial security shall be posted in accordance with the regulations of that public utility or municipal authority.
- 309.8 The Governing Body shall not condition the issuance of permits upon actual completion of improvements if financial security has been provided. Occupancy permits shall not be withheld provided the following conditions have been met:
- A. the streets have been improved to a permanently passable condition as determined by the Municipality; and
 - B. all other required improvements necessary for reasonable use and occupancy have been completed.

Section 310 Release of Performance Guarantees

- 310.1 All performance guarantees shall be released in whole or in part upon compliance with the following procedure:
- A. When the subdivider has completed all or a portion of these required improvements, the subdivider or developer may request the Governing Body, in writing, to release or authorize the release of portions of the financial security related to the completed improvements. The Governing Body shall direct and authorize the Municipal Engineer to inspect these improvements.
 - B. The Municipal Engineer shall file a written report with the Governing Body. This report shall recommend approval or rejection, either in whole or in part. If these improvements, or any portion thereof, shall not be approved by the Municipal Engineer, said report shall contain a statement of reasons for such rejection.
 - C. Upon receipt of the Municipal Engineer's report, the Governing Body shall authorize release of an amount estimated by the Municipal Engineer that fairly represents completed improvements.
 - D. The Governing Body shall have forty-five (45) days from the receipt of requests to take final action. If the Governing Body fails to comply with this time limitation, the Governing Body shall be deemed to have approved the release of funds requested.

- E. If any portion of these required improvements shall not be approved by the Governing Body, they shall be completed or corrected. Upon completion or correction, the above procedure shall be followed for the approval of any release in whole or in part.

Section 311 Dedication and Maintenance Guarantee

- 311.1 All improvements shown on the subdivision plan, recorded or otherwise, shall be deemed to be private until such time as these have been accepted by dedication to the Governing Body.
- 311.2 Before acceptance by dedication of any improvements, the Governing Body shall require the subdivider to file a maintenance guarantee by posting financial security. This financial security shall be posted for no longer than eighteen (18) months from the date of acceptance by dedication and shall not exceed fifteen (15) percent of the actual construction cost of the improvements to be dedicated.

Section 312 Plans Exempted from Standard Procedures

If the property currently proposed to be subdivided was previously subdivided since June 4, 1973, then that property is not eligible to use the abbreviated procedures offered under Sections 312.1 and 312.2 unless specifically authorized by the Governing Body.

312.1 Simple Subdivision (Sketch Plan of Record)

In the case of any subdivision in which all proposed lots will have frontage on and direct vehicular access to an existing improved Township or State road, the parcel being subdivided will be divided into no more than two (2) lots or parcels, and the lots will be used only for single family detached dwellings, the Planning Commission or Governing Body may, at its discretion, permit the Subdivider to submit only a Sketch Plan of Record to the Township, rather than Sketch, Preliminary and Final Plans.

- A. The Sketch Plan of Record shall be reviewed in accordance with Section 303 of this Ordinance, and shall contain all information required by Section 401.4 of this Ordinance.
- B. The Sketch Plan of Record shall be submitted to the County Planning Commission for review.
- C. The Planning Commission or the Governing Body shall require the submission of the results of the soil probe and percolation tests when on-lot sewage is required.
- D. The Sketch Plan of Record shall include appropriate provisions for an Erosion and Sedimentation Control Plan and stormwater management, as applicable.

- E. Further subdivision of a tract recorded under this section will require a review of plans in accordance with the standard procedures of this Ordinance (Sketch, Preliminary, and Final plans).
- F. Recording of Sketch Plans of Record shall be in accordance with the provisions of Section 308 of this Ordinance for Final Plans.

312.2 Subdivision Along Existing Roads, Property Divided Into More Than Two Lots or Parcels (Sketch to Final)

In the case of any Subdivision in which all proposed lots will have frontage on and direct vehicular access to an existing improved Township or State road and the parcel being subdivided will be divided into more than two lots or parcels and the lots will be used only for single family detached dwellings, the Planning Commission or the Governing Body may, at its discretion, permit the Subdivider to submit only Sketch and Final Plans to the Township, rather than require the Subdivider to submit Sketch, Preliminary and Final Plans.

- A. The Sketch Plan shall contain all information required by Section 401 and shall be submitted and reviewed in accordance with Sections 302 and 303 of this Ordinance.
- B. The Final Plan shall contain all information required by Section 403 and shall be submitted and reviewed in accordance with Sections 306 and 307 of this Ordinance. The Final Plan may be submitted following notification of approval of the Sketch Plan. Final Plans submitted after one (1) year of the Governing Body's approval of the Sketch Plan or after the expiration of any extension of time that may have been granted by the Governing Body upon written request may be considered as a new Sketch Plan.
- C. The Final Plan shall be submitted to the County Planning Commission for review.
- D. The results of soil probes, percolation tests, and appropriate PADEP Planning Module shall accompany the Final Plan.
- E. Submissions to and reviews from the Berks County Conservation District and the Pennsylvania Department of Transportation may also be required by the Planning Commission.
- F. Further subdivision of a tract recorded under this section will require review of plans in accordance with the standard procedures of this Ordinance (Sketch, Preliminary, and Final plans).

312.3 Resubdivision

Any replatting or resubdivision of land, including changes to recorded plans, shall be considered a subdivision and shall comply with this Ordinance, except that:

- A. Lot lines may be changed from those shown on a recorded plan, provided that in making such changes:
 - 1. No lot or tract of land shall be created or sold that is smaller than required by the Township Zoning Ordinance, and
 - 2. Easements and rights-of-way shall not be changed, and
 - 3. Street locations and block sizes shall not be changed, and
 - 4. No lot shall be created which does not abut a street, and
 - 5. Open space and recreation areas shall not be reduced, and
 - 6. The number of lots shall not be increased, and
 - 7. The previous Record Plan shall be specifically identified as superseded.
- B. In every case wherein lot lines are changed as permitted above, the Subdivider shall:
 - 1. Submit to the Secretary of the Township Planning Commission twelve (12) copies of the original plan, twelve (12) copies of the revised plan, and twelve (12) copies of a report describing all changes which have been made. The distribution and review shall be the same as for Preliminary Plans.
 - 2. When the Plan does comply with Section 312.3.A, the Subdivider shall submit the required number of copies of the Record Plan to the Township Secretary for the endorsement by the Township Planning Commission and Governing Body. After the Record Plan is endorsed by the Municipality, the subdivider shall record the plan.
 - 3. The Record Plan shall be a clear and legible black-on-white print on material acceptable to the Recorder of Deeds.
- C. When on-lot sewage disposal is intended to be utilized, the Township may require that a copy of the Final Plan be submitted to the Township Sewage Enforcement Officer for review, prior to endorsement of the Record Plan.

312.4 Auction Sale. In the case of the proposed subdivision of land by process of auction sale, the following procedure may be used by the subdivider:

- A. The Subdivider shall prepare and submit Sketch and Preliminary Plans in accordance with this Ordinance.
- B. The Sketch Plan and the Preliminary Plan shall comply with the requirements of this Ordinance and in addition contain the following notation:

“This property is intended to be sold by auction on or about _____, 19__ , in whole or in part according to this Plan. Sale of lots at such auction shall be in the form of agreement to purchase, and no actual transfer of ownership or interest in such lots shall proceed until a Final Plan showing such division or property shall have been approved by the Township, in accordance with its regulations, and recorded in the office of the Recorder of Deeds of the County.”

- C. The auction sale may then proceed in accordance with the above notation, after which the Subdivider shall prepare and submit a Final Plan in accordance with this Ordinance.

312.5 Lot Annexations

Where the conveyance, sale or transfer of land from one parcel to an adjacent parcel is proposed for the sole purpose of increasing lot size or adjustment of lot boundaries, and not for the purpose of creating a separate new lot or a land development, the Landowner shall submit a Sketch Plan of Record for review.

- A. The Sketch Plan of Record shall contain all information required by Section 401.4 and be submitted and reviewed in accordance with Sections 302 and 303 of this Ordinance.
- B. The Sketch Plan of Record shall be submitted to the County Planning Commission for review.
- C. Precise bearings and distances shall be shown for the parcel being transferred.
- D. Evidence shall be submitted that the parcel from which a parcel is being transferred will not violate, as the case may be, any requirement of the Zoning Ordinance or other Township regulations.
- E. If development is proposed for the parcel which has been increased in size, no building permit shall be issued unless the applicable Township regulations are met.

- F. The Plan shall contain a notation that the parcel in question is being created for the sole purpose of annexation to an adjoining parcel and is not to be considered as a separate building lot of record.
- G. The Plan shall, in the Certificates of Ownership, include the signatures of both Landowners involved in the land exchange.

Section 313 Recording of Lot Annexations

313.1 Documents relating to plans involving lot annexations shall be submitted and recorded as follows:

- A. By the time the Plan is submitted to the Governing Body for final review, the Landowner shall also submit to the Governing Body for its review a copy of the proposed deed for the parcel being annexed, which deed shall include reference to the Plan, the recording information and how the parcel is identified on the Plan and statements that the conveyance is for annexation purposes only and that the parcel is not a separate building lot.
- B. Record the approved plan.
- C. Record the deed from the Landowner of the parcel being annexed.

ARTICLE IV PLAN REQUIREMENTS

Section 401 Sketch Plan

- 401.1 The Sketch Plan shall be clearly and legibly drawn to a scale of one inch (1") equals fifty feet (50'), except that:
- A. If the average size of the proposed lots is three acres or larger, or if the minimum lot size is two acres or more, the plan may be drawn to a scale of one inch (1") equals one hundred feet (100').
 - B. If the Subdivision or Land Development contains more than fifty (50) acres, the plan may be drawn to a scale of one inch (1") equals one hundred feet (100').
 - C. If the Subdivision or Land Development proposes lots with an average frontage of less than fifty feet (50'), the plan may be drawn to a scale of one inch (1") equals twenty feet (20').
 - D. The original drawing and all submitted prints thereof shall be made on sheets measuring eighteen inches (18") by twenty-four inches (24"), twenty-four inches (24") by thirty-six inches (36") or thirty-six inches (36") by forty-eight inches (48").
- 401.2 If the Plan requires more than one sheet, a key diagram showing the relative location of all the sheets shall be drawn on each sheet. In addition, a match line shall be drawn on each sheet and the Subdivider shall indicate along each match line what sheet is to be adjoined at that match line.
- 401.3 The Sketch Plan shall contain at least the following information but not necessarily showing precise dimensions:
- A. A statement of total acreage of the property and of each proposed lot.
 - B. A statement of the proposed use for each lot, parcel and building indicated on the plan.
 - C. A statement of the total number of lots created from this tract since May 1, 1972.
 - D. The words "SKETCH PLAN" in an obvious location on any drawings or supplemental data.
 - E. Tract boundaries accurately labeled in a clockwise direction.
 - F. Name of the municipality in which the subdivision or land development is located.
 - G. North arrow, scale (written and graphic) and date.

- H. Name of proposed subdivision or land development or other identifying title.
 - I. Significant topographical and physical features (e.g., water bodies, quarries, flood plains [including Special Flood Hazard Areas and base flood elevations for the 100 year storm established by the Federal Emergency Management Agency (FEMA)], tree masses, railroad tracks, existing buildings, wetlands, contours at minimum of five foot (5') intervals, etc.) on the tract and within fifty feet (50') of the property lines of the tract.
 - J. Proposed general street and lot layout.
 - K. A key map, drawn to a scale of 1" = 800', with sufficient information to enable the Township Planning Commission to locate the property being subdivided.
 - L. Name and address of record owner and subdivider or developer.
 - M. Soil types and boundaries, as indicated by the USDA Soil Survey for Berks County.
- 401.4 In case of a "Sketch Plan of Record", in addition to the above requirements the plan shall also contain the following items:
- A. The words "SKETCH PLAN OF RECORD" in an obvious location on any drawings or supplemental data.
 - B. The source(s) of title to the land being subdivided or developed
 - C. Precise bearings and distances for the entire tract and all lot boundaries, accurately labelled, and the location of all required boundary line (perimeter) monuments.
 - D. The proposed building reserve (setback) line and yard lines (side and rear) for each lot.
 - E. All easements or rights-of-way.
 - F. Names of all owners of all abutting unplatted land and the names of all abutting subdivisions, if any, with the book and page number where recorded.
 - G. Existing Municipal zoning regulations, including district designations, requirements for lot sizes, front yards, side yards, rear yards, and any zoning district boundary lines transversing the proposed subdivision or land development.
 - H. Location of all required soil probes and percolation test holes if on-lot sewage is to be utilized.

- I. At the recommendation of the Governing Body, the Planning Commission, the Township Solicitor or the Township Engineer, any plan note deemed to have a significant impact on a lot shall be referenced by note number from within all affected lots.
- J. Whenever required under the rules and regulations of PADEP, a copy of the Erosion and Sedimentation Control Plan shall accompany Sketch Plan of Record submission.
- K. A Certificate of Accuracy (per Appendix) completed by the surveyor, a signed and notarized Certificate of Ownership (per Appendix), and blank Certificates of Municipal Approval (per Appendix).
- L. Along the edge of the plan, two blank 3" x 3" spaces and one blank 3-1/2" x 5-1/2" for approval seals. (See Sections 403.1Q through 403.1S for preferred locations of these spaces.)

Section 402 Preliminary Plan

- 402.1 The Preliminary Plan shall include all information as required for Sketch Plan under Article IV, Section 401, in this Ordinance and shall be drawn to the same scales and presented on the same sheet sizes as required for the Sketch Plan. In addition, the following information shall be shown:
 - A. Date, including the month, day, and year that the Preliminary Plan was completed and the month, day, and year that the Preliminary Plan was revised, for each revision.
 - B. Name and address of record owner and subdivider or developer.
 - C. Name, address, license number, and seal of the registered surveyor responsible for the subdivision plan.
 - D. Names of owners of all abutting unplatted land and the names of all abutting subdivisions, if any, with the book and page number where recorded.
 - E. A key map for the purpose of locating the property being subdivided, drawn to a scale of one (1) inch equals eight hundred (800) feet and showing the relation of the property, differentiated by tone or pattern, to adjoining property and to all streets, roads, municipal boundaries, zoning districts, water courses, and any areas subject to flooding, and recorded subdivision plans existing within one thousand (1,000) feet of any part of the property.
 - F. Total tract boundaries of the property being subdivided showing bearings and distances labeled in a clockwise direction and a statement of total acreage of the property.
 - G. Zoning data including all of the following if applicable:

1. Existing Municipal zoning regulations, including district designations, requirements for lot sizes, front yards, side yards, rear yards, and any zoning district boundary lines traversing the proposed subdivision or land development.
 2. Any changes in the existing zoning to be requested by the subdivider or developer.
 3. Any Municipal regulations other than zoning governing lot size and/or front yard requirements.
- H. The words “PRELIMINARY PLAN” in an obvious location on any drawings or supplemental data.
- I. Contour lines at vertical intervals of at least two (2) feet.
- J. Locations and elevation of the datum to which contour elevations refer shall be the closest USC&GS established bench mark, or an established bench mark approved by the Municipal Engineer.
- K. All existing sewer lines, water lines, fire hydrants, electric and telephone utility lines, culverts, bridges, railroads, quarries, water courses, flood plain areas (based on a 100-year storm frequency, unless otherwise specified by the Greenwich Township Floodplain Ordinance) and other significant man-made or natural features within the proposed subdivision and fifty (50) feet beyond the boundaries of the proposed subdivision.
- L. All existing buildings or other structures and the approximate location of all existing tree masses, rock out-crops, watercourses within the proposed subdivision or land development or other significant features.
- M. All existing streets on the Official Plan or Plans of the Municipality (including unpaved streets), including streets of record (recorded but not constructed) easements and rights-of-way, including names, right-of-way widths, cartway (pavement) widths and approximate grades within and adjoining the subdivision/land development.
- N. The full plan of proposed development, including:
1. Location and width of all streets, easements, and rights-of-way, with a statement of any conditions governing their use, and suggested types i.e., collector, major, minor, etc.
 2. Suggested street names and utility easement locations.
 3. Building reserve (setback) line and yard lines (side and rear) for each lot.
 4. Lot lines with approximate dimensions.

5. Lot numbers and statement of number of lots and parcels.
 6. A statement of the intended use of all non-residential lots and parcels.
 7. Water supply, sanitary and/or storm sewers (and other drainage facilities) with the size and material of each indicated, and any proposed connections with existing facilities.
 8. Parks, playgrounds, and other areas proposed to be dedicated or reserved for public use with any conditions governing such use.
- O. Location of all required soil probes and percolation test holes, if on-lot-sewage is to be utilized.
- P. Whenever required under the rules and regulations of the Pennsylvania Department of Environmental Protection, the proposed Erosion and Sedimentation Control Plan shall be shown on the preliminary plan or submitted as a separate plan. If a separate plan, three (3) copies will be required.
- Q. Where the subdivider proposes to gain access to a highway under the jurisdiction of the Pennsylvania Department of Transportation by way of a driveway or a new street, a highway occupancy permit is required for each access point or the following note shall be present on the plan:
- “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 driveway access to state highway (street name) is permitted. Access to a state highway shall be only as authorized by a highway occupancy permit.”

402.2 The Preliminary Plan shall be accompanied by the following supplementary data as applicable.

- A. Typical street cross-section drawing(s) for all proposed streets. Cross-section drawings may be shown on either the Preliminary Plan or on separate profile sheets.
- B. Tentative profiles along the top of cartway (pavement) edge or along the top of curb for both sides of each proposed street shall be shown. Such profiles shall show existing and proposed grades at one of the following sets of scales:
 1. One (1) inch equals ten (10) feet horizontal, and one (1) inch equals one (1) foot vertical.
 2. One (1) inch equals twenty (20) feet horizontal, and one (1) inch equals two (2) feet vertical.

3. One (1) inch equals forty (40) feet horizontal, and one (1) inch equals four (4) feet vertical.
 4. One (1) inch equals fifty (50) feet horizontal, and one (1) inch equals five (5) feet vertical.
- C. In lieu of the separate profile sheets, the tentative finished cartway (pavement) edge or top of curb grades for both sides of each street may be labeled on the Preliminary Plan.
 - D. Plans for stormwater management for the proposed development shall be included. The stormwater facilities shall be designed in accordance with Appendix V herein.
 - E. Preliminary designs of any bridges or culverts which may be required. Such designs shall meet all applicable requirements of the Pennsylvania Department of Environmental Protection and/or the Pennsylvania Department of Transportation. Calculations for waterway opening shall be included. All designs shall be subject to approval by the Municipality.
 - F. Where a Preliminary Plan shows the proposed subdivision of only a part of the subdivider's total property, a sketch shall be required showing the prospective street system in the remainder of the property so that the street system in the submitted portion shall be considered in relation to future connections with the unsubmitted portion.

Section 403 Final Plan

- 403.1 The Final Plan shall be of a size drawn to scale, and show all information as required for Preliminary Plans under Article IV, Section 402 in these regulations. In addition the Final Plan shall show the following:
- A. The source(s) of title to the land being subdivided or developed, as shown by the records of the County Recorder of Deeds.
 - B. The total tract boundary lines of the area being subdivided or developed with accurate distances to hundredths of a foot and bearings to the nearest second. These boundaries shall be determined by accurate survey in the field, which shall be balanced and close with an error of closure not to exceed one (1) foot in ten thousand (10,000) feet; provided, however, that the boundary(s) adjoining additional unplatted land of the subdivider (for example, between separately submitted Final Plan sections) are not required to be based upon field survey, and may be calculated. The location and elevation of all boundary line (perimeter) monuments shall be indicated, along with a statement of the total area of the property being subdivided. In addition, the surveyor shall certify, using the form specified in the Appendix, to the accuracy of the survey, the drawn plan, and the placement of the monuments.

- C. The words "FINAL PLAN" in an obvious location on any drawings or supplemental data.
- D. The name (or number) and cartway width and lines of all existing public streets and the name and location of all other roads within the property.
- E. The following data shall be shown for the cartway edges and right-of-way lines and, if required, the ultimate right-of-way, for all existing, recorded, (except those to be vacated) and/or proposed streets within or abutting the property to be subdivided or developed:

The length (in feet, to the nearest hundredth of a foot) of all straight lines and length of the radii, arcs and chords (in feet, to the nearest hundredth of a foot) and central angles (in degrees, minutes and seconds) and the magnetic bearings of chords (in degrees, minutes and seconds) of all curved lines.

- F. All straight lot lines shall be dimensioned (in feet, to the nearest hundredth of a foot) and shall be described by either interior angles (in degrees, minutes and seconds) or magnetic bearings (in degrees, minutes and seconds). Curved lot lines shall show length of arc (in feet, to the nearest hundredth of a foot) and the central angle (in degrees, minutes and seconds) and the radius (in feet to the nearest hundredth of a foot) and chord bearings (in degrees, minutes and seconds) and distances (in feet, to the nearest hundredth of a foot).
- G. A statement of the intended use of all non-residential lots, with reference to restrictions of any type which exist or will exist as covenants in the deed for the lots contained in the subdivision and, if covenants are recorded, including the book and page number.
- H. The proposed building reserve (setback) line and yard lines (side and rear) for each lot, and the proposed placement of each building.
- I. The location (and elevation, if established) of all existing and required street monuments.
- J. All easements or rights-of-way where provided for or owned by public services and any limitations on such easements or rights-of-way. Rights-of-way shall be shown and accurately identified on the plan, and easements shall either be shown or specifically described on the plan. Easements should be located in cooperation with the appropriate public utilities.
- K. Plan for water supply and distribution; locations, size and invert elevations of all sanitary and/or storm sewers and location of all manholes, inlets and culverts. (This data may be submitted as a separate plan.)

- L. If the subdivision or land development proposes a new street intersection with a State Route, a letter from the Pennsylvania Department of Transportation approving the proposed intersection shall be submitted with the Final Plan.
 - M. A clear sight triangle shall be clearly shown for all street intersections.
 - N. At the recommendation of the Governing Body, the Planning Commission, the Township Solicitor or the Township Engineer, any plan note deemed to have a significant impact on a lot shall be referenced by note number from within all affected lots.
 - O. A Certification of Ownership and an Acknowledgement of Plan and Offer of Dedication shall be lettered on the plan, using the form in the Appendix, and shall be duly acknowledged and signed by the owner(s) of the property, and notarized.
 - P. Certificates for approval of the Plan by the Governing Body and by the Municipal Planning Commission shall be lettered on the plan, using the forms in the Appendix.
 - Q. A blank space measuring three (3) inches square shall be left, preferably adjacent to the Governing Body Certification, in which the seal of the Municipality may be applied.
 - R. A blank space measuring three and one-half (3-1/2) inches by five and one-half (5-1/2) inches shall be left, preferably adjacent to the Municipal certification, in which the endorsement stamp of the County Planning Commission may be applied.
 - S. A blank space measuring three (3) inches square shall be left along the edge of the sheet, in order that the Recorder of Deeds may acknowledge receipt of the Plan when it is presented.
- 403.2 Whenever required under the rules and regulations of the Pennsylvania Department of Environmental Protection, a copy of the Erosion and Sedimentation Control Plan shall accompany Final Plan submission. The E & S C Plan shall be submitted to the Berks County Conservation District for review prior to Final Plan approval. Permits, when required, shall be submitted with Final Plan.
- 403.3 The Final Plan shall be accompanied by such application supplementary data as is required in Article IV, Section 402.2 in addition to profile sheets for all proposed streets within the tract. Such profiles shall show at least the following information, properly labeled:
- A. Existing (natural) profiles along the centerline of each street and, if slope within cartway area exceeds five (5) percent, along both cartway edges.

- B. Proposed finished grade of the centerline, and proposed finished grades at the top of both curbs, or proposed finished grade at both cartway pavement edges.
- C. The lengths of all vertical curves.
- D. Existing and proposed sanitary sewer mains and manholes, storm sewer mains, inlets, manholes, and culverts and existing or proposed water mains.

ARTICLE V DESIGN STANDARDS

Section 501 Application and General Standards

- 501.1 The standards and requirements contained in Articles V and VI are intended as the minimum for the promotion of the public health, safety, and general welfare, and shall be applied as such by the Municipal Planning Commission and Governing Body in reviewing all subdivision and land development plans.
- 501.2 Whenever other Municipal Ordinances and/or regulations impose more restrictive standards and requirements than those contained herein, such other ordinances and/or regulations shall be observed; otherwise, the standards and requirements of this Ordinance shall apply.
- 501.3 The standards and requirements of this Ordinance may be modified by the Governing Body in the case of complete communities, neighborhood units or other large scale developments upon the recommendation of the Municipal Planning Commission, where such modifications achieve substantially the objectives of this Ordinance and which are further protected by such covenants or other legal provisions as will assure conformity to and achievement of the subdivision/land development plan.
- 501.4 Land subject to hazards to life, health, or property, such as may arise from fire, floods, disease, or other causes, shall not be subdivided for building purposes unless such hazards have been eliminated or unless the subdivision plan shall show adequate safeguards against them, which shall be approved by the appropriate regulatory agencies.
- 501.5 Subdivision/land development plans shall give due recognition to the "Official Plans" of the Municipality and of the County or to such parts thereof as may have been adopted pursuant to statute.
- 501.6 Land proposed for subdivision shall not be developed or changed by grading, excavating, or by the removal or destruction of the natural topsoil, trees, or other vegetative cover unless adequate provisions for minimizing soil erosion and sedimentation are provided under Title 25, Chapter 102, Rules and Regulations, PADEP and Section 509 of this Ordinance.
- 501.7 Subdivision/land development plans shall comply with the Americans with Disability Act (ADA), as required.

Section 502 Streets

502.1 General Standards

- A. The location and width of all streets shall conform to the "Official Plans" or to such parts thereof as may have been adopted by the Municipal Planning Commission and/or the Governing Body.
- B. The proposed street system shall extend existing or proposed streets on the "Official Plans" at the same width or larger but in no case at less than the required minimum width in Section 502.3.
- C. Where, in the opinion of the Municipal Planning Commission, it is desirable to provide for street access to adjoining property, street stubs shall be extended, by dedication, to the boundary of such property. If a subdivision proposes lots, all of which front on existing public roads, the Municipality may require the subdivider to reserve land adequate to provide for future street access from the public roads on which the lots front to the land to the rear of the proposed lots. Such reserved area(s) shall be of such dimensions to permit the construction of streets meeting the standards of this Ordinance.
- D. New minor streets shall be so designed as to discourage through traffic, but the subdivider shall give adequate consideration to providing for the extension and continuation of major and collector streets into and from adjoining properties
- E. Where a subdivision abuts or contains an existing street(s) that is unimproved or substandard (based on the below standards), the Governing Body may require that the road(s) be improved in accordance with the "Subdivision Improvements and Construction of Township Roads" Ordinance.

502.2 Partial and Half Streets

New half or partial streets shall *be* prohibited except where essential to reasonable subdivision of a tract in conformance with the other requirements and standards of these regulations and where, in addition, satisfactory assurance for dedication of the remaining part of the street can be obtained. Subdivider shall provide the entirety of the required cartway width within his property.

502.3 Street Widths

Minimum street rights-of-way and pavement widths shall be as shown on the "Official Plans" or, if not shown on such plans, they shall be as follows:

<u>STREET TYPE</u>	<u>REQUIRED WIDTHS (IN FEET)</u>
MINOR STREET (a)	
RIGHT-OF-WAY	53
CARTWAY	33
COLLECTOR STREET (a)	
RIGHT-OF-WAY	60
CARTWAY	36
MAJOR STREET (a)	
RIGHT-OF-WAY	- SEE NOTE (b) –
CARTWAY	- SEE NOTE (b) –
CUL-DE-SAC STREET (a)	
RIGHT-OF-WAY	53
CARTWAY	33
MARGINAL ACCESS STREET (a)	
RIGHT-OF-WAY	- SEE NOTE (c)-
CARTWAY	26
SERVICE AND INTERNAL STREETS (a)	
RIGHT-OF-WAY	24
CARTWAY	24
BOULEVARD STREET (d) (a)	
RIGHT-OF-WAY	- SEE NOTE (e)-
CARTWAY	40 FEET (20' IN EACH DIRECTION)

NOTES:

- (a) NO ON-STREET PARKING PERMITTED.
- (b) AS SPECIFIED IN THE “OFFICIAL PLANS”, OR AS DETERMINED AFTER CONSULTING WITH THE MUNICIPALITY, THE COUNTY PLANNING COMMISSION AND THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION.
- (c) VARIABLE, DEPENDING ON THE WIDTH OF THE ADJACENT RIGHT-OF-WAY, BUT NOT LESS THAN THIRTY-THREE (33) FEET.
- (d) A BOULEVARD STREET IS A STREET WITH TWO LANES IN EACH DIRECTION SEPARATED BY A MEDIAN STRIP OF GRASS AND OTHER NATURAL COVER.
- (e) THE RIGHT-OF-WAY FOR A BOULEVARD STREET SHALL EXTEND 10 FEET TO THE OUTSIDES OF THE CARTWAY. THE MEDIAN STRIP SHALL BE INCLUDED IN THE RIGHT-OF-WAY.

Additional right-of-way and pavement widths may be required by the Municipal Planning Commission or Governing Body for the purpose of promoting public safety and convenience or to provide parking in commercial and industrial areas and in areas of high density residential development.

502.4 Restriction of Access

- A. Whenever a subdivision abuts or contains an existing or proposed street with an ultimate right-of-way of eighty (80) feet or more or contains or abuts an existing or proposed collector street, the Municipal Planning Commission or the Governing Body may require restriction of access to said street by:
 - 1. Provision of reverse frontage lots.
 - 2. Provision of service streets along the rear of the abutting lots, together with prohibition of private driveways intersecting the major street.
 - 3. Provision of marginal access streets, provided that the reserve strips establishing such marginal access streets shall be definitely placed within the jurisdiction of the Municipality under an agreement meeting the approval of the Municipal Solicitor.
 - 4. Except as specified under Section 502.4A.3 above, reserve strips shall be prohibited.

502.5 Street Grades

- A. There shall be a minimum centerline grade of three-quarters (3/4) percent.
- B. Centerline grades shall not exceed the following:
 - 1. Minor Street – ten (10) percent.
 - 2. Collector Street – seven (7) percent.
 - 3. Major Street – five (5) percent.
 - 4. Intersections – three (3) percent. Also, see Section 502.8.D.
- C. Grades up to twelve (12) percent may be permitted on a through minor street where access to the street is possible over streets with grades of ten (10) percent or less.

502.6 Horizontal Curves

- A. Whenever street lines are deflected in excess of five (5) degrees, connection shall be made by horizontal curves.

- B. To ensure adequate sight distance, minimum centerline radii for horizontal curves shall be as follows:
 - 1. Minor Streets - one hundred fifty (150) feet.
 - 2. Collector Streets - three hundred (300) feet.
 - 3. Major Streets - five hundred (500) feet.
- C. A straight section of road, at least one hundred (100) feet in length, shall be introduced between horizontal curves on all collector and major streets.
- D. To the greatest extent possible, combinations of the minimum radius and maximum grade shall be avoided.

502.7 Vertical Curves

At all changes of street grades where the algebraic difference in grade exceeds one (1) percent, vertical curves shall be provided to permit the following minimum sight distances:

- A. Minor Streets - two hundred (200) feet.
- B. Collector Streets - three hundred (300) feet.
- C. Major Streets - four hundred (400) feet.

502.8 Intersections

- A. Streets shall intersect as nearly as possible at right angles, and no street shall intersect another at an angle of less than sixty (60) degrees or more than one hundred twenty (120) degrees.
- B. No more than two streets shall intersect at the same point.
- C. A street intersection shall be designed to occur directly opposite an existing street or there shall be at least one hundred fifty (150) feet between centerline intersections, measured along the centerline of the street being intersected.
- D. Intersections shall be approached on all sides by a straight leveling area, the grade of which shall not exceed three (3) percent within fifty (50) feet of the intersection of the nearest right-of-way lines.
- E. Intersections with major streets shall be located not less than one thousand (1,000) feet apart measured from centerline to centerline along the centerline of the major street.

- F. Street curb intersections shall be rounded by a tangential arc with a minimum radius of:
 - 1. Twenty (20) feet for intersections involving only minor streets.
 - 2. Thirty-five (35) feet for all intersections involving a collector street.
 - 3. Fifty (50) feet for all intersections involving a major street.
 - 4. Ten (10) feet for all intersections involving only service streets.
- G. Street right-of-way lines shall be parallel to (concentric with) curb arcs at intersections.

502.9 Sight distance requirements at intersections

- A. Clear sight triangle
 - 1. All new streets that are proposed to intersect an existing public street or road shall be provided with clear sight triangles at that intersection. Within such triangles, no vision-obstructing objects other than utility poles, street lights, street signs, or traffic signs shall be permitted which obscure vision below the height of ten (10') feet, measured from the centerline grade of the proposed street. Such triangle shall be established from a distance of:
 - a. Seventy-five (75') feet along all centerlines, measured from the point of intersection of the centerlines, for intersections with minor streets, or
 - b. One hundred fifty (150') feet along all centerlines, measured from the point of intersection of the centerlines, for intersections with collectors or other major streets.
- B. Stopping Sight Distance Triangle
 - 1. All new streets and driveways that are proposed to intersect an existing or proposed public street or road shall be provided with stopping sight distance triangles at that intersection. All intersections shall be provided with at least 300 feet of sight distance in accordance with the conditions set forth in Section A of Form 1 of the Greenwich Township Private Driveway Standard Ordinance. This distance equates approximately to a running speed of 40 miles per hour in combination with a minimal negative (downhill) grade approaching the intersection. If the applicant wishes to seek relief from this requirement because of local site conditions, he shall submit safe running speed and existing approach grade determinations for comparison to PennDOT requirements for Minimum Safe

Stopping Distance. These determinations shall be certified by a licensed engineer. Said distance shall be measured to the left and to the right with the driver of a vehicle positioned ten (10') feet back from the edge of cartway and shall be recorded in Section A of Form 1 provided in the Greenwich Township Private Driveway Standard Ordinance. Within such triangles, no vision-obstructing objects other than utility poles, street lights, street signs, or traffic signs shall be permitted which obscure vision below the height of ten (10') feet, measured from the centerline grade of the proposed street or driveway. Field measured sight distances for intersection or driveway approach conditions shall also be provided on Form 1 (Sections B and C).

- C. Clear sight triangles shall be provided for all new street intersections. Stopping sight distance triangles shall be provided for all new street intersections and all new driveway intersections. Written agreements authorizing access to adjoining property for maintenance of all sight triangles must be submitted for the Solicitor's review prior to recording the document.
- D. Whenever a portion of the line of the clear sight triangle(s) occurs behind (i.e., from the street) the building reserve (setback) line, such portion shall be shown on the Final Plan of the subdivision or land development and shall be considered a building setback (reserve) line.

502.10 Cul-de-Sac Streets

- A. Dead-end streets are prohibited unless designed as cul-de-sac streets or designed for future access to adjoining properties.
- B. A temporary cul-de-sac shall be defined as a street for which clear and concrete plans exist for extension within a period of time satisfactory to the Governing Body. All other cul-de-sac streets shall be considered permanent.
- C. Permanent cul-de-sac streets shall not exceed five hundred (500) feet in length from the edge of the intersected cartway (either proposed or existing) to the extreme rear edge of the turnaround. The cul-de-sac street shall not furnish access to more than fourteen (14) dwelling units.
- D. A single entrance street having an internal circulation loop shall not serve more than fifty (50) dwelling units. That portion of the street which connects the entrance and the circulation loop shall not exceed five hundred (500) feet in length and shall be designed and constructed as a boulevard street.
- E. The Township may require that a permanent easement be provided and maintained for emergency vehicle access to another street from either a cul-de-sac street or a single entrance street having an internal circulation loop.

- F. Except as hereinafter provided, all cul-de-sac streets, whether permanently or temporarily designed as such, shall be provided at the closed end with a fully paved turnaround. The minimum radius of the pavement edge or curb line shall be sixty (60) feet, and the minimum radius of the right-of-way line shall be seventy (70) feet.
- G. Drainage of cul-de-sac streets shall preferably be towards the open end (intersected street). If drainage is toward the closed end (turnaround area) it shall be conducted away in an underground storm sewer.
- H. The centerline grade on a cul-de-sac street shall not exceed ten (10) percent, and the grade of the diameter of the turnaround shall not exceed five (5) percent.

502.11 Street Names

- A. Proposed streets which are obviously in alignment with others already existing and named, shall bear the names of the existing streets.
- B. In no case shall the name of a proposed street be the same as, or similar to, an existing street name in either the Municipality or even the same postal district; Irrespective of the use of the suffix street, road, avenue, boulevard, driveway, place, court, lane, etc. North, south, east and west shall not be used as either a prefix or a suffix to a street name.
- C. All street names shall be subject to the approval of the Governing Body.

502.12 Service Streets (Alleys)

- A. Service Streets may be permitted, provided that the subdivider produces evidence satisfactory to the Municipal Planning Commission or Governing Body of the need for such service streets.
- B. Dead-end service streets shall be avoided, but where this proves impossible, dead-end service streets shall terminate with a paved circular turnaround having a minimum radius to the outer pavement edge (curb line) of fifty (50) feet.
- C. Service street intersections and sharp changes in alignment shall be avoided, but where necessary, corners shall be rounded as required in Section 502.8 and deflections in alignment in excess of five (5) degrees shall be made by horizontal curves.

502.13 Off-Street Parking

- A. Each proposed dwelling unit in a subdivision or land development shall be provided with at least two off-street parking spaces.
 - 1. In the case of single-family buildings, such off-street parking spaces shall be provided behind the street right-of-way line and may be provided in an attached or separate garage, carport, or driveway.
 - a. Parking facilities for all single-family detached and semi-detached uses shall be provided with a vehicle turnaround area to eliminate the need for backing vehicles onto a public roadway.
 - 2. In the case of multi-family dwellings, such off-street parking spaces shall be provided in parking facilities located adjacent to, within, or near the multi-family buildings. Each off-street parking space shall contain a minimum of two hundred (200) square feet. In addition, adequate aisles for maneuvering and movement of vehicles shall be provided. The grade of such parking areas shall not exceed five (5) percent.
- B. Commercial and industrial developments shall meet the off-street parking requirements of the Township Zoning Ordinance.

502.14 Driveways

- A. Subdivisions which will require access to a highway under the jurisdiction of the Pennsylvania Department of Transportation shall contain the following note in compliance with Act 42 of 1986:

“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 driveway access to state highway SR-_____ is permitted. Access to the state highway shall be only as authorized by a highway occupancy permit.”
- B. Private driveways serving lots abutting a proposed street shall access directly to the proposed street, and not to existing public roads.
- C. Provision shall be made at all intersections of driveways with streets to ensure adequate stormwater drainage.
- D. Driveway design shall further conform to the requirements of the Greenwich Township Private Driveway Standard Ordinance of 2001.
- E. All driveways shall be constructed by the applicant in conformity with the specifications contained herein, and approved by the Township prior to issuance of the Occupancy and Use Permit.

- F. All driveways shall be located only on the property for which they serve to provide a means of ingress and egress and shall abut and enter upon a Township road.

Section 503 Blocks

503.1 Layout

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

- A. Provision of adequate sites for buildings of the type proposed;
- B. Zoning requirements;
- C. Topography;
- D. Requirements for safe and convenient vehicular and pedestrian circulation, including the reduction of intersections with major streets.

503.2 Length

- A. Blocks shall have a maximum length of one thousand six hundred (1,600) feet and a minimum length of five hundred (500) feet, provided however that the Municipal Planning Commission or Governing Body may increase the maximum and/or decrease the minimum lengths of blocks, if in the opinion of either body, topography of the land in question and/or surface water drainage conditions warrant such a change.
- B. In the design of blocks longer than one thousand (1,000) feet, special consideration shall be given to the requirements of satisfactory fire protection.
- C. Where practicable, blocks along major and collector streets shall not be less than one thousand (1,000) feet long.

503.3 Crosswalks

- A. Crosswalks shall be required wherever necessary to facilitate pedestrian circulation and to give access to community facilities, as well as in blocks of over one thousand (1,000) feet in length.
- B. Such crosswalks shall have a width of not less than ten (10) feet and a paved walk of not less than four (4) feet.

503.4 Depth

Residential blocks shall be of sufficient depth to accommodate two tiers of lots, except where prevented by the size, topographical conditions or other inherent conditions of the property, in which case the Municipal Planning Commission or Governing Body may approve a single tier of lots.

503.5 Commercial and Industrial Blocks

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

Section 504 Lots and Parcels

504.1 General Standards

- A. Insofar as is practicable, side lot lines should be at right angles to straight street lines or radial to curved street lines.
- B. Where feasible, lot lines should follow municipal boundaries, rather than cross them, in order to avoid jurisdictional problems.
- C. The depth of residential lots shall be not less than one (1) nor more than three (3) times its width.
- D. Depth and width of parcels intended for non-residential uses shall be adequate for the use proposed and sufficient to provide satisfactory space for on-site parking, loading and unloading, setbacks, landscaping, etc.
- E. If, after subdividing, there exist remnants of land, they shall be either:
 - 1. Incorporated into existing or proposed lots, or
 - 2. Legally dedicated to public use, if acceptable to the Municipality.

504.2 Lot Frontage

- A. All lots shall abut a public street, existing or proposed, or an existing private street if it meets the requirements of these regulations.
- B. Double or reverse frontage lots shall be avoided except where required to provide separation of residential development from major streets or to overcome specific disadvantages of topography or orientation.
- C. All residential reverse frontage lots shall have a rear yard with a minimum depth of seventy-five (75) feet, measured in the shortest

distance from the proposed dwelling unit to the ultimate right-of-way, and shall have within such rear yard and immediately adjacent to the right-of-way, a planting screen easement of at least ten (10) feet in width, across which there shall be no right of access.

504.3 Lot Size

- A. Lot dimensions and areas shall not be less than specified by the Greenwich Township Zoning Ordinance except that where an existing lot or parcel of land is proposed to be subdivided into two or more parcels, one or more parcels of which is, or are, to be simultaneously merged (annexed) with another existing lot or parcel of land, minimum lot dimensions and areas as set forth in the Greenwich Township Zoning Ordinance shall not be applicable to the parcel or parcel to be merged, provided further that the remaining parcel, or each of the remaining parcels, after subdivision, shall comply with all requirements of the Township Zoning Ordinance and the Township Subdivision and Land Development Ordinance.
- B. Lot areas shall further conform to the rules and regulations of the Pennsylvania Department of Environmental Protection and Sections 505, 506 and 507 of this Ordinance.

Section 505 Sanitary Sewage Disposal

- 505.1 Each property shall be connected to the municipal sewer system if accessible. Where the municipal sewer is not yet accessible, but is planned for extension to the subdivision, the subdivider shall install sewer lines, including lateral connections as may be necessary to provide adequate service to each lot when connection with the sewer system is made. The sewer lines shall be suitably capped at the limits of the subdivision, and the laterals shall be capped at the street right-of-way line. When capped sewers are provided, on-site disposal facilities shall also be provided. Design of a capped sewer system shall be subject to approval by the Municipality.
- 505.2 Sanitary sewers shall be designed and constructed in strict accordance with Pennsylvania Department of Environmental Protection standards and Municipal standards. A copy of the DEP approval of such system shall be submitted with the Final Plan.
- 505.3 Sanitary sewers shall not be used to carry storm water.
- 505.4 All lots which can not be connected to an operating municipal sanitary sewage disposal system at the time of construction of a principal building shall be provided with an on-site sanitary sewage disposal system consisting of a septic tank(s) connected with a soil absorption area and which shall, as a minimum requirement, meet the design standards of the rules and regulations of the Pennsylvania Department of Environmental Protection, and Municipal standards.

- 505.5 If on-site sanitary sewage disposal facilities are proposed where the potential exists to extend and utilize an existing public sewer system, the Municipal Planning Commission may require that the subdivider submit a Feasibility Report. Such Report shall compare the cost of providing on-site facilities and the cost of extending the public sewer system. Based on the analysis of this report, the Planning Commission may require the installation of a public sewer system.
- 505.6 Where on-site sanitary sewage facilities are to be utilized, each lot so served shall be of a size and shape to accommodate the necessary area of the soil absorption area at the required distance from the proposed building(s) in accordance with Municipal or State regulations.
- 505.7 No person shall install, construct or alter an individual sewage system or a community sewage system or construct or install or occupy any building or structure for which an individual sewage system or a community sewage system is to be installed without first obtaining a permit indicating that the site and the plans and specifications of such system are in compliance with the provisions of the Pennsylvania Sewage Facilities Act and the standards adopted pursuant to that Act.
- 505.8 No system or structure designed to provide individual or community sewage disposal shall be covered from view until approval to cover same has been given by the municipal sewage enforcement officer. If 72 hours has elapsed, excepting Sundays and holidays, since the sewage enforcement officer issuing the permit received notification of completion of construction, the applicant may cover said system or structure unless permission has been specifically refused by the sewage enforcement officer.
- 505.9 All new individual sewage systems, which includes proposed replacement absorption areas, but excludes remediation systems approved by PADEP, shall be constructed within the boundaries of the parcel of land on which the residence/building is located and for which the sewage permit is being issued. No new individual sewage system or proposed replacement absorption area shall be installed which transverses a public or private road, or be located on land not owned by the applicant.
- 505.10 No building or occupancy permit shall be issued by the municipality or its codes enforcement officer for a new building which will contain sewage generating facilities until a valid sewage permit has been obtained from the municipality's certified sewage enforcement officer.
- 505.11 No building or occupancy permit shall be issued and no work shall begin on any alteration or conversion of any existing structure, if said alteration or conversion will result in the increase or potential increase in sewage flows from the structure, until the municipality's codes enforcement officer and the structure's owner receive from the municipality's sewage enforcement officer either a permit for alteration or replacement of the existing sewage disposal system, or written notification that such a permit will not be required. The

Township Sewage Enforcement Officer shall determine whether the proposed alteration or conversion of the structure will result in increased sewage flows.

- 505.12 Sewage permits may be issued only by a certified sewage enforcement officer employed by the municipality for that express purpose. The Department of Environmental Protection shall be notified by the municipality as to the identity of their currently employed certified sewage enforcement officer.

Section 506 Soil Probe and Percolation Test Requirements

- 506.1 Soil probe and percolation tests shall be performed for all subdivisions wherein building(s) at the time of construction will not be connected to an operating public sanitary sewage disposal system.
- 506.2 Soil probes and percolation tests shall be performed in accordance with the procedures required by the Pennsylvania Department of Environmental Protection.
- 506.3 All systems, including individual subsurface systems, sandmound sewage systems, community sewage systems, and oversize sewage systems, shall, at a minimum, require that sufficient area be set aside and left essentially undisturbed to provide for a replacement absorption area should the original absorption area fail. The suitability of the replacement area shall be confirmed by at least one soil probe. All primary absorption areas shall include two probes and a percolation test, and shall be tested and approved in compliance with the provisions of Chapter 73 of the Rules and Regulations promulgated by the Department of Environmental Protection relative to the Pennsylvania Sewage Facilities Act.
- 506.4 Where possible, soil percolation tests shall be performed near the site of the proposed on-site sanitary sewage disposal facilities and spaced evenly throughout the test area.
- 506.5 The sewage enforcement officer shall enter the results of the tests and all other information on the Site Investigation And Percolation Test Report (PADEP) form and submit the completed forms to the Subdivider. The Subdivider shall then complete five (5) copies of the appropriate PADEP Planning Module Component(s) and submit same to the Sewage Enforcement Officer for review and approval. The Sewage Enforcement Officer shall then submit the Planning Module to the Township Planning Commission for review and approval. The submission to the Township Planning Commission shall be made at the time of Preliminary Plan submission.
- 506.6 The results of the soil percolation tests shall be reviewed by the Municipality in relation to the physical characteristics of the tract being subdivided and of the general area surrounding the tract. If the review of the soil probe and/or percolation test results reveals that the soil is marginal for the intended use at the lot size proposed, the Township Planning Commission may require that the lot size(s) be increased in accordance with the test results or that additional

tests be made on each proposed lot at the location of the contemplated disposal facility, and the data submitted for review pursuant to Section 506.7.

- 506.7 The proposed use of on-lot disposal systems will require additional documentation to assure that both the short-term and the long-term sewage facilities needs of the area will be met if the site is considered marginal for the use of on-lot systems based on any of the following:
- A. Soils profile examinations which document areas of suitable soil intermixed with areas of unsuitable soils, or
 - B. A site evaluation which documents soils generally suitable for elevated sand mounds with some potential lots with slopes over 8%, or
 - C. A site evaluation which documents soils generally suitable for in-ground systems with some potential lots with slopes in excess of 20%, or
 - D. A proposed lot density of more than 1 EDU/acre, or
 - E. The proposed use of a community on-lot disposal system or a system serving commercial, industrial or institutional uses.
- 506.8 To assure long-term sewage facilities where marginal conditions for on-lot systems have been documented, the subdivider shall conduct complete soils tests (two soil probes and one six-hole percolation test) for both the primary area and a replacement area, or in the case of the proposed high density use of on-lot systems, the subdivider shall reduce the density of lots below the threshold of one residential dwelling per acre.
- 506.9 All soil probes and percolation tests, whether passing or failing, shall be shown and differentiated on the final subdivision plan.

Section 507 Water Supply

- 507.1 If water is to be provided by means other than by private wells (owned and maintained by the individual owners of lots within the subdivision or development), applicants shall present evidence to the Governing Body or planning agency, as the case may be, that the subdivision or development is to be supplied by a certificated public utility, a bona fide cooperative association of lot owners, or by a municipal corporation, authority or utility. A copy of a Certificate of Public Convenience from the Pennsylvania Public Utility Commission or an application for such certificate, a cooperative agreement or a commitment or agreement to serve the area in question, whichever is appropriate, shall be acceptable evidence.
- 507.2 The distribution system of an approved community water system shall be designed to furnish an adequate supply of water to each lot, with adequate main sizes, appurtenances and fire hydrants located to meet the specifications of the Municipality.

- 507.3 Each lot served by an individual on-site water supply system shall be of a size and shape to allow the safe location of such a system. Wells shall be placed uphill from sewage disposal systems and shall not be within one hundred (100) feet of any part of the absorption (tile) field of any on-site sanitary sewage disposal system, nor within fifty (50) feet of lakes, streams, ponds, quarries, etc.

Section 508 Storm Drainage

- 508.1 Storm sewers, culverts, and related installations and improvements shall be provided in order to:
- A. Permit unimpeded flow of natural watercourses;
 - B. Ensure adequate drainage of all streets;
 - C. Intercept stormwater runoff along streets at intervals related to the extent and grade of the area drained;
 - D. Provide positive drainage away from on-site sewage disposal facilities and buildings;
 - E. Ensure adequate drainage at intersections of driveways with streets.
- 508.2 Where existing storm sewers are reasonably accessible and of adequate capacity, subdivisions and land developments shall, if required by the Township, connect to the existing storm sewers.
- 508.3 Stormwater runoff shall not be concentrated (directed to form a new drainageway) onto adjacent properties unless written approval is given by the adjacent property owners and the Township. When storm drainage will be directed into an adjacent municipality, all provisions for accommodating such storm drainage shall be submitted to the governing body of that municipality for review.
- 508.4 Storm drainage facilities shall be designed not only to handle the anticipated peak discharge from the property being subdivided, but also the anticipated increased runoff that will occur when all the property at a higher elevation in the same watershed is fully developed. Subdividers should consult the Township's Comprehensive Plan and Zoning Ordinance.
- 508.5 Where a subdivision or land development is traversed by a watercourse, drainageway, channel, or stream, there shall be provided a drainage easement conforming substantially with the line of such watercourse, drainageway, channel, or stream and of such width as will be adequate to preserve the unimpeded flow of natural drainage, or for the purpose of widening, deepening, relocating, improving or protecting such drainage facilities. Any changes in the existing drainageway shall be subject to the approval of the Pennsylvania Department of Environmental Protection when the department has jurisdiction. The subdivider shall properly grade and seed slopes and

fence open ditches. Areas within easements shall be kept as lawn or in natural conditions.

- 508.6 All drainage facilities shall be designed to adequately handle surface runoff and carry it to suitable outlets and shall be designed in accordance with design standards in Appendix V of this Ordinance.
- 508.7 All streets shall be so designed as to provide for the discharge of surface water from their rights-of-way.
- 508.8 The slope of the crown on proposed streets shall be not less than 1/4 of an inch per foot and not more than 3/8 of an inch per foot.
- 508.9 Adequate facilities shall be provided at low points along streets, at street intersections and at intermediate points where necessary to intercept runoff. Crossing gutters will not be permitted.

Section 509 Erosion and Sedimentation Control

- 509.1 All subdivisions and land developments shall comply with the Clean Streams Law of Pennsylvania and Chapter 102 of the Rules and Regulations of the Pennsylvania Department of Environmental Protection as amended from time to time.
- 509.2 The landowner or developer shall be responsible for the submission and approval of an application to the Berks County Conservation District for a permit to allow any earthmoving activity. All landowners or developers are required to obtain such permit except as otherwise provided in Section 102.31, Permits and Plans, of Chapter 102 of the Rules and Regulations of the Pennsylvania Department of Environmental Protection (DEP) as amended from time to time.
- 509.3 The erosion and sedimentation control plan must be available at all times at the construction site. The permit allowing earthmoving activity shall be obtained by the landowner or developer before any construction on the site shall begin.
- 509.4 The start of any earth disturbance and the implementation of vegetative soil stabilization measures to control erosion and sedimentation shall be planned so as to provide for seasonal effects such as the inability to establish vegetation during winter months, the influence of freezing, and the like. No soil surface shall remain unstabilized over the winter.
- 509.5 Measures shall be taken to preclude the tracking of mud, soil and the like by construction vehicles and equipment onto streets which serve the site. Such measures may include rock construction entrances or temporary scrub pads with collector sumps and cleaning devices, which construction vehicles shall pass through prior to leaving the site.

- 509.6 The following erosion and sedimentation control design standards shall be observed:
- A. For the design of the storm sewer collection system, grass waterways, swales and diversions, the required storm frequency shall be as follows:
 - 1. For residential lots one (1) acre or larger in size, the ten (10) year storm shall be used.
 - 2. For residential lots less than one (1) acre in size and all commercial proposals, the twenty-five (25) year storm shall be used.
 - B. For the design of detention basins, the required storm frequency shall be as follows:
 - 1. Basin storage capacity
 - a. for residential lots one (1) acre or larger in size, the twenty-five (25) year storm shall be used;
 - b. for residential lots less than one (1) acre in size, and all commercial proposals, the fifty (50) year storm shall be used.
 - 2. Pipe spillway discharge systems, the pre-development two (2) year storm discharge rate shall govern outflow.
 - 3. Emergency spillways, the one hundred (100) year storm shall be used.
- 509.7 Land shall not be developed or changed by grading, excavation, by the removal or destruction of natural topsoil, trees, or other vegetative cover unless adequate provisions for minimizing erosion and sedimentation are provided.
- 509.8 A plan for soil erosion and sedimentation control shall be prepared. The plan shall meet all requirements of the County Conservation District and the Pennsylvania Department of Environmental Protection and be approved by the County Conservation District, the Township, and the Pennsylvania Department of Environmental Protection, when applicable. The Township may, when deemed appropriate by the Township, permit the subdivision plan to contain a note that individual lot purchasers are responsible for preparing a soil erosion and sedimentation control plan prior to the commencement of earthmoving activities in lieu of an overall soil erosion and sedimentation control plan.
- 509.9 The soil erosion and sedimentation control plan shall be submitted at Final Plan submission and shall contain two parts: (a) a plan or plans describing the topography of the area within the subdivision, the proposed alterations of the

area, and the erosion and sedimentation control measures and facilities which are proposed; and (b) a Narrative Report describing the project and giving the purpose, engineering assumptions and calculations for control measures and facilities.

A. A plan or plans shall show:

1. The types, slope and areal extent of the soils within the subdivision;
2. The proposed alteration to the area, including
 - a. Changes to land surface and vegetative cover;
 - b. Areas of cuts and fills exceeding 5' in vertical difference (3' if sidewalks are to be constructed);
 - c. Structures, roads, paved areas, buildings;
 - d. Stormwater control facilities;
 - e. Existing contours on the site at intervals required by this Ordinance and, where required by the Township, finished contours at the same interval.

B. The Narrative Report shall contain:

1. A General Statement of the Project which shall contain:
 - a. A general description of the project;
 - b. A general description of stormwater handling;
 - c. A general description of accelerated erosion control;
 - d. A general description of sedimentation control.
2. A description of the amount of runoff in the project area and the upstream watershed, including method of calculation and factors considered.
3. The staging of earthmoving activities, including cover removal, control facility installation, installation of improvements, and program of operations. If homes are to be constructed one at a time and not concurrently, the typical treatment on each home site shall be indicated.
4. A maintenance program for the control facilities, including:

- a. Method of disposal of materials removed from the control facilities of the project area.
 - b. The methods, frequency and ultimate disposal site for solid waste material.
 - 5. Facilities must be maintained for their designed operation to insure adequate performance.
- C. The following items shall be shown on a plan and described in the Narrative Report:
 - 1. Temporary control measures and facilities for use during earthmoving, including:
 - a. Purpose;
 - b. Types of measures and facilities;
 - c. Location of measures and facilities;
 - d. Dimensioned details of the facilities;
 - e. Design considerations and calculations.
 - 2. Permanent control measures and facilities for site restoration and long term protection, including:
 - a. Purpose;
 - b. Types of measures and facilities;
 - c. Location of measures and facilities;
 - d. Dimensioned details of the facilities;
 - e. Design considerations and calculations.
- D. All soil erosion and sedimentation control facilities shall be periodically inspected and checked for adequacy by the Township.
- E. The following guidelines shall be followed as needed in developing soil erosion and sedimentation control measures:
 - 1. Stripping of vegetation, grading, filling, excavation or other alteration of the landscape shall be kept to a minimum and shall be done in such a way that will minimize erosion;
 - 2. Whenever feasible, natural vegetation shall be retained, protected, and supplemented;

3. The disturbed area and the duration of exposure shall be kept to a minimum;
 4. Disturbed soils shall be stabilized as quickly as practicable;
 5. Temporary vegetation and/or mulching shall be used to protect exposed critical areas during development;
 6. The permanent vegetation (where applicable) and mechanical erosion control and drainage measures shall be installed prior to development;
 7. Both permanent and temporary provisions shall be made to effectively accommodate the increased runoff caused by changed soil and surface conditions during and after development. Where necessary, the rate of surface water runoff shall be mechanically retarded;
 8. Until disturbed areas are stabilized, sediment in runoff water shall be trapped by the use of debris basins, sediment basins, silt traps, or similar measures approved in the Erosion and Sedimentation Control Plan.
- F. The following guidelines shall be applied as needed in excavation and fills as part of erosion and sedimentation controls:
1. All lots, tracts, or parcels shall be graded to provide positive drainage away from buildings, without ponding;
 2. Grading and cut-fill operations shall be kept to a minimum to ensure conformity with the natural topography, to minimize the erosion hazard and to adequately handle surface runoff;
 3. Natural drainage patterns shall be preserved wherever possible and desirable;
 4. Adequate provisions shall be made to prevent surface water from damaging the cut face of excavations and the sloping surfaces of fills;
 5. Cuts and fills shall not endanger adjoining property. Where cuts or fills are proposed adjacent to an adjoining property, a maximum slope of 3 to 1 (horizontal to vertical) shall be utilized to meet existing grade. The cut or fill slope shall begin no less than five (5) feet from the property line;
 6. Fill shall be mechanically compacted during placement to minimize sliding and erosion of the soil;

7. Fills shall not encroach on natural watercourses, flood plains or constructed channels;
8. Grading shall not be done in such a way as to divert water onto the property of another landowner without the written agreement of the adjoining landowner and approval of all written agreements by the Township Governing Body and the Township Solicitor;
9. During grading operations, necessary measures for dust control shall be exercised;
10. Grading equipment shall not cross live streams unless provisions are made for the installation of culverts or bridges.

Section 510 Public Open Space

- 510.1 In reviewing subdivision plans, the Township Planning Commission shall consider whether community facilities, especially schools, in the area are adequate to serve the needs of the additional dwellings proposed by the subdivision, and shall make such report thereon as it deems necessary in the public interest.
- 510.2 Subdividers shall give earnest consideration to the providing of both public and semipublic community facilities and the reserving of areas for facilities normally required in residential neighborhoods, including churches, libraries, schools, and other public buildings; parks, playgrounds and playfields; shopping and local business centers. Areas provided or reserved for such community facilities should be suitably prepared to provide for its end use at the expense of the subdivider. Prior to the preparation of plans, subdividers of large tracts should review with the Township Planning Commission the minimum standards for various community facilities applicable to the tract being subdivided.
- 510.3 During the review of subdivisions and/or land developments, the Township Planning Commission (after consultation with the Township Recreation Board if the subdivision/land development contains 40 or more dwelling units) shall consider and thereafter recommend to the Governing Body for final determination, the Township's need for either newly dedicated suitable open space areas for public recreation or the improvement of nearby existing public neighborhood recreation area or areas at the expense of the subdivider, or the private reservation of land, the payment of fees in lieu thereof, or a combination. The standards to be utilized by the Governing Body, the Township Planning Commission and the Township Recreation Board in deciding which of the aforesaid alternatives shall be in the best interest of the Township, shall be as follows:
 - A. (i) whether a public neighborhood recreation area exists or is planned within one (1) mile of all homes within the proposed subdivision and/or land development; (ii) whether an arterial street or road separates the nearby existing public recreation area and the proposed subdivision

and/or land development; and (iii) whether the nearby existing public recreation area adequately fulfills the recreational needs of the future residents of the proposed subdivision and/or land development.

- B. In the event it shall be determined that a new suitable open space area for public recreation is needed, the Governing Body shall request that the subdivider set aside and dedicate, for public recreation purposes, the following quantities of suitable open space areas based upon site density.

<u>Density</u> <u>(Dwelling Units Per Acre)</u>	<u>Percentage of Tract</u>
1 - 3	5%
3.1 - 6	10%
6.1 - 10	15%
10.1 - 15	20%
Over 15	25%

- C. In the event it shall be determined that a payment of fees shall be made by a subdivider in lieu of dedication of suitable open space, such fee shall be based upon a contribution to the Township of the sum as established by the Governing Body by resolution from time to time per new building lot or proposed dwelling unit in the subdivision where such lot does not then contain a presently existing and occupied dwelling unit.
- D. Monies contributed in lieu of dedication of suitable open space shall be deposited by the Township in an interest-bearing account, clearly identifying the specific recreation facilities for which the fee was received. Interest earned on such accounts shall become funds of that account. Funds from such accounts shall be expended only in properly allocable portions of the cost incurred to construct the specific recreation facilities for which the funds were collected. Upon request of any person who paid any such fees, the Township shall refund such fee, plus interest accumulated thereon from the date of payment, if the Township has failed to utilize the fee paid for the purposes set forth in this Section within three (3) years from the date such fee was paid.

Section 511 Solid Waste Management

- 511.1 Provision shall be made in land developments containing multi-family building units and commercial and industrial developments to adequately store within containers all solid wastes generated between collections.
- 511.2 All storage containers shall be located to permit efficient collection from the containers and such locations shall be noted on the plan.
- 511.3 All bulk storage containers shall be appropriately screened by plantings, fencing, walls, earth mounds or similar structures.

- 511.4 Debris, rubbish, or other waste material resulting from grading or construction activities on the lot shall be removed from the lot prior to the issuance of a certificate of use and occupancy for the lot. No debris, rubbish, or waste material shall remain within the area of an improvement covered by an improvement guarantee upon expiration of the guarantee or completion of the improvements, whichever is sooner.

Section 512 Community Assets

Consideration shall be shown for all natural features, such as large trees, which if preserved, will add attractiveness and value to the remainder of the subdivision. Trees shall be preserved wherever possible.

Section 513 Utility Easements

- 513.1 Easements with a width of twenty (20) feet shall be provided for poles, wires, conduits, storm and sanitary sewers, gas, water and heat mains and/or other utility lines intended to service the abutting lots. No structures or trees shall be placed within such easements.
- 513.2 To the fullest extent possible, easements shall be centered on rear or side lot lines. Along road frontage, the easement shall be that ten (10) foot width on the landowner's side of the ultimate right-of-way.
- 513.3 There shall be a minimum distance of fifty (50) feet measured in the shortest distance, between any proposed dwelling unit and any petroleum products or natural gas transmission line right-of-way which traverses the subdivision.
- 513.4 Where a gas or petroleum transmission line is a part of proposed development, whether proposed or requiring relocation, construction shall occur within a right-of-way width of fifty (50) feet minimum and shall comply with the applicable requirements of the Pennsylvania Public Utilities Commission regulations.
- 513.5 Electric distribution lines are required to be installed underground in all new residential developments of five (5) or more family units. This also applies to mobile home parks, apartment houses, and new houses. In compliance with these regulations and with the cooperation of local utility companies, the following procedure will be followed in reviewing plans subject to underground electric service:
- A. Upon filing a Preliminary Plan, a Sketch Plan of Record or a Final Plan (in the case of a subdivision along an existing road(s)), the subdivider shall forward a copy of the plan to the appropriate utility company if the development would fall subject to Section 513.5. This will apprise the utility company of the project status and indicate that the subdivider would be contacting them in the near future.
 - B. The subdivider shall obtain approval of plans for the underground electric system. Receipt of a letter from the utility company indicating

receipt of plans shall be required before Preliminary Plan approval. The subdivider shall also submit to the Township an approval letter from the utility company for the plans for the underground electric system prior to Township endorsement of any plan for recording. The responsibility for securing this approval and coordinating the plan with the utility company is the subdivider's or his representative's.

Section 514 Mobile Home Parks

Mobile home parks shall be considered subdivisions and shall comply with all the design standards and specifications found in this Ordinance.

514.1 Site Requirements

- A. The minimum area of a mobile home park shall be ten (10) acres.
- B. The site shall be free from adverse influence by swamps, marshes, garbage or rubbish disposal areas or other potential breeding places for insects or rodents.
- C. The site shall not be subject to flooding.
- D. The site shall not be subject to any hazard or nuisance, such as excessive noise, vibration, smoke, toxic matter, radiation, heat, odor or glare.

514.2 Area, Density, Width, Yard and Height Regulations for Mobile Homes and Accessory Structures within Mobile Home Parks

- A. Minimum Mobile Home Lot Size per Mobile Home
 - 1. Single-Width Mobile Home 5,000 sq. ft.
 - 2. Double-Width Mobile Home 10,000 sq. ft.
- B. Maximum Density of Mobile Homes (Dwelling Units) 7 dwelling units per acre
- C. Minimum Mobile Home Lot Width (Measured at the Minimum Building Setback Line) 40 feet
- D. Minimum Setback Line for Mobile Homes from property line of mobile home park and street line boundary 50 feet
- E. Front Yard Minimum (From streets internal to the mobile home park) 20 feet

- | | | | |
|----|--|-------------------|---------|
| F. | Minimum Side Yards: | Total | 20 feet |
| | | One Side | 10 feet |
| G. | Minimum Distance Between Mobile Homes and Service or Accessory Building or Common Parking Facility | | 30 feet |
| H. | Maximum Coverages | | |
| | 1. | Building Coverage | 30% |
| | 2. | Lot Coverage | 65% |
| I. | Maximum Height | | 35 feet |

514.3 Design Standards

A. General

1. All mobile home parks shall be served by a public or community sewage system and a public or community water supply system. Both shall be approved by the Pennsylvania Department of Environmental Protection.
2. The water supply shall be designed such that fire protection can be provided in accordance with National Fire Protection Association (NFPA) standards. Fire hydrants shall be located within six hundred (600) feet of any mobile home, service building or other structure in the park.
3. All mobile home parks shall be designed giving full consideration to the topographic and natural features of the site, including steep slopes, knolls, ponds, streams, basins and vegetation.
4. A minimum of ten (10) percent of the net area of the park shall be set aside as common open space, of which not more than fifty (50) percent shall consist of protected natural resources.
5. The common open space shall be a contiguous area located and designed for the maximum benefit of all residents of the park. It shall be suitable for its designated purpose and shall contain no structure or parking facility, except as related to and incidental to open space uses.
6. Common open space areas may be reserved for private use or offered to the Township for dedication. For land which is not dedicated to the Township, written agreements satisfactory to and approved by the Governing Body shall be made for the perpetual

preservation, management and maintenance of the indicated open space.

7. There shall be a minimum of two (2) off-street hard surface parking spaces for each mobile home. Each space shall be not less than ten (10) feet by twenty (20) feet.
8. All parks shall be furnished with lighting units so spaced and equipped with luminaires placed at such mounting heights as will provide adequate levels of illumination for the safe movement of pedestrians and vehicles at night.
9. Nothing contained in this Section shall be deemed as prohibiting the display for sale of a sample mobile home or sample mobile homes, each of which must be located on a mobile home site. For a phased park, a sample mobile home(s) may exist only in the two most current phases.

B. Street Layout and Construction

1. There shall be at least one (1) street in the park which is circumferential and from which lesser streets shall turn out so as to provide direct access to each lot and to each common space/area of the tract.
2. Cul-de-sac streets shall not exceed 500 feet in length and shall terminate in a turnaround having a 60-foot radius to the outer edge of the turnaround.
3. There shall be at least two (2) entrances from a public street into the park. Additional entrances may be approved by the Township if traffic conditions would warrant additional entrances.
4. Street design shall meet the requirements of this Ordinance.
5. All streets shall be hard surface and shall be constructed in accordance with Township specifications.

C. Entrance to Mobile Home Park

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

D. Stormwater Drainage.

1. The ground surface in all parts of the park shall be graded and equipped to drain all surface water in a safe, efficient manner.
2. Surface water collectors and other bodies of standing water capable of breeding mosquitoes and other insects shall be eliminated or controlled.
3. Waste water from any plumbing fixture or sanitary sewer line shall not be deposited upon the ground surface in any part of a mobile home park.
4. Stormwater drainage shall be in accordance with the requirements set forth in Appendix V herein.

E. Pedestrian Circulation System, Service and Accessory Buildings and Landscaping

1. All mobile home parks shall contain a pedestrian circulation system which shall be designed, constructed, and maintained for safe and convenient movement from all mobile home spaces to principal destinations within the park and, if appropriate, shall provide safe and convenient access to pedestrian ways leading to destinations outside of the park. "Principal Destinations" include such uses as recreation areas, service buildings, storage areas, common parking and management offices.
2. All pedestrian walks shall have a minimum width of four (4) feet.
3. All pedestrian walks shall be paved.
4. All service and accessory buildings, including management offices, storage areas, laundry buildings, and indoor recreation areas, shall conform to the requirements of the Township Building Code. Attachments to mobile homes in the form of sheds and lean-tos are prohibited.
5. The mobile home park shall have a structure designed and clearly identified as the office of the mobile home park manager.
6. Service and accessory buildings located in a mobile home park shall be used only by the occupants of the park and their guests.
7. Ground surfaces in all parts of a mobile home park must be paved or covered with grass or other suitable vegetation capable of preventing soil erosion and the emanation of dust.

8. Park grounds must be kept free of vegetative growth which is poisonous or which may produce pollen or harbor rodents, insects, or other pests harmful to man.

514.4 Solid Waste and Vector Control and Electric Distribution System

- A. The storage, collection, and disposal of solid wastes from the mobile homes shall be responsibility of the mobile home park operator.
- B. The storage, collection, and disposal of solid wastes must be conducted so as to prevent insect and rodent problems.
- C. All solid wastes must be stored in approved fly-tight, rodent-proof and water-tight containers, and these containers shall be maintained in a clean condition.
- D. Solid waste containers must be distributed throughout the mobile home park in adequate numbers so as to be readily accessible to the mobile home spaces in use.
- E. Exterior storage areas for solid wastes must be completely screened on three sides with evergreen plantings.
- F. Every mobile home park shall be provided with an electrical distribution system to which every mobile home and service building shall be connected. Such system and connections shall be installed, inspected, and maintained in accordance with the specifications and rules of the appropriate utility company, the Township, and the State. The appropriate electric utility shall inspect all transformers and underground connections to all mobile homes located within mobile home parks and shall attach its dated "tag-of-approval" to each mobile home at a visible location before any mobile home is occupied.
- G. Underground electric distribution lines are to be installed in all mobile home parks.

514.5 Mobile Home Installation

- A. The installation instructions provided by the manufacturer of the mobile home shall be used to determine permissible points of support for vertical loads and points of attachment for anchorage systems used to resist horizontal and uplift forces.
- B. Foundation Systems
 1. The foundation system design shall be based on the classification of the soil at the specific mobile home stand.
 2. Foundations shall in all cases extend below the frost line.

3. Provisions shall be made for the control and drainage of surface water away from the mobile home.

C. Ground Anchors

1. Ground anchors shall be designed and installed to transfer the anchoring loads to the ground. The load-carrying portion of the ground anchors shall be installed to the full depth called for by the manufacturer's installation directions and shall extend below the established frost line into undisturbed soil.
2. Each ground anchor, when installed, shall be capable of resisting an allowable working load at least equal to 3150 pounds in the direction of the tie plus a 50 percent overload (4725 pounds total) without failure. Failure shall be considered to have occurred when the anchor moves more than 2 inches at a load of 4725 pounds in the direction of the installation.
3. Anchors designed for connection of multiple ties shall be capable of resisting the combined working load and overload consistent with the intent expressed herein.
4. When it is proposed to use ground anchors and the Township has reason to believe that the soil characteristics at a given site are such as to render the use of ground anchors inadvisable, or when there is doubt regarding the ability of the ground anchors to obtain their listed capacity, the Township may require that a representative field installation be made at the site in question and tested to demonstrate ground anchor capacity.

D. Anchoring Equipment

1. Anchoring equipment shall be capable of resisting all loads as specified herein.
2. When the stabilizing system is designed by an engineer or architect licensed by the state to practice as such, alternative designs may be used, providing the anchoring equipment is capable of withstanding a load equal to 1.5 times the calculated load.
3. All anchoring equipment, tension devices and ties shall have a resistance to deterioration.
4. Tensioning devices such as turnbuckles or yoke-type fasteners shall be ended with clevis or welded eyes.

E. Ties, Materials and Installation

1. Steel strapping, cable, chain or other approved materials may be used for ties.
2. All ties shall be fastened to ground anchors and drawn tight with turnbuckles or other adjustable tensioning device or devices supplied with the ground anchor.
3. The materials shall be capable of resisting an allowable working load of 3150 pounds with no more than 2 percent elongation and shall withstand a 50 percent overload.
4. Ties shall connect the ground anchor and the main structural frame. Ties shall not connect to steel outrigger beams which fasten to and intersect the main structural frame unless specifically stated in the manufacturer's installation instructions.

F. Skirting

1. Skirting shall be material suitable for exterior exposure and contact with the ground.
2. Skirting shall be adequately secured to assure stability, to minimize vibration and susceptibility to wind damage, and to compensate for possible wind damage.

514.6 Required Permits and Application for Permits

- A. It shall be unlawful for any person to maintain, construct, alter, or extend any mobile home park within the Township unless he holds a valid Certificate of Registration issued by the Pennsylvania Department of Environmental Protection and a valid occupancy permit issued by the Township Governing Body.
- B. Proof that a valid Certificate of Registration from the Pennsylvania Department of Environmental Protection is held shall be submitted to the Township Secretary each year.
- C. Every person holding a Certificate of Registration shall file notice in writing to the Pennsylvania Department of Environmental Protection and the Township Secretary within ten (10) days after having sold, transferred, given away, or otherwise having disposed of interest in or control of any mobile home park.
- D. Mobile home parks in existence upon the effective date of this Ordinance shall be required to meet only the standards of the Pennsylvania Department of Environmental Protection, the Township Zoning Ordinance, and other applicable Township Ordinances, as a prerequisite to the issuing of an occupancy permit by the Township. The standards of the Department of Environmental Protection, the Township Zoning Ordinance, other applicable Township Ordinances,

and the standards prescribed in this Ordinance shall be met before an occupancy permit is issued by the Township for a mobile home park constructed or expanded after the effective date of this Ordinance.

- E. A representative of the Township may inspect a mobile home park at reasonable intervals and at reasonable times to determine compliance with this Ordinance.
- F. A copy of the occupancy permit for a mobile home park issued by the Township shall at all times be posted in the office of the mobile home park manager.
- G. Applications for Occupancy Permits for Mobile Home Parks shall be filed with the Township Secretary, using application forms available from the Township Secretary.
- H. Accompanying all applications for occupancy permits shall be three (3) copies of all information which was submitted to the Pennsylvania Department of Environmental Protection when an application for a Certificate of Registration from that body was filed.
- I. An application for an occupancy permit for a mobile home park shall be accompanied by three (3) copies of plans for the mobile home park and three (3) copies of any supplemental drawings which shall contain all information necessary to allow the Governing Body to determine that all the requirements of this Ordinance have been met.
- J. The Governing Body shall act on each application for an occupancy permit for a mobile home park and shall issue an occupancy permit if the application is approved, and if proof that the Pennsylvania Department of Environmental Protection has issued a Certificate of Registration is submitted to the Township. The occupancy permit shall be valid for a period of one year from the date it is issued.
- K. An annual permit fee shall be required for each mobile home park. An occupancy permit must be renewed each year and will not be renewed by the Township unless the annual permit fee is paid to the Township and the Township determines that all the standards of the Pennsylvania Department of Environmental Protection are met. In the case of mobile home parks constructed or expanded after the effective date of this Ordinance, the Township must also determine that the standards of this Ordinance are met.
- L. An application for renewal of an occupancy permit for a mobile home park must be submitted each year. Application forms shall be obtained from the Township Secretary. Only an application need be submitted when an occupancy permit is to be renewed. A plan of the mobile home park is not required when a permit is to be renewed.

- M. After the effective date of this Ordinance, before the area, number of mobile home spaces, road system, service facilities, sewer facilities, water facilities, or any other aspect of a mobile home park which is regulated by this Ordinance may be altered or expanded, this alteration or expansion must be approved by the Governing Body. Plans which indicate all proposed modifications shall be filed with the Township Secretary and the Township Secretary will submit the plans to the Governing Body.

514.7 Supervision of Park

- A. The person to whom an occupancy permit for a mobile home park is issued shall operate the park in compliance with this Ordinance and shall provide adequate supervision to maintain the park, its facilities, and equipment in good repair and in a clean and sanitary condition.
- B. A register containing the names of all park occupants, the make, model, and serial number of each mobile home, the date of arrival of each mobile home in the park, and the lot number upon which the mobile home is parked, and the date of departure from the park shall be maintained by the person to whom an occupancy permit for a mobile home park was issued. The register shall be available to any person whom the Governing Body authorize to inspect the park and shall be kept within the office of the mobile home park manager.
- C. A space within a mobile home park shall be rented for a period of one hundred eighty (180) days or more.
- D. Whenever the ownership or management of any mobile home park changes, the new owner or manager of the mobile home park shall notify the Township Secretary of the change.

514.8 Notices, Hearings and Orders

- A. Whenever, after inspection of any mobile home park, it is determined by the Governing Body that conditions or practices exist which are in violation of any provision of this Ordinance, the Township Secretary shall give notice in writing to the person to whom an occupancy permit for a mobile home park was issued, advising such person that unless such conditions or practices are corrected within a reasonable period of time specified within the notice, the permit to operate a mobile home park in the Township will be suspended. At the end of the specified period of time the mobile home park will be reinspected by the Governing Body and if the conditions or practices in violation of the Ordinance have not been corrected, the Governing Body shall suspend the occupancy permit and give notice in writing of such suspension to the person to whom the permit was issued.
- B. The written notice advising that conditions or practices exist which are in violation of this Ordinance and that these conditions or practices may

result in the suspension of an occupancy permit for a mobile home park shall:

1. be in writing,
 2. include a statement of the reasons for its issuance,
 3. allow a reasonable time for the performance of any act it requires,
 4. contain an outline of remedial action which, if taken, will effect compliance with the provisions of the Ordinance,
 5. be served upon the person to whom an occupancy permit for a mobile home park was issued.
- C. Any person affected by any notice which has been issued in connection with the enforcement of any provision of this Ordinance, or of any regulation adopted pursuant thereto, may request and shall be granted a hearing on the matter before the Governing Body provided that such person shall file with the Township Secretary a written petition requesting such hearing and setting forth a brief statement of the grounds for the request for the hearing within ten (10) days after the notice was served.
- D. Upon receipt of such petition, the Governing Body shall set a place and time for the hearing and shall give the petitioner written notice thereof. At the hearing the petitioner will be given an opportunity to show why the notice which was issued should be modified or withdrawn. The hearing shall be held not later than ten (10) days after the day on which the petition was filed. Upon written application by the petitioner, the Governing Body may waive this ten (10) day requirement when in their judgment the petitioner has submitted sufficient reasons for such a postponement.
- E. After the hearing has been held, the Governing Body shall make findings as to the compliance with the provisions of the Ordinance and shall issue an order in writing sustaining, modifying, or withdrawing the notice provided for in Section 514.7A of this Ordinance. Upon failure to comply with the conditions of the sustained or modified notice, the Governing Body shall suspend the occupancy permit for the mobile home park in question and give notice in writing of such suspension to the person to whom the permit was issued.
- F. Any person aggrieved by the decision of the Governing Body may seek relief in any court of competent jurisdiction, as provided by the laws of the Commonwealth of Pennsylvania.

Section 515 Emergency Access

For all subdivisions and land developments for which only one means of ingress and egress is proposed, the Township may require, where feasible and deemed necessary in the public interest, the provision of an alternate means of ingress and egress which could be used by emergency vehicles if the primary means of ingress and egress were rendered unusable. The alternate means of ingress and egress shall be of such width and improved to such an extent to be usable by emergency vehicles, and shall not be used for structures or landscaping.

Section 516 Traffic Impact Study

516.1 A Traffic Impact Study shall be submitted by the subdivider in the following instances:

- A. A residential subdivision or land development which has or will accumulate to fifty (50) or more lots and/or dwelling units.
- B. A non-residential subdivision of five (5) or more lots.
- C. A non-residential land development containing 20,000 square feet or more of gross floor area.
- D. Any non-residential land development within one quarter (1/4) mile of an intersection involving an arterial road or two collector roads.

Provided that the Governing Body reserves the right to require a traffic study for any subdivision or land development other than a minor residential subdivision, lot annexation, abbreviated residential subdivision, or plan for revision to lot lines when the Governing Body deems such a study necessary to adequately review the impact of the subdivision or land development on existing and proposed roads in accordance with this Section.

516.2 Qualifications of Person Preparing the Study

- A. The Traffic Impact Study shall be prepared by a qualified professional traffic engineer or traffic planner with verifiable experience in preparing such studies.

516.3 Study Area

- A. The study area for the traffic study shall be based on engineering judgment and an understanding of existing traffic conditions at the site and represent the area which is likely to be affected by the development. The study limits shall be initially agreed upon by the subdivider, his engineer, and the Township.

516.4 The Traffic Impact Study shall contain the following elements:

- A. The study area boundary and identification of the roadways included within the study area.
- B. A general site description, including:
 - 1. Size, location, existing and proposed land uses and dwelling types, construction staging, and completion date of the proposed development.
 - 2. Existing land uses, approved and recorded subdivisions and land developments and subdivisions and land developments proposed but not yet approved and recorded in the study area that are agreed upon by the Township, developer, and traffic engineer as having bearing on the development's likely impact shall be described and considered.
 - 3. Within the study area, the applicant must describe existing roadways and intersections (geometrics and traffic signal control) as well as improvements contemplated by government agencies or private parties.
- C. Analysis of Existing conditions, including:
 - 1. Daily and Peak Hour(s) Traffic Volumes. Schematic diagrams depicting daily and peak hour(s) traffic volumes shall be presented for roadways within the study area. Turning movement and mainline volumes shall be presented for the three peak hour conditions (AM, PM, and site generated) while only mainline volumes are required to reflect daily traffic volumes. The source and/or method of computation for all traffic volumes shall be included.
 - 2. Volume/Capacity Analyses at Critical Points. Utilizing techniques described in the Highway Capacity Manual Transportation Research Board Special Report 209 (latest edition) or derivative balance between roadway volumes and capacity are to be described. The analysis shall be performed for existing conditions (roadway geometry and traffic signal control) for the appropriate peak hours.
 - 3. Level of Service at Critical Points. Based on the results obtained in the previous section, levels of service (A through F) shall be computed and presented. Included in this section shall also be a description of typical operating conditions at each level of service.
 - 4. A tabulation of accident locations during the most recent three-year period shall be provided.

- D. Analysis of future conditions without the proposed development. The future year(s) for which projections are made will be specified by the Township and will be dependent on the timing of the proposed development. The following information shall be included.
1. Daily and Peak Hour(s) Traffic Volumes. This section shall clearly indicate the method and assumptions used to forecast future traffic volumes. The schematic diagrams depicting future traffic volumes shall be similar to those described in Section 516.4C.1 in terms of location and times (daily and peak hours).
 2. Volume/Capacity Analyses at Critical Points. The ability of the existing roadway system to accommodate future traffic (without site development) shall be described in this section. If roadway improvements or modifications are committed for implementation, the volume/capacity analysis shall be presented for these conditions.
 3. Levels of Service at Critical Points. Based on the results obtained in the previous section, levels of service (A through F) shall be determined.
- E. Trip Generation. The amount of traffic generated by the site shall be presented in this section for daily and the three peak hour conditions. The trip generation rates used in this phase of the analysis shall be justified and documented to the satisfaction of the Governing Body. Trip Generation (Fourth or latest edition) published by the Institute of Transportation Engineers shall be used unless the Governing Body approves other studies.
- F. Trip Distribution. The direction of approach for site generated traffic shall be presented in this section for the appropriate time periods. As with all technical analysis steps, the basic method and assumptions used in this work shall be clearly stated in order that the Township can replicate these results.
- G. Traffic Assignment. This section shall describe the utilization of study area roadways by site generated traffic. The proposed traffic volumes shall then be combined with anticipated traffic volumes from Section 516.4D to describe mainline and turning movement volumes for future conditions with the site development as the applicant proposes.
- H. Analysis of Future Conditions with Development. This Section shall describe the adequacy of the roadway system to accommodate future traffic with development of the site.

Any unique characteristics of the site or within the study area (i.e., weekend tourists and antique sales, or holiday shopping) affecting traffic shall be considered. If staging of the proposed development is anticipated, analysis for each stage of completion shall be made.

The following information shall be included:

1. Daily and Peak Hour(s) Traffic Volumes, Mainline and turning movement volumes shall be presented for the highway network in the study area as well as driveways and internal circulation roadways for the appropriate time periods.
 2. Volume/Capacity Analysis at Critical Points. Similar to Sections 516.4C.2 and 516.4D.2, a volume/capacity analysis shall be performed for the appropriate peak hours for future conditions with the site developed as proposed.
 3. Levels of Service at Critical Points. As a result of the volume/capacity analysis, the level of service on the study area roadway system shall be computed and described in this section.
- I. Recommended Improvements. In the event that the analysis indicates unsatisfactory levels of service (levels of service D, E, or F) as described in Highway Capacity Manual, Transportation Research Board Special Report 209 (latest edition) will occur on study area roadways, a description of proposed improvements to remedy deficiencies shall be included in this section. These proposals would not include committed projects by the Township and State which were described in Section 516.4B.3 and reflected in the analysis contained in Sections 516.4C and 516.4D.

The following information shall be included:

1. Proposed Recommended Improvements. This section shall describe the location, nature and extent of proposed improvements to assure sufficient roadway capacity. Accompanying this list of improvements shall be preliminary cost estimates.
 2. Volume/Capacity Analysis at Critical Points. Another iteration of the volume/capacity analysis shall be described which demonstrates the anticipated results of making these improvements.
 3. Levels of Service at Critical Points. As a result of the revised volume/capacity analysis presented in the previous Sub-Section, levels of service for the highway system with improvements shall be presented.
- J. Conclusion. The last section of the report shall be a clear, concise description of the study findings. This concluding section shall serve as an executive summary.

Section 517 Required Studies to be Submitted by the Subdivider

517.1 The impact studies listed below shall be submitted to the Township in the following instances:

- A. A residential subdivision or land development which has or will accumulate to fifty (50) or more lots and/or dwelling units.
- B. A non-residential subdivision of five (5) or more lots.
- C. A non-residential land development containing 20,000 square feet or more of gross floor area.

Provided that the Governing Body reserves the right to require impact studies for any subdivision or land development other than a minor residential subdivision, lot annexation, abbreviated residential subdivision, or plan for revision to lot lines when the Governing Body deem such a study necessary to adequately review the impact of the subdivision or land development.

517.2 Utilities Impact Study

A study shall be prepared by a registered professional engineer indicating the impact of the proposed development on the existing sanitary sewer, water, solid waste, and drainage systems serving the Township. Said impact study shall identify the existing capacity of facilities which would serve the development, the prospects of those facilities being able to provide service to it, and any improvements that might be required as a direct result of the proposed development. Additionally, the study shall identify the likely ability of sanitary sewer, water, solid waste, and drainage systems to continue to provide efficient and economic service to existing residents and businesses within the Township considering added service requirements of the proposed development.

517.3 Recreation Impact Study

The study shall analyze the demand for recreational facilities which the proposed development will generate and determine whether adequate facilities exist or are planned or proposed. As a minimum, the study shall include the following:

- A. A description of the projected age breakdown of the residents of the proposed development.
- B. A description of any recreational facilities to be provided by the developer.
- C. A description of existing municipal recreational facilities and the impact of the proposed development on these facilities. Accepted national standards for required recreation shall be used in the analysis.

- D. Discussion of potential for any recreational facilities to be provided by the developer to compensate for any anticipated deficiencies of the Township's recreational facilities.
- E. A description of any contributions the developer plans to make for Township recreation to compensate for expected impacts.

517.4 Fiscal Impact Analysis

A fiscal impact analysis shall be prepared identifying the likely impact of the development on the Township's and the School District's tax structures and expenditure patterns. Included shall be a determination of the revenues to accrue to the Township and School District as a result of a proposed development, as well as an identification of the costs associated with delivering services to the proposed development. The fiscal impact analysis shall deal with the impact of the proposed development on the ability of the Township to deliver fire, police, administrative, public works and utility services to the development and on the Township's economy. In order to prepare the analysis, the applicant shall utilize a methodology from The New Guide to Fiscal Impact Analysis (Rutgers Center for Urban Policy Research, 1985, as modified from time to time), adapted as appropriate and to the Township's satisfaction.

- A. Public Works. This includes potential effects on the maintenance, repair and upkeep of roads, signal systems, sanitary sewer, water and drainage systems, open space and recreation areas or any other applicable function. This study shall address projected cost increases for the above mentioned items in terms of administration, personnel, equipment and materials.
- B. Administration. This includes time that would be required by the Governing Body, Secretary, and other staff to process the application and handle the project during construction, as well as long term administration demands. This should include, but not be limited to, the handling of: plans, contracts, various legal instruments or agreements, permits, special problems, and escrow. Added demands on the code administration staff also shall be projected.
- C. Fire and Emergency Services. The analysis shall incorporate the development's impact on fire company capabilities, including but not limited to, municipal water supply, pumping capacity, specialized equipment and training requirements.
- D. Police. The study shall project the overall effects of the proposed development on existing Township police personnel numbers, equipment, vehicles and working space. The study shall include whatever facilities or assistance the development will provide to handle emergencies, criminal investigation, armed robbery, or other security-related problems.

517.5 Environmental Impact Study

The study shall include the following impacts:

- A. Habitats of Threatened and Endangered Species of Special Concern in Pennsylvania within the tract, as established by the Pennsylvania Biological Survey and/or Pennsylvania Natural Diversity Inventory, shall be identified and the impact on such resources detailed.

If such habitats exist on the tract, the measures proposed to protect the habitats shall be indicated.

- B. The suitability of the site for the intensity of use proposed by the site's soils, slopes, woodlands, wetlands, flood plains, aquifers, natural resources and other natural features.
- C. The impact of the proposed use on the site's soils, slopes, woodlands, wetlands, flood plains, natural resources and natural features, the degree to which these are protected or destroyed, the tolerance of the resources to development and any adverse environmental impacts; and
- D. The impact of the proposal and the preservation of agriculture and other land uses which are essential to public health and welfare.

517.6 Hydrogeologic Impact Study

Those applications proposing the use of a public or community well(s) shall require the preparation of hydrogeologic study. Such study shall be conducted by a qualified hydrogeologist and shall consist of the following minimum considerations:

- A. A map showing the location of the site and proposed well(s).
- B. A description of the geologic conditions on and around the site, including factors which would affect the groundwater recharge rate and the degree of groundwater renovation. Site geology, including stratigraphy, structure, and soils shall be analyzed. Hydrogeology, including aquifer characteristics, groundwater movement, local water use, aquifer yield, and water quality shall be analyzed. Groundwater impacts, availability of groundwater, well interference, water quality, and yield availability shall be analyzed.
- C. Should it be determined that the proposed use(s) would result in a degradation of groundwater quality, or eliminate the potential groundwater use at nearby properties, the study shall present measures that will be employed to prevent these adverse impacts.
- D. Results of a test well, including quality of water and flow rate.

ARTICLE VI IMPROVEMENT SPECIFICATIONS

Section 601 General Requirements

Physical improvements to the property being subdivided or developed shall be provided, constructed, and installed as shown on the Record Plans, in accordance with the requirements of this Ordinance or other Municipal Ordinances or Regulations, whichever is more restrictive.

601.1 As a condition to review of a Final Plan by the Municipal Planning Commission and the Governing Body, the subdivider shall agree with the Municipality as to the installation of all improvements shown on the Plan and required by this Ordinance or other Municipal Ordinances or Regulations. Before the Record Plan is endorsed by the Governing Body, the subdivider shall submit an executed original copy of an agreement with the Municipality as to the responsibilities and obligations for improvements under the provisions of this Ordinance. Such agreement shall be in form and content satisfactory to the Municipal Solicitor and shall be recorded if deemed appropriate by the Municipality.

601.2 All improvements installed by the subdivider or developer shall be constructed in accordance with the design specifications of the Municipality including any promulgated by a Municipal Authority.

Where there are no applicable Municipal specifications, improvements shall be constructed as determined by the Municipality, in accordance with the specifications of the Municipal Engineer, County Engineer, Pennsylvania Department of Transportation, Pennsylvania Department of Environmental Protection, Pennsylvania Department of Forests and Waters, or such other State agency as applicable. If there are not applicable Municipal or State regulations, the Municipality may authorize that specifications be prepared by the Municipal Engineer or an Engineering Consultant at the expense of the Owner or Developer.

601.3 Supervision of the installation of the required Municipal improvements shall in all cases be the responsibility of the Municipality or of the appropriate state regulatory agency, at the expense of the Owner or Developer. It shall be the responsibility of the Developer to give the Municipality sufficient notice of the time of installation of municipal improvements in order that the Municipal Engineer may supervisor said installation.

Section 602 Required Improvements

The following improvements, as shown on the Record Plans, shall be provided by the subdivider in all subdivisions.

602.1 Street Grading: All streets shall be graded to the full right-of-way width.

602.2 Cartway Paving: All streets shall be paved to full cartway width (as shown on the Final Plan) and as required by Section 502.3 of this Ordinance, as more

fully described in Construction Standard attached as Appendices A and D to Subdivision Ordinance.

602.3 Curbs: Curbs shall be installed along both sides of all streets, except along service streets in accordance with Township Ordinances. Curbs shall be either the vertical type, or rolled curb-and-gutter type, except that rolled curbs shall not be used on streets whose grade exceeds six (6) percent, or on any collector or major streets. The transition from one type of curb to another shall be made only at a street intersection. Adequate provision shall be made for driveway entrances. Construction of said curbs to conform to Construction Standard attached as Appendix B to Subdivision Ordinance.

602.4 Sidewalks:

- A. Sidewalks shall be a minimum width of four (4) feet and shall be installed on both sides of all streets except that no sidewalks shall be required along service streets and where required, sidewalks shall be installed on only one (1) side of marginal access streets.
- B. All sidewalks, curbs and gutters shall be installed in accordance with these regulations and with Township curb, gutter and sidewalk Ordinance, as more fully described in Construction Standard attached as Appendix C to Subdivision Ordinance.

602.5 Driveways: All driveways shall be installed in accordance with the Greenwich Township Private Driveway Standard Ordinance and the Pennsylvania Department of Transportation requirements (when applicable).

602.6 Sewers

- A. Storm Sewers: Storm sewers and related facilities shall be installed consistent with the design principles and requirements contained in Article V of this Ordinance and Appendix V herein.
- B. Sanitary Sewage Disposal System(s):
 - 1. Sanitary sewage disposal systems shall be consistent with the design standards and requirements contained in Article V of this Ordinance.
 - 2. The design and installation of a public sanitary sewage disposal system shall be subject to the approval of the Municipal Engineer and the Municipal Authority.
 - 3. Whenever a subdivider proposes that individual on-site sanitary sewage disposal systems shall be utilized within the subdivision, the subdivider shall either install such facilities or shall require (by deed restriction or otherwise), as a condition of the sale of each lot or parcel within the subdivision, that such facilities shall be installed by the purchaser of such lot or parcel at the time that a

principal building is constructed and in accordance with this Ordinance.

4. In all other cases, the subdivider shall provide a complete community or public sanitary sewage disposal system. The design and installation of such public system shall be subject to the approval of the Municipal Engineer and the Municipal Authority. The design and installation of such community distribution system shall be subject to the approval of the Pennsylvania Department of Environmental Protection and such system shall be further subject to satisfactory provision for the maintenance thereof.
5. Where studies by the Municipal Planning Commission or a Municipal Authority indicate that construction or extension of sanitary trunk sewers to serve the property being subdivided or developed appears probable within a reasonably short time (up to five years), the Municipal Planning within a reasonably short time (up to five years), the Municipal Planning Commission and the Governing body shall require the installation and capping of sanitary sewer mains and house connections, in addition to the installation of temporary, individual, on-site sanitary sewage disposal systems. It shall, however, be the responsibility of the Municipality to supervise the design and installation of such capped sewers, and the acceptance of such responsibility shall be a prerequisite to the Municipal Planning Commission and Governing Body's requirements of such installation.

602.7 Water Supply

- A. Water supply system(s) shall be installed consistent with design principles and requirements contained in Article V of these regulations.
- B. Where the subdivider proposes that individual on-site water supply systems shall be utilized within the subdivision, the subdivider shall either install such facilities or shall require (by deed restriction or otherwise), as a condition of the sale of each lot or parcel within the subdivision, that the facilities shall be installed by the time that a principal building is constructed and in accordance with these regulations.
- C. Wherever economically feasible, the subdivision shall be provided with a complete public or community water distribution system. The design and installation of such public system shall be subject to the approval of the Municipal Engineer or the Municipal Authority's Engineer, whichever is appropriate; the design and installation of such community distribution system shall be subject to the approval of the Pennsylvania Department of Environmental Protection and such system shall be further subject to satisfactory provision for the maintenance thereof.

602.8 Fire Hydrants: Wherever a public water system is provided, fire hydrants suitable for the coupling of equipment servicing the Municipality shall be installed within six hundred (600) feet of all existing and proposed structures, measured by way of accessible streets (as specified by the Middle Department Association of Fire Underwriters). Locations of hydrants shall be approved by the Fire Company officials serving the Municipality and by the Engineer of the Municipality.

602.9 Monuments:

- A. Monuments shall be accurately placed (where missing) at the intersection of all lines forming angles and at changes in directions of lines in the boundary (perimeter) of the property being subdivided. The Municipal Engineer shall inspect the placement of such monuments.
- B. All monuments shall be placed by a registered surveyor so that the scored (by an indented cross or drill hole at not more than one-quarter (1/4) inch diameter in the top of the monument) point shall coincide exactly with point of Intersection of the lines being monumented.
- C. Monuments shall be set with the top level with the finished grade of the surrounding ground, except:
 - 1. Monuments which are placed within the lines of existing or proposed sidewalks shall be so located (preferably beneath the sidewalks) that their tops will not be affected by lateral movement of the sidewalks.
 - 2. Where monuments are located beneath a sidewalk, proper access shall be provided for their use.
- D. All streets shall be monumented at the right-of-way lines of the street and at the following locations:
 - 1. At least one monument at each intersection.
 - 2. At changes in direction of street lines, excluding curb arcs at intersections.
 - 3. At each end of each curbed street line, excluding curb arcs at intersections.
 - 4. At such places where topographical or other conditions make it impossible to sight between two otherwise required monuments, intermediate monuments shall be placed.
 - 5. At such other places along the line of streets as may be determined by the Municipal Engineer to be necessary so that any street may be readily defined in the future.

E. Metal markers shall be placed at all lot corners.

602.10 Street and Traffic Signs: Street name and traffic signs shall be installed at all street intersections. The design and placement of street signs shall be in accordance with Municipal standards.

A. The design and placement of traffic signs shall be in accordance with PennDOT standards. The cost of all signs shall be borne by the subdivider.

Section 603 Recommended Improvements

The following improvements, intended to enhance the sales values of the subdivisions as well as to benefit the Municipality are recommended:

603.1 Street Lights: In accordance with the conditions to be agreed upon by the subdivider, the Municipality, and the appropriate public utility, street lights are recommended to be installed in all subdivisions. However, whether or not street lights are initially installed, the developer shall be responsible for providing utility easements for future street lighting installation upon consultation with the public service utility company involved.

603.2 Shade Trees: Reasonable efforts should be made by the subdivider to preserve existing shade trees and, in addition, deciduous hardwood trees with a minimum caliber of one and one-half (1½) inches should be provided in accordance with conditions to be agreed upon by the Municipality, and if necessary, the appropriate public utility. Where provided, such trees should be planted between the street right-of-way and the building reserve (setback) line at least ten (10) feet from the public street right-of-way. No trees or shrubs shall be planted between the sidewalk and the right-of-way line.

A. Any tree planted in commercial or industrial areas shall have a minimum caliber of three (3) inches.

B. A street planting plan shall be furnished for approval by the Township as to kind, size, and location of trees.

ARTICLE VII ADMINISTRATION, AMENDMENT, SEVERABILITY

Section 701 Revision and Amendment

- 701.1 The Governing Body may, from time to time on its own motion revise, modify, or amend this Ordinance in order to increase its effectiveness or to expedite the approval of land subdivision and/or land development plans.
- 701.2 Any revisions, modifications, or amendments to this Ordinance shall be made in accordance with the procedures established by law, after a public hearing on the proposed revisions, modifications, or amendments, held pursuant to public notice in accordance with the provision of Section 505 of Act 247, as amended, or any amendments thereto.

Section 702 Modifications

The provisions of this Ordinance are intended as minimum standards for the protection of the public health, safety, and welfare of the residents and inhabitants of the Municipality. The Municipality reserves the right, in unusual situations, to modify or to extend them conditionally in individual cases as may be necessary in the public interest, provided, however, that such variation shall not have the effect of nullifying the intent and purpose of these regulations. The list of such modifications and the reasons for them shall be entered in the minutes of the Municipal Planning Commission or Governing Body, and a copy of this entry shall be transmitted to the Municipal Secretary. Modifications shall be clearly defined and entered on the Record Plan and signed by the Governing Body.

Section 703 Appeals and Challenges

All appeals and challenges shall conform to the requirements and procedures as outlined in the Pennsylvania Municipalities Planning Code, as amended.

Section 704 Fees

- 704.1 The Governing Body shall establish, by resolution, a collection procedure and Schedule of Fees to be paid by the Subdivider or Developer at the time of filing a Sketch, Preliminary and Final Plan.
- 704.2 The Schedule of Fees shall be available in the municipal office, upon request.
- 704.3 In the event the subdivider or developer is required to pay additional fees at the filing of the Final Plan, such fees shall be collected by the Municipal Secretary prior to distributing the Final Plan. There shall be no refund or credit of any portion of the fee should the subdivider fail to apply for final approval within the required period of time or if the Final Plan covers only a section of the subdivision or land development for which Preliminary Approval has been obtained.

- 704.4 No Final Plan shall be approved unless all fees and charges have been paid in full.

Section 705 Penalties

- 705.1 No person, partnership or corporation shall subdivide any lot, tract or parcel of land, lay out, construct, open or dedicate any street, sanitary sewer, storm sewer or water main or other improvements for public use, travel or for the common use of occupants for buildings abutting thereon, sell, lease, transfer or agree or enter into an agreement to sell any land in a subdivision or erect any building in a subdivision until (a) a Record Plan of such subdivision shall have been approved and properly recorded, (b) improvements have been either constructed or guaranteed and (c) all of the provisions of this Ordinance have been complied with.

- 705.2 Any person, partnership or corporation who or which has violated any provision of this Ordinance shall, upon being found liable therefor in a civil enforcement proceeding commenced by the Township, pay a judgment of not more than \$500.00 plus all court costs, including reasonable attorney's fees incurred by the Township as a result thereof. No judgment shall commence or be imposed, levied or payable until the date of the determination of a violation by a district justice. If the violator neither pays nor timely appeals the judgment, the Township may enforce the judgment pursuant to applicable rules of civil procedure. Each day that violation continues shall constitute a separate violation, unless the district justice determining that there has been a violation further determines that there was a good faith basis for the person, partnership or corporation violating the Ordinance to have believed that there was no such violation, in which event there shall be deemed to have been only one such violation until the fifth day following the date of the determination of each violation by the district justice and thereafter each day that a violation continues shall constitute a separate violation. All judgments, costs and reasonable attorney's fees collected for the violation of this Ordinance shall be paid over to the Township.

The court of common pleas, upon petition, may grant an order of stay, upon cause shown, tolling the per diem fine pending a final adjudication of the violation and judgment.

- 705.3 In addition to other remedies, the Township may institute and maintain appropriate actions by law or in equity to restrain, correct or abate violations, to prevent unlawful construction, to recover damages, to prevent illegal occupancy of a building, structure or premises and to set aside and invalidate any unlawful conveyances of land. 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.
- 705.4 The Township may refuse to issue any permit or grant any approval necessary to further improve or develop any real property which has been developed or

which has resulted from a subdivision of real property in violation of this Ordinance. Such refusal shall apply to any of the following applicants:

- A. The owner of record at the time of such violation.
- B. The vendee or lessee of the owner of record at the time of such violation without regard as to whether such vendee or lessee had actual or constructive knowledge of the violation.
- C. The current owner of record who acquired the property subsequent to the time of violation without regard as to whether such current owner had actual or constructive knowledge of the violation.
- D. The vendee or lessee of the current owner of record who acquired the property subsequent to the time of violation without regard as to whether such vendee or lessee had actual or constructive knowledge of the violation.

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

- 705.5 Nothing herein shall prevent the Municipality from taking such other action necessary to prevent or remedy any violation.

Section 706 Keeping of Records

The Municipal Planning Commission and the Governing Body shall keep a record of their findings, decisions, and recommendations relative to all subdivision or land development plans filed for review. Such records shall be made available to the public for review.

Section 707 Responsibility

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

Section 708 Conflicts

- 708.1 Whenever there is a difference between the minimum standards specified herein and those included in other Municipal Ordinances or regulations the more stringent requirements shall apply.
- 708.2 All existing ordinances or regulations or parts thereof which are contrary to the provisions of this Ordinance are hereby repealed to the extent necessary to give this Ordinance full force and effect.

Section 709 Severability

Should any article, section, subsection, paragraph, clause, phrase, or provision of this Ordinance be declared by a court of competent jurisdiction to be invalid, such judgment shall not affect the validity of the Ordinance as a whole or any part or provision thereof other than the part so declared to be invalid or unconstitutional.

Section 710 Effective Date

This Ordinance shall become effective 10 days after same shall have been adopted by the Governing Body.

DULY ENACTED AND ORDAINED by the Governing Body of Greenwich Township, Berks County, Pennsylvania, this 2nd day of January 1996, in lawful session duly assembled.

Greenwich Township Governing Body

Attested:

Secretary

**FORMS,
APPENDICES
AND
STANDARDS**

APPENDICES

The following forms, appendices and standards have been adopted by ordinance by the Governing Body to assist in the administration of this Ordinance and are subject to revision from time to time by further resolution of the Governing Body. A list of additional applicable ordinances is available from the Township Secretary.

FORM SLD-1

APPLICATION FOR REVIEW OF
SKETCH SUBDIVISION/LAND DEVELOPMENT PLAN

Application is hereby made for review of the Sketch Subdivision/Land Development submitted plan herewith and more particularly described below:

1. Name of Applicant(s): _____
Address: _____
_____ Phone No.: _____
2. Name of Owner(s): _____
(If other than Applicant)
Address: _____
3. Applicant's interest, if other than owner: _____
4. Location of Subdivision: _____

5. Surveyor responsible for plan: _____
Address: _____
_____ Phone No.: _____
6. Total Acreage: _____ Number of Lots: _____
7. Acreage being subdivided: _____ Minimum lot area: _____ Sq. Ft.
8. Lot use proposed: Single Family _____ Commercial _____
Two Family _____ Industrial _____
Townhouse _____ Other (specify) _____
Multi-Family _____
9. Zoning Classification: _____
Zoning changes to be requested: _____

FORM SLD-1

10. Type of water supply proposed: **APPLICATION FOR REVIEW OF SKETCH SUBDIVISION/LAND DEVELOPMENT PLAN**

Public System _____

Community System _____

Application is hereby made for review of the Sketch Subdivision/Land Development submitted plan herewith and more particularly described below:

11. Type of sanitary sewage disposal proposed: _____

1. Name of Applicant(s): _____

Public System _____

Live _____

Capped _____

Phone No.: _____

Community System _____

Individual On-Site _____

2. Name of Owner(s): _____
(septic tank & tile field)

(If other than Applicant)

Address: _____

12. Type of off-street parking proposed: _____

3. Applicant's interest, if other than owner: _____

Garages _____

Driveways _____

4. Location of Subdivision: _____

Other _____

13. List proposed improvements: _____

5. Surveyor responsible for plan: _____

2. Address: _____

3. _____

14. Date of Plan: _____

Phone No.: _____

6. Total Acreage: _____

Number of Lots: _____

7. Acreage being subdivided: _____

Minimum lot area: _____

Sq. Ft.

8. Lot use proposed: Single Family _____

Commercial _____

Two Family _____

Industrial _____

Townhouse _____

Other (specify) _____

Multi-Family _____

9. Zoning Classification: _____

Zoning changes to be requested: _____

FORM SLD-2

APPLICATION FOR REVIEW OF
PRELIMINARY SUBDIVISION/LAND DEVELOPMENT PLAN

Application is hereby made for review of the Preliminary Subdivision or Land Development Plan submitted herewith and more particularly described below:

1. Name of Subdivision: _____ Plan Dated: _____
County Deed Book No.: _____ Page No.: _____
2. Name of Applicant(s): _____
Address: _____
_____ Phone No.: _____
3. Name of Property Owner(s): _____
(if other than applicant)
Address: _____
_____ Phone No.: _____
4. Applicant's interest if other than owner: _____
5. Surveyor responsible for plan: _____
Address: _____
_____ Phone No.: _____
6. Total Acreage: _____ Number of Lots: _____
7. Acreage of adjoining land in same ownership (if any): _____
8. Lot use planned: _____ Single Family _____ Commercial
_____ Two Family _____ Industrial
_____ Townhouse _____ Other (specify)
_____ Multi-Family _____
9. Will construction of buildings be undertaken immediately? _____ Yes _____ No
By Whom? _____ Subdivider
_____ Other Developers
_____ Purchasers of Individual Lots
10. Type of water supply planned:
_____ Public System
_____ Community System
_____ Individual On-Site

11. Type of sanitary sewage disposal planned:

_____ Public System
_____ Live
_____ Capped
_____ Community System
_____ Individual On-Site

12. Type of off-street parking planned:

_____ Garages
_____ Driveways
_____ Other (Specify)

13. Lineal feet of new streets planned: _____

14. Are all streets proposed for dedication? _____ Yes _____ No

15. Deed restrictions that apply or are contemplated. (If no restrictions, state "None", if "yes" attach copy.): _____

16. Acreage proposed for parks or other public use: _____

17. Zoning Classification: _____

Zoning Changes to be Requested: _____

18. Have appropriate public utilities been consulted? _____ Yes _____ No

19. List proposed improvements and utilities and intentions to install or post performance guarantee prior to final endorsement by the Township:

	<u>Improvement</u>	<u>Intention</u>
1.		
2.		
3.		
4.		
5.		

20. List maps and other material accompanying application and number of each:

	<u>Item</u>	<u>Number</u>
a.		
b.		
c.		
d.		
e.		
f.		

Date: _____

Signature of Applicant

FORM SLD-3

APPLICATION FOR REVIEW OF
FINAL SUBDIVISION/LAND DEVELOPMENT PLAN

Application is hereby made for final approval of the Final Subdivision or Land Development Plan submitted herewith and more particularly described in the accompanying maps and documents:

1. Name of Subdivision: _____ Plan Dated: _____
County Deed Book No.: _____ Page No.: _____
2. Name of Applicant(s): _____
Address: _____
_____ Phone No.: _____
3. Name of Property Owner(s): _____
(if other than applicant)
Address: _____
_____ Phone No.: _____
4. Date of approval of Preliminary Plan: _____
5. Final Plan follows exactly the approved Preliminary Plan: _____ Yes _____ No
If no, list changes: _____

6. List maps and other documents accompanying application and the number of each:

	<u>Item</u>	<u>Number</u>
a.		
b.		
c.		
d.		
e.		
f.		
g.		
h.		

Date: _____

Signature of Applicant

**FORM SLD-4
IMPROVEMENTS AGREEMENT**

In consideration of the mutual covenants contained herein, it is hereby agreed between the Governing Body of the Township of Greenwich, and _____, the subdivider of the property shown on the plan of _____, dated _____, 19____, that in accordance with municipal requirements and specifications, the responsibility for the provision of the improvements shown on the plan will be as follows:

<u>Improvement</u>	<u>Subdivider</u>	<u>To be provided by Municipality</u>	<u>Other (Specify)</u>
Street Grading	_____	_____	_____
Street Base	_____	_____	_____
Street paving	_____	_____	_____
Curbs	_____	_____	_____
Sidewalks	_____	_____	_____
Storm sewer facilities	_____	_____	_____
Sanitary sewers:			
Trunk lines	_____	_____	_____
Mains	_____	_____	_____
House connections	_____	_____	_____
On-site sewage facilities	_____	_____	_____
Water mains	_____	_____	_____
On-site water supply	_____	_____	_____
Fire hydrants	_____	_____	_____
Street monuments	_____	_____	_____
Street name signs	_____	_____	_____
Street lights	_____	_____	_____
Other _____	_____	_____	_____
Other _____	_____	_____	_____
Other _____	_____	_____	_____
Supervision of all installations	_____	_____	_____

(witness)

(signature of subdivider)

(Supervisor, Chairman)

(Supervisor)

(witness)

(Supervisor)

APPENDIX I
CERTIFICATION OF OWNERSHIP, ACKNOWLEDGEMENT OF PLAN,
AND OFFER OF DEDICATION

The following certification, in the wording shown, must be labeled and completed on the Final
Subdivision Plan:

Commonwealth of Pennsylvania
County of Berks

On this, the _____ day of _____, 19____, before me, the undersigned officer,
personally appeared _____, who being duly sworn according to law, deposes and
says that he is the _____ (1) _____ of the property shown on this plan, that the
subdivision plan thereof was made at his/its direction, and that he acknowledges the same to be his/its
act and plan _____ (2) _____, and that all streets _____ (3) _____, shown and
not heretofore dedicated are hereby dedicated to the public use _____ (4) _____.

_____ (5) _____ (6) _____ (7)
_____ (8) _____ (9)

(1) insert either:

Owner

Equitable Owner

President of (name of corporation) which is the owner

- (2) whenever applicable, insert: and desires the same to be recorded as such according to law
(3) whenever applicable, insert: and open spaces
(4) if necessary, insert: except those labeled "not for dedication" and any other restrictions or
reservations
(5) where necessary, signature of secretary of corporation
(6) signature of individual, of partners, or of president of corporation
(7) if necessary corporate seal
(8) signature and (9) seal of notary public or other officer

APPENDIX II
CERTIFICATION OF OWNERSHIP AND ACKNOWLEDGEMENT OF PLAN
(To Be Signed by the Grantee of Land in an Annexation Plan)

The following certification, in the wording shown, must be labeled and completed on the Final Subdivision Plan:

Commonwealth of Pennsylvania
County of Berks

On this, the _____ day of _____, 19____, before me, the undersigned officer, personally appeared _____, who being duly sworn according to law, deposes and says that he is the _____ (1) _____ of the property shown on this plan, that the subdivision plan thereof was made at his/its direction, and that he acknowledges the same to be his/its act and plan _____ (2) _____.

(3) _____ (4) _____ (5)

(6) _____ (7)

(1) insert either:

Owner

Equitable Owner

President of (name of corporation) which is the owner

- (2) whenever applicable, insert: and desires the same to be recorded as such according to law
(3) where necessary, signature of secretary of corporation
(4) signature of individual, of partners, or of president of corporation
(5) if necessary corporate seal
(6) signature and (7) seal of notary public or other officer

APPENDIX III - CERTIFICATION OF ACCURACY

The following certification in the wording shown, must be labeled and completed on the Final Plan:

CERTIFICATION OF ACCURACY

I hereby certify that the plan shown and described hereon, as well as all drawings bearing my seal, are true and correct to the accuracy required by the Greenwich Township Subdivision and Land Development Ordinance, and were prepared by me or under my direction and for which I accept full responsibility.

(2)

_____, 19____ (1) _____

- (1) Signature of the Professional Land Surveyor responsible for the preparation of the plan.
- (2) Apply seal of the Professional Land Surveyor.

**APPENDIX IV
CERTIFICATES OF APPROVAL**

The approval of the Final Plan by municipality in which the subdivision is located must be indicated on the Record Plan, in substantially the following form:

At a meeting held on _____, 19____, the Planning Commission of the Township of Greenwich, recommended for approval the subdivision/land development plan of the property of _____ (1) _____, as shown hereon.

(2)

- (1) insert name of property owner
- (2) signatures of Planning Commission

The approval of the Final Plan by each municipality in which the subdivision is located must be indicated on the Record Plan, in substantially the following form:

At a meeting held on _____, 19____, the Governing Body of the Township of Greenwich, by resolution duly enacted, approved the subdivision/land development plan of the property of _____ (1) _____, as shown hereon.

(2)

(3)

- (1) insert name of property owner(s)
- (2) signatures of the Governing Body
- (3) municipal seal

APPENDIX V

STORMWATER MANAGEMENT

SECTION 1 PLAN REQUIREMENTS

1.1 General

When required by this Ordinance, and prior to the preliminary approval of subdivision and/or land development plans, the owner, subdivider, developer or his agent shall submit a stormwater management plan to the Township and receive approval of said plan.

1.2 Plan Contents

The following items, where appropriate, shall be included in the plan:

A. General

1. General description of project
2. General description of erosion and sedimentation controls
3. General description of stormwater controls both during and after development
4. Expected project time schedule, including anticipated start and completion dates

B. Map(s) of the Project Area Showing

1. The location of the project relative to highways, municipalities or other identifiable landmarks.
2. Existing contours at intervals to two (2) feet. In areas of steep slopes (greater than 15%), five-foot contour intervals may be used.
3. Streams, lakes, ponds, wetlands or other bodies of water within the project area, or which will be affected by runoff from the project.
4. Other physical features including existing drainage swales and areas of natural vegetation to be preserved.
 - a. Delineation of any existing wetlands, as classified by a qualified environmental scientist experienced in wetland determination.
5. Location of existing or proposed overhead and underground utilities, sewer and water lines.
6. Soil types and boundaries.

7. Proposed changes to land surface and vegetation cover.
 - a. Areas to be cut or filled.
 - b. Final contours at intervals of two (2) feet. In areas of steep slopes (greater than 15%), five-foot contour intervals may be used.
 8. Proposed structures, roads, paved area and buildings.
- C. Erosion and Sedimentation Controls
1. When an Erosion and Sedimentation Control Plan is Required: Land shall not be developed or changed by grading, excavation or the removal or destruction of natural topsoil, trees or other vegetative cover unless adequate provisions for minimizing erosion and sedimentation are provided, including stormwater facilities and detention ponds.
 2. Plan Requirements: A plan for erosion and sedimentation control shall be prepared and submitted to the Township. The plan shall meet all requirements and be approved by the County Conservation District, and the Pennsylvania Department of Environmental Protection (Chapter 102 of Title 25, latest revision), when applicable.
 3. Plan Content: The plan shall contain two (2) parts: (1) a map(s) describing the topography of the area within the subdivision or development, the proposed alterations of the area, and the erosion and sedimentation control measures and facilities which are proposed; and (b) a narrative report describing the project and giving the purpose, engineering assumptions, and calculations for control measures and facilities.
- D. Stormwater Management Controls
1. Calculations: All calculations, assumptions, and criteria used in the design of stormwater management facilities and in the establishment of the calculated pre-development, land disturbance (during construction) and post-development peak discharges.
 2. Delineation of Drainage Areas: A map(s) clearly delineating and labelling all drainage areas used in the design of storm sewer facilities, swales, and detention basins. The runoff path used as the basis for time of concentration calculations should be shown.
 3. Plans and Profiles: Plans and profiles of proposed stormwater management facilities (storm sewers, swales, ponds, etc.) including horizontal and vertical location, size and type of material. This information shall provide sufficient information required for the construction of all facilities.
 4. Detention Basin Staging: For all detention basins, a plotting or tabulation of storage volumes with corresponding water surface elevations and outflow rates for those water surfaces.

5. Detention Basin Inflow and Outflow: For all detention basins, the design inflow and outflow and routing calculations to determine the function of the basin.
6. Drainage Easement: A twenty-five (25) foot drainage easement around all stormwater management structures and from such structures to a public right-of-way. For stormwater detention basins or ponds, the easement shall extend at least twenty-five (25) feet beyond the perimeter (top of excavation or toe of embankment) of such facilities to provide sufficient access for construction/maintenance equipment.

E. Maintenance Program

Proposals for the ownership and maintenance responsibilities for all proposed storm drainage facilities shall be submitted to the Township for review and approval. The Township shall be satisfied with sufficient provision has been made for adequate and perpetual maintenance of all such facilities. All drainage facilities shall be maintained to retain their design capacity.

F. Specifications

The plans shall include all details and narratives necessary for the Township to review the plans, for contractors to properly bid the project, and for field personnel to properly construct the facilities.

1.3 Special Requirements

- A. Discharge of Stormwater Runoff: Stormwater runoff shall discharge to an existing watercourse with defined bed and barriers or to an existing storm drainage system. It shall not be concentrated onto adjacent properties, nor shall the velocity of flow be increased beyond that existing prior to subdivision, land development or the commencement of land disturbance activities unless written approval of the proposed discharge of surface runoff is given by the adjacent property owners and the written agreements are approved by the Township.
- B. Storm Drainage Directed Into an Adjacent Municipality: When storm drainage will be directed into a adjacent municipality, all provisions for accommodating such storm drainage shall be submitted to the governing body of that municipality for review.
- C. Discharge of Roof Runoff: Stormwater runoff from roofs shall not be discharged into the street right-of-way nor concentrated onto adjacent properties. It shall be returned to sheet flow or discharged into an adequately designed collection or infiltration facility approved by the Township.
- D. Correction of Existing Stormwater Problems: The design and philosophy of any stormwater management shall consider corrective measures to existing stormwater problems that are created in whole or in part by the Developer's land, or that would impact the end users of the development.

1.4 Plan Approval

- A. Conditions of Approval: The Township shall grant plan approval only after it has been determined that the proposed work to be undertaken will be in conformance with the requirements of this and all other applicable codes and ordinances.
- B. Solicitation of Comments: A copy of all plans and calculations for any proposed construction or development to be considered for approval may be submitted by the Township to any other appropriate agencies and/or individuals (e.g., Planning Commission, Conservation District, Municipal Engineer, etc.) for review and comment.
- C. Government Permits: Prior to the approval of the plan, all other necessary government permits required by State and Federal laws shall have been obtained, including but not limited to, those required by Act 537, the Pennsylvania Sewage Facilities Act; the Dam Safety and Encroachments Act; the U.S. Clean Water Act, Section 404, 33, U.S.C. 1334; and the Pennsylvania Clean Streams Act.
- D. Plan Review: The Township or its designee shall review the plan and comments from any other appropriate agencies and/or individuals (e.g., Planning Commission, Conservation District, Municipal Engineer, etc.)

SECTION 2 DESIGN OF STORM DRAINAGE SYSTEMS

2.1 Stormwater Runoff Computations

A. Method of Stormwater Runoff Computations

The stormwater analysis shall be accomplished using the latest edition of the Soil-Cover Complex Method, (Urban Hydrology for Small Watersheds: Technical Release No. 55 as published by the U.S. Soil Conservation Service) as a basis unless other methods are approved, prior to submittal, by the Municipal Engineer.

- 1. In some instances for small drainage areas, the Municipal Engineer may approve use of the Rational Method as outlined in the "Erosion and Sediment Pollution Control Program Manual" published by PADEP, Bureau of Soil and Water Conservation.
- 2. All computations performed using an approved alternate method shall comply with the intent of this Ordinance.

B. Runoff Curve Numbers (CN Values)

All pre-development, land disturbance, and post-development runoff computations shall be performed using the runoff curve numbers (CN) for the ground covers as specified below. The use of other (CN) values must be fully justified to the Municipal Engineer prior to plan approval.

The following sections use the terms "cultivated agricultural", "other agricultural", and "urban". These terms pertain to the phraseology used in TR-55.

1. Pre-Development Computations

- a. Lands within the subdivision or land development and part of the same watershed.
 - (1) Cultivated agricultural ground covers shall be considered contoured and terraced with crop residue and in good condition (C & T + CR).
 - (2) Urban and other agricultural ground covers (woods, meadow, brush, etc.) shall be considered as their existing condition.
- b. Ground covers for lands uphill of the subdivision or land development and part of the same watershed shall be considered as their existing condition (urban, cultivated agricultural, and other agricultural).

2. Post-Development Computations

- a. Lands within the subdivision or land development and part of the same watershed:
 - (1) Ground covers shall be evaluated as the proposed conditions for all areas within the boundaries of the subdivision or land development.
 - (2) Ground covers shall be considered as existing condition or at best as contoured row crops with crop residue present for areas which will continue to be considered cultivated agricultural.
 - (3) Ground covers shall be evaluated as existing condition for all areas considered other agricultural (woods, meadows, brush, etc.).
- b. Lands uphill of the subdivision or land development and part of the same watershed:
 - (1) Ground covers shall be evaluated as existing condition or at best as contoured row crops with crop residue present for areas considered cultivated agriculture.
 - (2) Ground covers shall be considered as existing for all other conditions (urban and other agricultural).

3. Land Disturbance (During Construction) Computations.

- a. Lands within the subdivision or land development and part of the same watershed:
 - (1) Ground covers shall be evaluated in the disturbed condition for all areas within the boundaries of the regulated activity.
 - (2) Ground covers shall be evaluated as existing condition or at best as contoured row crops with crop residue present for areas considered cultivated agricultural outside of the boundaries of the subdivision or land development.
- b. Land uphill of the subdivision or land development and part of the same watershed shall be considered the same as shown in Section 2.1B.2.b of this Appendix.

C. Comparison of Discharges.

Pre-development discharges shall be compared to land disturbance (during construction) and post-development discharges for individual drainage basins rather than to the combined discharges for the overall tract. If the land disturbance discharge and/or the post-development discharge is greater than the respective pre-development discharge for a given drainage basin, a detention facility will be required and shall be designed to detain the greater discharge.

2.2 Design of Drainage Facilities

A. Design Storm Frequency

The design storm frequency for all drainage facilities shall be as follows:

<u>Description of Area</u>	<u>Design Storm Frequency (Yrs.)</u>
1. Residential Areas	
a. One (1) Dwelling Unit per One (1) Acre or Larger Lots	10
b. More Than One (1) Dwelling Unit Per Acre	25
2. Agricultural Areas	10
3. All Other Areas	25

An overflow system shall be provided to carry flow to a detention basin when capacity of the storm sewer system is exceeded. Overflow should have capacity for the 25 year storm.

B. Storm Sewer Design

In general, storm sewer (pipe) shall be provided where swales or other conveyances are inappropriate or do not meet the requirements of this ordinance. Storm sewer (pipe) shall always be provided as an interceptor line to convey collected stormwater to a holding pond unless otherwise approved by the Township. Storm sewer pipe specifications shall be clearly shown on the plans, including the pipe material and class of pipe.

1. Pipe Requirements

- a. All pipe to be installed shall have a minimum inside diameter of fifteen (15) inches.
- b. All pipe to be installed shall be either reinforced concrete pipe (RCP) or polyethylene (PE) pipe with internal liner (e.g. Advanced Drainage Systems N-12).
- c. When polyethylene pipe is to be used, all pipe ends that would be exposed to the environment (i.e., at-grade inlets or outlets) shall be protected from damage by use of a concrete headwall or endwall. At-grade inlets or outlets of concrete pipe may use concrete flared end sections.
- d. Township backfill specifications, including material and compaction requirements, shall be provided on the plans.
- e. The minimum grade of storm sewer shall be 0.5%.
- f. The top of storm sewer pipe in a roadway shall be at least one foot below road subgrade. Otherwise pipe cover shall be in accordance with PennDOT specifications.
- g. The method of making watertight joints shall be specified.
- h. At-grade pipe outlets and inlets shall be provided with a flared end section or a headwall.

2. Inlet (Catch Basin) Design

Inlet spacing and flow capacity shall be in accordance with Chapter 10: Drainage Design, PennDOT Design Manual Part 2, Highway Design, latest revision.

3. Drainage Collected by a Headwall or Catch Basin

In all cases where drainage is collected by a headwall or catch basin, where inlet or outlet control may govern, the pipe shall be designed as a culvert. The allowable headwater should be determined by the specific entrance conditions and sound engineering judgement. The design of culverts shall not create excessive headwater depths.

4. Coefficient of Roughness (n)
 - a. A roughness (n) value of 0.012 shall be used for all concrete pipe.
 - b. Roughness (n) values for other materials should be fully documented with manufacturer's or other reliable data.
5. Permissible Flow Velocities
 - a. Minimum

The minimum flow velocity shall be 2.5 feet per second for the design storm.
 - b. Maximum

There is no fixed limitation for the maximum permitted velocity in storm sewer pipes. However, the design shall consider minor losses due to bends, restrictions, manholes, etc. and erosion potential at pipe outlets. The pipe manufacturer's suggested maximum velocity, if any, shall also be considered in the pipe design.

C. Open Channels

1. Open channels shall be designed in accordance with good engineering practices, using published design procedures.
2. Open channels within street rights-of-way shall be of the parabolic type not exceeding six feet in width and one foot in depth.
3. Open channels within street rights-of-way shall be designed to carry the design storm with three (3) inches of freeboard.
4. In situations where the requirements of Sections 2.2C.2 and 2.2C.3 above cannot be met, storm sewer rather than open channels shall be used to convey the stormwater.
5. Open channels shall not be used in street rights-of-way where curbing is to be installed. Stormwater conveyance shall be via storm sewer in these cases.
6. Open channels shall not be used to convey stormwater within a street right-of-way on slopes exceeding eight (8) percent. In these cases storm sewer shall be used.
7. Open channels shall have a minimum slope of one (1) percent, and shall be designed to avoid ponding and standing water.

2.3 Design of Detention Facilities

A. Design Storm Frequencies

When a detention facility is required, the peak runoff being routed to the detention facility shall be computed for all frequency storms required by the following section.

B. Storage Volume Requirements

The storage volume for all detention basins shall be computed in accordance with the methods found in the U.S. Department of Agriculture, Soil Conservation Service Technical Release No. 55, "Urban Hydrology for Small Watersheds," latest approved revision. Other methods may be used only when approved by the Municipal Engineer prior to plan submittal. The maximum storage volume shall be the largest volume required to detain the post-development or land disturbance peak runoff while releasing the pre-development peak runoff of the storm frequency as found in the following table.

<u>DETAINING</u> Post-Development or Land Disturbance Peak Runoff for a Storm Frequency of:	<u>WHILE</u>	<u>RELEASING</u> Pre-Development Peak Runoff for a Storm Frequency of:
2 yr.		2 yr.
5 yr.		5 yr.
10 yr.		10 yr.
25 yr.		25 yr.

1. Need to Protect Public Health, Safety or Welfare

The Township may require the control of more severe storm events if the need to protect property, the public health, safety or welfare warrants it.

C. Pond Requirements

Detention ponds shall be designed and specified in accordance with the following criteria:

1. The minimum bottom slope to the outlet shall be 2%. Lesser slopes may be approved if an adequate low-flow channel is provided. Low flow channels shall be concrete or other permanent materials that will eliminate ponding on the flat grade.
2. An anti-seep collar shall be provided around the outlet pipe.
3. A profile of the outlet pipe shall be provided on the plans.
4. Pipe outlets shall be provided with an energy dissipator, designed in accordance with good engineering practice.
5. Sideslopes of the pond shall be 3:1 or flatter.

6. Specifications for pond construction shall be provided and should include at a minimum: topsoil stripping, berm material, berm compaction methods, key trench, and dimensions of berm.
7. The top width of the berm shall be per U.S. Soil Conservation Service standards.
8. The pond depth shall include a one foot freeboard above the highest water elevation for the 25 year storm.

D. Outlet Structure Requirements

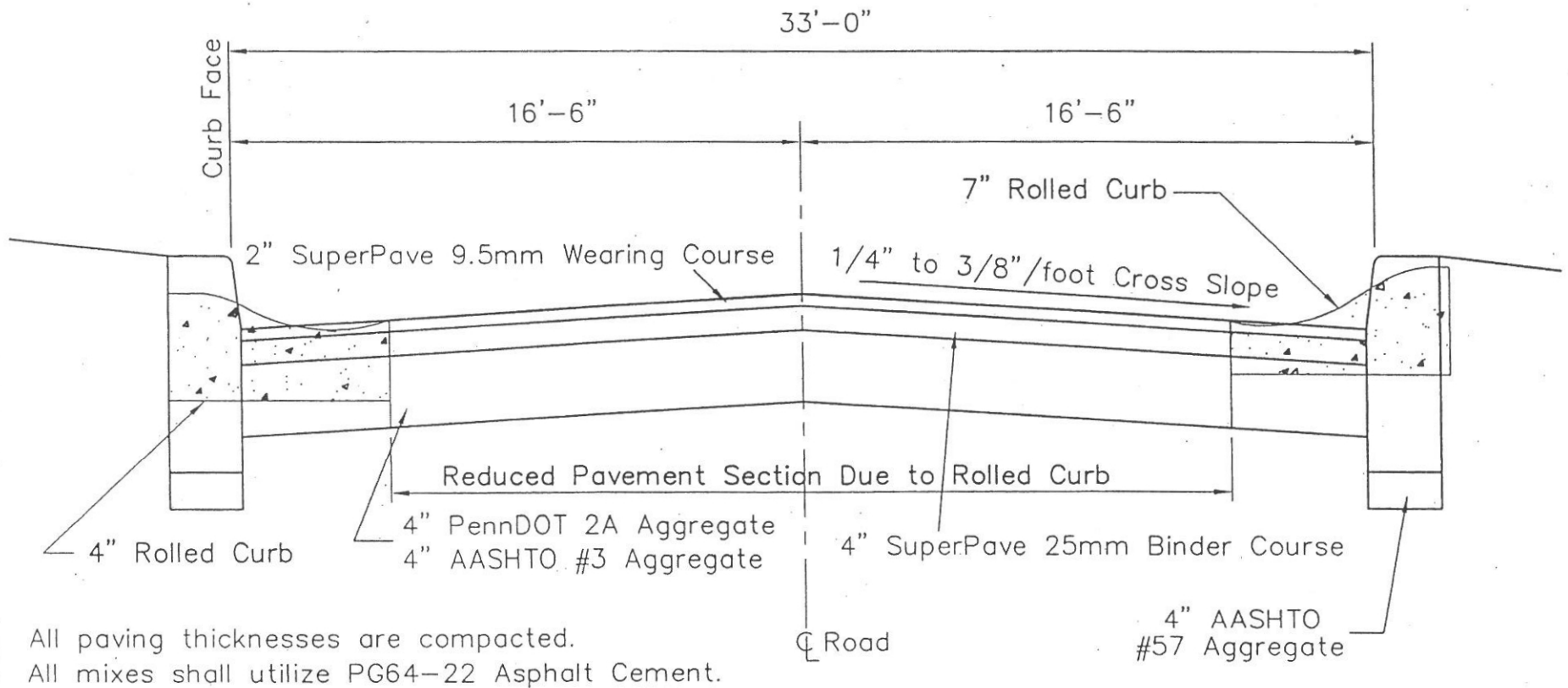
Outlet structures shall be designed and specified in accordance with the following criteria.

1. The outlet structures shall be the riser type, and shall be constructed of concrete and placed on a concrete footing that is a minimum of two feet below grade.
2. The lowest stage outlet shall be provided with the trash rack.
3. The release rate from the outlet structure shall conform to the requirements of Section 2.3B of this Appendix.
4. Details shall be provided for construction of the outlet structure.

E. Emergency Spillway

1. The emergency spillway for all ponds shall be designed to pass the post-development peak discharge from the 100 year frequency storm. The principal spillway shall be considered completely blocked when designing the emergency spillway.
2. Emergency spillways constructed in fill material shall be lined with erosion control protection.
3. Construction details shall be provided for the emergency spillway.

GREENWICH TOWNSHIP BERKS COUNTY, PENNSYLVANIA ROAD CONSTRUCTION STANDARDS



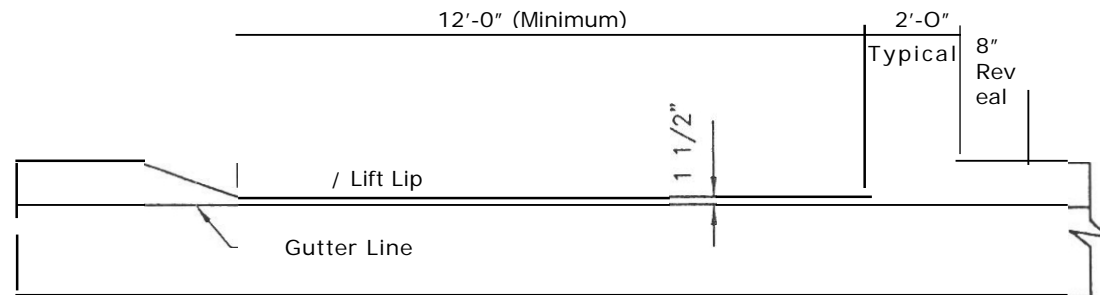
TYPICAL ROAD CROSS SECTION

No Scale

TEI 7/98

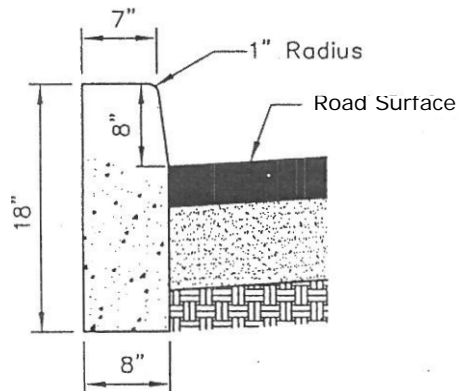
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GREENWICH TOWNSHIP BERKS COUNTY, PENNSYLVANIA CURB CONSTRUCTION STANDARDS



CURB CUT FOR DRIVEWAY ENTRANCE

No Scale



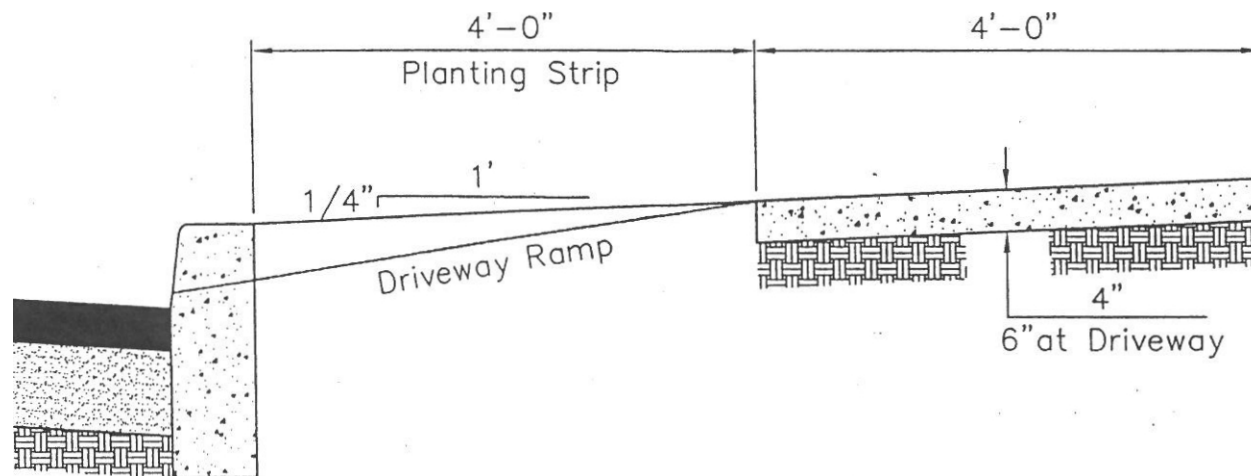
STANDARD CURB DETAIL

No Scale

NOTES:

1. All curb shall be constructed on a minimum of 4" of AASHTO #57 stone.
2. Expansion joints shall consist of 1/2" thick preformed, nonextruding and resilient joint filler and shall be placed at 20-foot intervals to the full depth of fixed-form curb. Expansion joints shall be placed at 80-foot intervals for slipformed curb.
3. Slipformed curb shall be sawcut to the street surface at 10-foot intervals. All fixed form curb shall be scored at 10-foot intervals.
4. Concrete mix shall achieve a minimum 28-day strength of 3500 psi with 6% air entrainment.

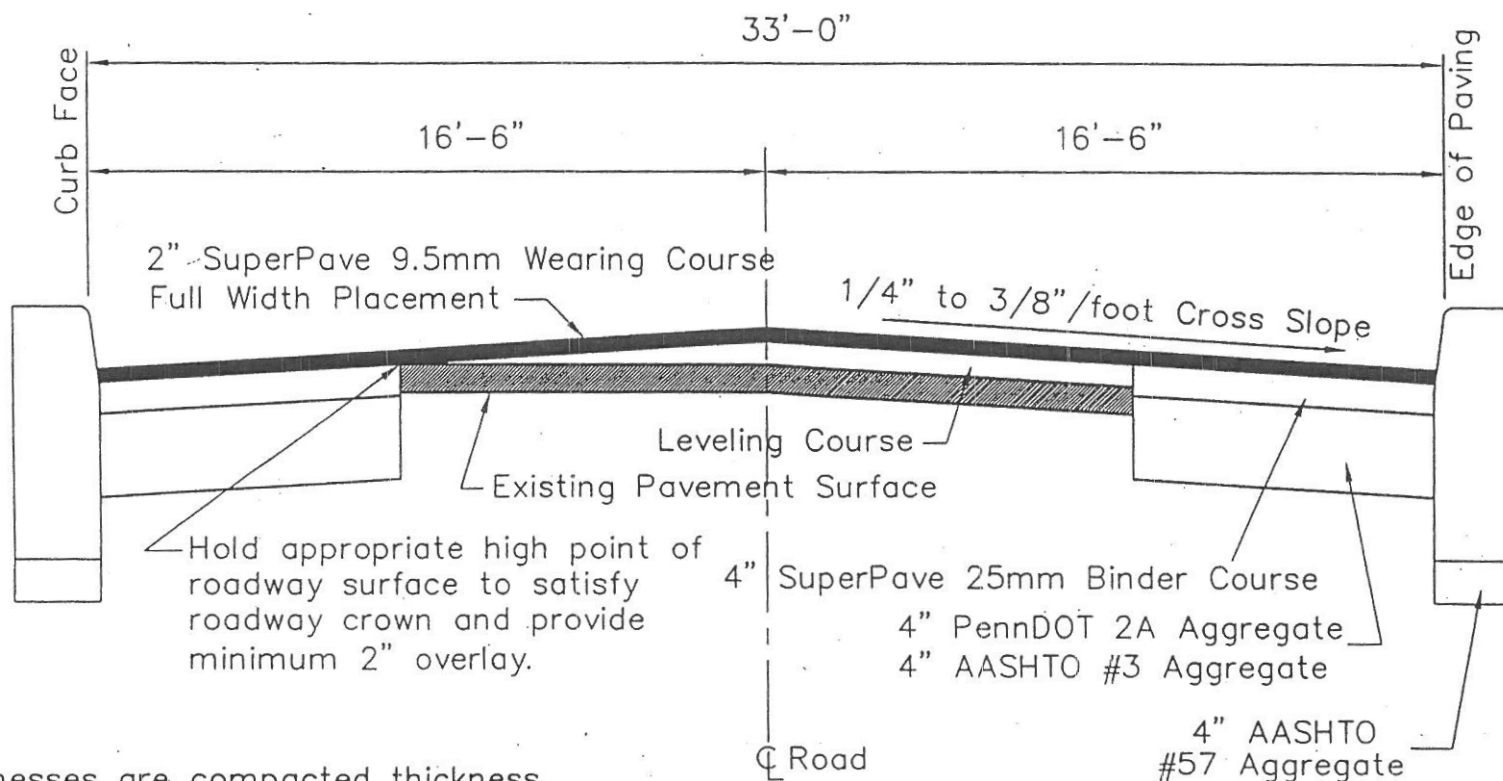
GREENWICH TOWNSHIP BERKS COUNTY, PENNSYLVANIA SIDEWALK CONSTRUCTION STANDARDS



TYPICAL SIDEWALK CROSS SECTION

No Scale

GREENWICH TOWNSHIP BERKS COUNTY, PENNSYLVANIA ROAD RECONSTRUCTION/WIDENING STANDARDS



All thicknesses are compacted thickness.
All mixes shall utilize PG64-22 Asphalt Cement.

TYPICAL ROAD CROSS SECTION

TEI 10/03

No Scale

Last Revised 4/5/05

S-4

RoadRebuild.dwg