

**New Hope Borough
Subdivision
and
Land Development**

ORDINANCE

**Enacted: January 31, 1984
October 15, 1991
September 12, 1995**

SUBDIVISION AND LAND DEVELOPMENT ORDINANCE

INDEX

New Hope Borough Resolution 6-9-86 (1)

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RESOLUTION NO. 6-9-86-1

The Borough Council of the Borough of New Hope hereby resolves as follows:

1. The Borough Council of the Borough of New Hope recognizes that the strict application of the terms and provisions of the Land Development Regulations can be unnecessarily burdensome and expensive at times. Therefore, Borough Council hereby establishes a procedure whereby an applicant for a small land development (hereinafter referred to as "Minor Land Development") may request a waiver from the provisions of the Land Development Regulations if the Development will not require public improvements, if the Development shall consist only of the expansion of an existing building for the addition of one tenant, and if the existing site facilities will not require improvement to satisfy the minimum requirements of the New Hope Borough Zoning Ordinance and the New Hope Borough Subdivision and Land Development Ordinance. Every applicant for a Minor Land Development shall acknowledge that New Hope Borough Council shall at no time be bound to waive the provisions of the Borough Land Development Regulations and that Borough Council may at its sole discretion deny an application for a Minor Land Development and require the applicant to conform to all of the terms and provisions of the Land Development Regulations. No applicant is required to file an application for a Minor Land Development and all applicants have a right to file applications which conform to the provisions of the Borough's Land Development Regulations. The procedures set forth herein are informal and intended to benefit those applicants who intend to proceed with small project.

2. The procedure for an application for a Minor Land Development shall be as follows:

A. The application form provided by the Borough shall be signed by the applicant and filed with the Borough Administrator.

B. The application for approval of a Minor Land Development shall include the submission of eight (8) sets of Final Plans for Distribution as follows:

Borough Council:	one
Borough Planning Commission:	one
Borough Administrator:	two
Borough Solicitor:	one
Borough Engineer:	one
Borough Zoning Officer:	one
Fire Marshall:	one

C. Application Procedure

(1) The applicant shall submit the required number of copies of the Final; Plan and supporting information, application forms, and fees to the Borough Administrator.

(2) Within five (5) weeks of submission, the Borough Administrator, Planning Commission, Solicitor, Engineer, Zoning officer and Fire Marshall shall determine if the application complies with the Requirements for a Minor Land Development and shall advise Borough Council if the applicant's request for a waiver of the Land Development Regulations is in accordance with the intent of this Resolution.

(3) At the next Borough Council Meeting after the receipt of all recommendations pursuant to paragraph (2) above, Borough Council shall determine the acceptability of the applicant's submission and request for a waiver. If approved, no further action shall be required of the applicant. If rejected by decision of Council, the applicant shall prepare and submit documents for the development in accordance with all of the requirements and procedures as set forth in the New Hope Borough Subdivision and Land Development Ordinance.

3. The applicant shall submit such detailed plans and supporting documentation as is necessary to prove to New Hope Borough Council that a waiver of the strict compliance with the Land Development Regulations is reasonable and advisable. As a guideline, the applicant shall refer to Section 4.04 "Final Plan - Minor Subdivision, part D" required information of the New Hope Borough Subdivision and Land Development Ordinance.

4. General Provisions

A. Simultaneously with the filing of the application and plans for the Minor Land Development and waiver of the Land Development Regulations, the applicant shall pay a fee to the Borough Administrator in the amount of ~~Two~~ Two Hundred Fifty Dollars (\$250.00) to reimburse the Borough the costs of the review of the Plan by the Borough Engineer and the Borough Solicitor.

B. Once a tract of land has received an approval for a Minor Land Development, the same tract, or any portion thereof, shall not be approved thereafter for a Minor Land Development, but shall be subject to all of the provisions and requirements of the New Hope Borough Subdivision and Land Development Ordinance.

C. All applications for a waiver and Minor Land Development shall be signed by the applicant subject to the application.

D. If New Hope Borough Council shall fail to render a decision on the minor land development application, then and in that event, failure of Borough Council to take action shall be a deemed denial of the Plan, and the applicant shall file a new application and conform to all of the provisions and requirements of the New Hope Borough Subdivision and Land Development Ordinance.

ATTEST:

/s/
Secretary

BOROUGH OF NEW HOPE
/s/
President of Council

APPROVED this Ninth day of June, 1986

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- B. To provide for the coordination of new facilities with existing streets and public utilities
- C. To provide for efficient and orderly extension of community services and facilities at minimum cost and maximum convenience.
- D. To ensure conformance of land utilization with the Comprehensive Plan of New Hope Borough.
- E. To promote and preserve the health, safety, morals, and general welfare of the residents of the Borough.
- F. To secure equitable handling of all subdivision and land development plans by providing uniform procedures and standards for observance by developers and the Borough.

Section 1.04 Scope

From and after the effective date of this Ordinance, any subdivision or land development filed thereafter shall be in conformity with this Ordinance and all standards and specifications adopted as part of such Ordinance.

Section 1.05 Interpretation

In interpreting and applying the provisions of this Ordinance, they shall be held to the minimum requirements for the promotion of the public health, safety, morals, and general welfare.

- A. Whenever any regulations made under authority of this Ordinance require a greater width or size of yards, courts or other open spaces, or require a lower height of buildings or smaller number of stories, or require a greater percentage of lot to be left unoccupied, or impose other higher standards than are required in or under any other statute, the provisions of the regulations made under authority of this Ordinance shall govern.
- B. Whenever the provisions of any other statute require a greater width or size of yards, courts or other open spaces, or require a greater percentage of lot to be left unoccupied, or impose other higher standards than are required by any regulations made under authority of this Ordinance, the provisions of such statute shall govern.
- C. This Ordinance does not repeal, abrogate, annul or in any way impair or interfere with existing provisions of others laws or ordinances, except those specifically or explicitly repealed by this Ordinance, or any private restrictions placed upon property by covenant, deed or

other private agreement unless repugnant hereto.

- D. Provisions in the New Hope Borough Zoning Ordinance providing for varying design standards shall not be considered to be in conflict with the provisions of this Ordinance.
- E. The illustrations in the Ordinance, are not a part of the Ordinance but are included herein for purpose of explanation and clarification only.

Section 1.06 Separability

It is hereby declared to be the intent of the Borough Council that:

- A. If a court of competent jurisdiction declares any provision, sentence or clause of this Ordinance to be invalid or ineffective in whole or in part, the effect of such decision shall be limited to those provisions, sentences or clauses which are expressly stated in the decision to be invalid or ineffective, and all other provisions, sentences and clauses of this Ordinance shall continue to be separately and fully effective.
- B. If a court of competent jurisdiction finds the application of any provision, sentence or clause of this Ordinance to any lot, building or other structure, or tract of land, to be invalid or ineffective in whole or in part, the effect of such decision shall be limited to the person, property, or situation immediately involved in the controversy, and the application of such provision, sentence or clause to other persons, property, or situations shall not be affected.
- C. It is hereby declared as a legislative intent that this Ordinance would have been adopted has such unconstitutional, illegal or invalid provisions, sentences or clauses not been included herein.

Section 1.07 Jurisdiction

- A. Subdivision and Land Development Control - It shall be unlawful for the owner or any other person, firm or corporation, controlling any land in the Borough, to subdivide any lot, tract, or parcel of land, or to layout, construct, open or dedicate for public use or travel any street, sanitary or storm sewer drainage facility or other facility in connection therewith, for the common use of occupants of buildings located within the subdivision or land development, unless final plans for such subdivision or land development shall (1) have

been prepared and signed by and sealed by a professional engineer and land surveyor duly and currently registered in the Commonwealth of Pennsylvania; (2) signed by the record owners of the land, and said signature notarized; (3) submitted to and reviewed by the Bucks County Planning Commission; (4) submitted to and approved in writing thereon by the Borough Council; and (5) recorded in the Bucks County Recorder of Deeds Office in Doylestown, Pennsylvania.

(amendment Oct 15, 1991) Anything in this Ordinance to the contrary notwithstanding, the Borough of New Hope shall not be subject to the jurisdiction and controls of this Ordinance as to any lot, tract or parcel of land which is owned by the Borough, and will continue to be so owned and not sold in whole or in part to a non-municipal or governmental entity.

- B. Before the approval of a plan by the Borough a copy shall be transmitted to the County Planning Commission, and that Commission shall make a report thereon to the Borough Council. Pending the receipt and consideration of such report, the Borough shall defer action thereon, but if such report is not received by the Borough Council within forty-five days from the submission, or within such further time as may be agreed upon by the Borough, the Borough may proceed to final action thereon.

ARTICLE II ADMINISTRATION

Section 2.00 Hardship

- A. If any mandatory provisions of these regulations are shown by the applicant, to the satisfaction of a majority of the Borough Council present at a regular meeting, to be unreasonable and to cause undue hardship as they apply to his proposed subdivision or land development, the Borough Council may grant an exception to such applicant from such mandatory provisions, so that substantial justice may be done and the public interest secured; provided that such exception will not have the effect of nullifying the intent and purpose of these regulations.

- B. It is not sufficient proof of hardship to show that greater profit would result if the exception were granted. Furthermore, hardship complained of cannot be claimed by one who purchases with or without knowledge of restrictions; it must be from the application of this Ordinance; it must be suffered directly by the property in question; and evidence of exception granted under similar circumstances shall not be considered.

- C. In granting exceptions and modifications, the Borough Council may impose such conditions as will, in its judgement, secure substantially the objectives of the standards or requirements so varied or modified.

Section 2.01 Fees

The applicant shall reimburse the Borough for all reasonable professional expenses, including but not limited to engineering, legal, consultant fees for review, modification or supplementing the feasibility studies required under Article V pursuant to the provisions of this Ordinance. Prior to the filing of a preliminary plan, and prior to the filing of a final plan the applicant shall, for expenses, deposit with the Borough Administrator the appropriate non-refundable filing fee and a deposit towards the professional expenses in accordance with the fee schedule adopted by resolution by the Borough Council. Thereafter, as the deposit for expenses is expended, the applicant shall make further deposits upon notice from the Borough Administrator until approval of the plan. Upon approval of the final plan, the Borough Administrator shall forthwith refund to the applicant any uncommitted portion of the deposit remaining after all expenses incurred by the Borough

Section 2.02 Preventive Remedies

Any person, partnership, or corporation who or which being the owner or agent of any lot, tract or parcel of land shall lay out,

construct, open or dedicate any street, sanitary sewer, storm sewer, or water main or other improvements for public use, travel or other purposes or for the common use of occupants of buildings abutting thereon, or who sells, transfers or agrees or enters into an agreement to sell any land in a subdivision or land development whether by reference to or by other use of a plan of such subdivision or land development or erect any building thereon, unless and until a final plan has been prepared in full compliance with the provisions of this Ordinance.

A. In addition to other remedies provided for herein, the Borough may institute and maintain appropriate actions in law or in equity to restrain, correct or abate violations, to prevent unlawful construction, recover damages and to prevent illegal occupancy of a building, structure or premises. The description by metes and bounds in the instrument of transfer or transferring shall not exempt the seller or transferor from such penalties or from the remedies herein provided.

B. The Borough, its Zoning Officer or other officials, 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 any provision of this Ordinance. This authority to deny any such permits or approvals shall apply to any of the following applicants:

1. The owner of record at the time of such violation.
2. The vendee or lessee of the owner or record at the time of such violation without regard as to whether such vendee or lessee had actual or constructive knowledge of the violation.
3. The current owner or record who acquired the property subsequent to the time of violation without regard as to whether such current owner had actual or constructive knowledge of the violation.
4. The vendee 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.

C. No permit shall be issued nor shall any approval be granted to any applicant identified in subparagraph B. above, unless such applicant complies with the conditions which would have been applicable to the property at the time the applicant acquired an interest in such real

property, unless the Borough waives such condition or conditions.

Section 2.02A Enforcement Remedies

- A. Any person, partnership, or corporation who or which has violated any of the provisions of this Ordinance, upon being found liable therefor in a civil enforcement proceeding commenced by the Borough, shall pay a judgement of not more than \$500.00 plus all court costs plus reasonable attorney fees incurred by the Borough as a result thereof. No judgement shall commence or be imposed, levied, or payable until the date of the determination of a violation by the District Justice. If the defendant neither pays nor timely appeals the judgement, the Borough may enforce the judgement pursuant to the applicable rules of civil procedure. Each day that a violation continues shall constitute a separate violation, unless the District Justice determines that there has been a violation further determines that there was a good faith basis for the person, partnership, or corporation violating this 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 (5th) day following the date of the determination of a violation by the District Justice and thereafter each day that the violation continues shall constitute a separate violation.
- B. The Court of Common Pleas, upon petition of the defendant, may grant an order of stay, upon cause shown, tolling the per diem judgement pending a final adjudication of the violation and judgement.
- C. Nothing contained herein shall be construed or interpreted to grant to any person or entity other than the Borough, the right to commence any action for enforcement pursuant to this Section.

Section 2.03 Required Contracts

- A. Improvements. Before approving any subdivision or land development plan for recording, the Borough Council shall either require that the necessary grading, paving and other improvements herein specified shall have been installed in strict accordance with the standards and specifications of the Borough, or that the Borough Council be assured by means of a proper contract and completion guarantee, as set forth in Section 2.03 (B) hereof, that the improvements will subsequently be installed by the developer.

B. Contracts . . . In all cases where the necessary grading, paving and other improvements required herein, both on-site and off-site, shall not have been installed in strict accordance with the standards and specifications of the Borough prior to approval of the final plan, the developers shall enter into a written agreement with the Borough in accordance with the requirements of the Municipalities Planning Code in the manner and form approved by the Borough Solicitor (in a form similar to the agreement attached here to as Appendix A), wherein the developer shall agree to the extent applicable:

1. To construct or cause to be constructed at his own expense all streets, street signs, curbs, sidewalks, street and buffer plantings, street lights, fire hydrants, water supply system sanitary sewer system, (including capped sewers and water mains), storm sewers, drainage and erosion control improvements, and other improvements including off-site improvements as may be required by the Borough shown on said subdivision or land development plan, all in strict accordance with the standards and specifications of the Borough and within the time specified in said agreement.
2. To made adequate provisions with the Borough for the inspection of the construction of the aforesaid improvements to assure strict compliance with Borough standards and specifications.
3. To secure the structural integrity of the required improvements for the subdivision as well as the functioning of the required improvements in the subdivision in accordance with the design and specifications of that particular final plat of the required improvements including streets, street signs, curbs, sidewalks, street and buffer plantings, street lights, fire hydrants, water mains (including capped water mains), sanitary sewers (including capped sewers), storm sewers, drainage, grading and erosion control improvements, including off-site improvements as may be required by the Borough and other improvements for the period of eighteen months from the date of acceptance of dedication of some or all of the required improvements following completion.
4. To pay all costs, charges or rates of the utility furnishing electric service for the street lighting facilities installed by the developer until such time as the streets shown on the subdivision and/or land development plan shall have been accepted or

condemned by the Borough for public use, and to indemnify and save harmless the Borough from and against all suits, actions, claims and demands for electric service as aforesaid, or any part thereof, to the time that said streets shall be accepted or condemned as public streets in the manner hereinabove set forth.

5. To post contemporaneous with the execution of such agreement such financial security as is required by the Pennsylvania Municipalities Planning Code, as amended.
 6. To obtain the easements and releases required by this Ordinance.
 7. To reimburse the Borough promptly for attorney's and engineer's inspection fees and fees for other professionals employed by the Borough to review or process subdivision and land development plans.
 8. To file as-built plans of public improvements and utilities with the Borough and Borough Engineer.
- C. The provisions of this section shall not relieve the developer from the penalties provided for in Section 515 of the Pennsylvania Municipalities Planning Code for this Ordinance.

Section 2.04 Records

- A. The Borough Council and Borough Planning Commission shall keep records of their findings, decisions, and recommendations relative to all subdivision and land development plans filed with them for review or approval.
- B. All records shall be public records.

Section 2.05 Severability

It is hereby declared to be the intent of the Borough Council that if a Court of competent jurisdiction declares any provision, sentence or clause of this Ordinance to be invalid or ineffective in whole or in part, the effect of such decision shall be limited to those provisions, sentences or clauses which are expressly stated in the decision to be invalid or ineffective, and all other provisions, sentences and clauses of this Ordinance shall continue to be separately and fully effective. (amendment October 15, 1991)

ARTICLE III DEFINITIONS

Section 3.00 General

A. Unless a contrary intention clearly appears, the following words and phrases shall have for the purposes of this Ordinance the meanings given in the following clauses:

1. Words used in the present tense include the future.
2. The singular includes the plural.
3. The word "person" includes a corporation, partnership, association or other legal entity, as well as the individual.
4. The word "lot" includes the words "plot" or "parcel."
5. The term "shall" is mandatory.
6. The word "used" or "occupied" as applied to any land or building shall be construed to include the words "intended, arranged, or designed to be occupied."
7. The word "Commission" and the words "Planning Commission" always mean the New Hope Planning Commission.

Section 3.01 Words and Phrases Not Defined.

Any word or term not defined herein shall be used with a meaning of standard usage, except that words defined in the New Hope Borough Zoning Ordinance shall have such definition herein unless a contrary intention clearly appears.

Section 3.02 Agent

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

Section 3.03 Agricultural Purpose

Those land uses which are devoted to the production of agricultural, horticultural, viticultural and dairy products, livestock, ranch raised fur bearing animals, poultry and bee raising, forestry, sod crops, and any and all products raised on farms intended for human consumption or other uses. Residence

shall not be considered an "agricultural purpose" for reasons of exemption from subdivision procedures of this Ordinance.

Section 3.04 Agricultural Soils

Soils classified in the Soil Survey of Bucks and Philadelphia Counties, Pennsylvania, U. S. Department of Agriculture, Soil Conservation Service, July, 1975, or current edition. The term, unless otherwise specified, refers to land capacity units I, II, III, those soils which may be considered prime agricultural soils.

Section 3.05 Applicant

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

Section 3.06 Architect

A professional architect registered by the Commonwealth of Pennsylvania.

Section 3.07 Block

An area bounded by two (2) or more streets.

Section 3.08 Borough

Borough of New Hope.

Section 3.09 Borough Engineer

A professional Engineer designated by the Borough Council to perform the duties of a Borough Engineer.

Section 3.10 Buffer

A strip of land established to protect adjacent land uses. Buffer yards are intended to visually soften the outline of buildings, to screen glare and noise and to create a visual barrier between adjacent land uses.

Section 3.11 Buildings (Also see structure)

A structure having a roof which is used for the shelter or enclosure of persons, animals, or property. The word "building" shall include any part thereof.

Section 3.12 Caliper

Caliper is the maximum thickness or diameter of a tree at a specified point. For measuring street trees and trees for

buffering and landscaping purposes, caliper measurements shall be taken at a point on the trunk six (6) inches above natural ground line for trees up to four (4) inches in caliper and at a point twelve (12) inches above the natural ground for trees over four (4) inches in caliper. For measuring existing trees to determine whether they are a forest resource, caliper measurements shall be taken at a point on the trunk four and one half (4 1/2) feet above natural ground line.

Section 3.13. Cartway (Roadway)

The portion of a street right-of-way, paved or unpaved, intended for vehicular use.

Section 3.14. Center Line of Street or Road

A line midway between and parallel to the two edges of the cartway, or as otherwise defined by the Borough Engineer.

Section 3.15. Clear Sight Triangle

An area of unobstructed vision at street intersections defined by lines of sight between points at a given distance from the intersection of the street.

Section 3.16. Council

New Hope Borough Council.

Section 3.17. Crosswalk

A publicly or privately owned right-of-way for pedestrian use, which crosses a cartway or driveway.

Section 3.18. Cul-de-sac

A street which intersects another street at one end and terminates at the other in a vehicular turnaround

Section 3.19. Developer

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

Section 3.20. Development

See Land Development Section 3.33.

Section 3.21. Easement

A grant of the specified use of a parcel of land to the

public, a corporation, or person.

Section 3.22 Engineer

A professional engineer registered by the Commonwealth of Pennsylvania

Section 3.23 Erosion

The process by which soil and bedrock are worn away by the action of wind, water, climate, or chemical action.

Section 3.24 Existing Grade

The vertical elevation of ground surface, above or below sea level, prior to earthmoving or filling.

Section 3.24A Feeder Roots

The smallest roots of a tree, which are responsible for most of the absorption of nutrients into the tree; most are located within the top twelve inches of the soil.

Section 3.25 Finished Grade

The final vertical elevation above or below sea level of the ground surface after development.

Section 3.26 Floodplain

- A. A relatively flat or low area adjoining a river, stream or watercourse, which is subject to partial or complete inundation;
- B. An area subject to the unusual and rapid accumulation or run-off of surface waters from any source.

Section 3.27 Floodplain District

The District specifically designated in Section 611 of the New Hope Zoning Ordinance as being subject to inundation by waters of one hundred (100) year flood as defined in the Flood Insurance Study dated September 28, 1984, and any subsequent changes.

Section 3.28 Forest

Areas, groves or stands of mature trees (i.e. greater than 8 inches caliper) consisting of ten or more individual trees covering an area of one quarter of an acre or more.

Section 3.29 Impervious Surfaces

Impervious surfaces are those that do not absorb precipitation and surface water. All buildings, parking areas, driveways, roads, sidewalks and areas in concrete and asphalt and any additional areas determined by the Engineer shall be considered impervious surfaces within this definition.

Section 3.30 Impervious Surface Ratio

The impervious surface ratio is measured by dividing the total area of all impervious surfaces within the site by the base site area.

Section 3.31 Improvements

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

Section 3.32 Lakes and Ponds

Natural and artificial bodies of water which retain water, exclusive of detention and retention basins. Artificial ponds may be created by dams, or result from excavation. The shoreline of such water bodies shall be measured from the spillway crest elevation rather than permanent pool if there is any difference. Lakes are bodies of water two and one half (2.5) or more acres in extent. Ponds are any water body less than two and one half (2.5) acres in extent.

Section 3.33 Land Development

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

- A. A group of two or more residential or non residential 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, parking lots, driveways, common area, leaseholds, condominiums, building groups or other features, or
- C. A subdivision of land.

The following types of development shall be excluded from the definition of land development when such development involves:

1. The conversion of an existing single-family detached dwelling or single family semi-detached dwelling into not more than three (3) residential units, unless such units are intended to be a condominium;
2. the addition of an accessory building, including farm buildings, on a lot or lots subordinate to an existing principal building.

Section 3.34 Land Owner

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 conditions), a lessee if he is authorized under the lease to exercise the rights of the land owner, or other persons having a proprietary interest in land.

Section 3.35 Landscape Architect

A professional landscape architect registered in the Commonwealth of Pennsylvania.

Section 3.36 Loop Street

A loop street is a street which has two points of intersection with the same road. In its simplest form a loop street enters a tract, follows a course through it and returns to the same road at some distance from the other intersection.

Section 3.37 Lot

The area of land, within designated property lines, including the area of any easement, used or set aside and available for use as a site of one or more buildings and any buildings accessory thereto or for any other purpose, in one ownership and not divided by a street, nor including any land within the right-of-way of a public or private street upon which said lot abuts, even if the ownership to such right-of-way is in the owner of the lot. A lot for the purpose of this Ordinance may or may not coincide with the lot of record.

Section 3.38 Mobile Home

A dwelling unit manufactured in one or more sections, designed for long-term occupancy; containing sleeping accommodations, a flush toilet, a tub or shower bath, and kitchen facilities, with plumbing and electric connections provided for attachment to outside systems and designed to be transported after fabrication on its own wheels, or on flatbed or other trailers; arriving at the site where it is to be occupied as a dwelling complete, including major appliances and furniture, and ready for occupancy except for minor and incidental unpacking and assembly operations. For

purposes of this Ordinance, travel trailers are not considered mobile homes. Mobile homes will be permitted as single-family detached dwellings in all districts in which single-family detached dwellings are permitted and shall conform to all requirements as specified in the New Hope Borough Zoning Ordinance for single-family detached dwellings. Mobile homes will not be permitted as single-family detached dwellings in Use B3, Single-Family Detached Clusters or Use B4, Performance Standard Development.

Section 3.39 Monument

A stone or concrete monument with a flat top at least four (4) inches square, containing a reference point, and at least twenty-four (24) inches in length. It is recommended that the bottom sides be at least two (2) inches greater than the top, to minimize movements caused by frost.

Section 3.40 Open Space

Open space is land used for recreation, resource protection, amenity or buffers and is freely accessible to all residents. It is regulated by the provisions of this Ordinance and the New Hope Borough Zoning Ordinance to ensure that it remains in such uses. Open space does not include land occupied by buildings, roads, or rights-of-way; the yards or lots of single or multi-family dwelling units, or parking areas as required by the provisions of the New Hope Borough Zoning Ordinance. Open space may be left in a natural state except in the case of recreation uses which may contain impervious spaces. Such impervious surfaces shall be included in the calculation of the impervious surface ratio. Parks shall be considered open space.

Section 3.41 Parking Space

An area on a lot used for parking a vehicle, to which there is access from a street or private drive.

Section 3.42 Pedestrian Walkway

A continuous way designated for pedestrians and separated from the through lanes for bicycles or motor vehicles by space or other barrier.

Section 3.43 Plan, Final

A complete and exact subdivision or land development plan, including all required supplementary data, prepared for official recording as required by statute, to define property rights and proposed streets and other improvements.

Section 3.44 Plan, Preliminary

A formal subdivision or land development plan (and including all required supplementary data), showing proposed street and lot layout as a basis for consideration prior to preparation of a Final Plan.

Section 3.45 Plan, Record

The copy of the Final Plan which bears the signed and dated approval of the Borough Engineer, Borough Planning Commission and Borough Council.

Section 3.46 Plan, Sketch

An informal plan, indicating salient existing features of a tract and its surroundings and the general layout of a proposed subdivision or land development.

Section 3.47 Planning Commission

The Planning Commission of New Hope Borough, Bucks County, Pennsylvania.

Section 3.47A Pruning

Removal of branches from a tree using proper tools and approved cutting techniques.

Section 3.48 Public Water System

A public water system is defined as a source of water serving more than one user unit (residence, business, church, school or combination thereof). All public water systems shall be designed and constructed as dual-purpose systems able to supply enough water for fire protection while at the same time meeting the anticipated consumption for other purposes.

Section 3.49 Record Owner

The legal and beneficial owner or owners of land whose interests appear of record in the office for the recording of deeds in and for Bucks county.

Section 3.50 Reserve Strip (Prohibited)

A reserve strip is a parcel of land which is parallel to and between a street right-of-way and a tract of land.

Section 3.51 Retention/Detention Basins

An impoundment for storm water run-off, made by constructing a dam or embankment or by excavating a pit, for the purpose of retaining run-off water and releasing it slowly into the ground or

into a natural water course at a controlled rate.

Section 3.52 Resubdivision

Any change of lot lines within a previously approved subdivision. See also Subdivision Section 3.69

Section 3.53 Review

An examination of the Preliminary Plan, or the Final Plan by the Planning Commission or the Borough Council.

Section 3.54 Right-of-way

Land set aside for use as a street, or other means of access.

- A. Existing right-of-way: The legal right-of-way as established by the Commonwealth or other appropriate governing authority currently in existence.
- B. Future right-of-way: The right-of-way deemed necessary to provide adequate width for future street improvements.

Section 3.55 Roadway

See Cartway, Section 3.13.

Section 3.56 Runoff

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

Section 3.57 Sedimentation

The process by which mineral or organic matter is accumulated or deposited by wind, water, or gravity. Once this matter is deposited (or remains suspended in water), it is usually referred to as "sediment."

Section 3.58 Sewer

- A. Public Sewer: A "public sewer" is any municipally or privately owned sewer system in which sewage is collected from buildings from more than one lot and/or dwelling unit and piped to an approved sewage disposal system. It may also be referred to as "off-lot" or "off-side" sewer. This shall include capped sewers.
- B. Private Sewer: An "on-lot" approved disposal system generally providing for disposal of effluent for only one building or a group of buildings on a single lot.

Section 3.59 Sight Distance

The 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.

Section 3.60 Site

The site shall be defined as the total land area to be proposed for subdivision or land development.

Section 3.61 Site Area

All land area within the site as defined in the deed or deeds; and as corroborated by a current site survey.

Section 3.62 Soil Percolation Test

A field test conducted by a person qualified according to the rules and regulations of the Bucks county Department of Health to determine the suitability of the soil for sanitary sewage disposal facilities by measuring the absorptive capacity of the soil at a given location and depth.

Section 3.63 Steep Slopes

Areas of a least one-quarter acre in size where the average slope exceeds fifteen (15) percent.

Section 3.64 Stabilization

The proper placing, grading and/or covering of soil, rock, or earth to insure their resistance to erosion, sliding or other movement.

Section 3.65 Street

A right-of-way, municipally or privately owned, serving as a means of vehicular and pedestrian travel, furnishing access to abutting properties, and space for public utilities.

Section 3.66 Street Line

The dividing line between the street and the lot. The street line shall be the same as the legal right-of-way provided that where a future right-of-way width for a road or street has been established, then that width shall determine the location of the street line. (Refer to Section 3.54)

Section 3.67 Structure

A combination of materials assembled, constructed or erected

at a fixed location, the use of which requires location on the ground or attachment to something having location on the ground.

Section 3.68 Subdivider

See Developer Section 3.19

Section 3.69 Subdivision

The division or redivision of a lot, tract or parcel of land by any means into two or more lots, tracts, parcels or other divisions of land, including changes in existing lot lines for the purpose, whether immediate or future, of lease, transfer of ownership or building or lot development; provided, however, that the subdivision by lease of land for agricultural purposes into parcels of more than ten acres, not involving any new street or easement of access or residential dwellings, shall be exempted.

Section 3.70 Subdivision, Major

Any subdivision not classified as a Minor Subdivision.

Section 3.71 Subdivision, Minor

The division of a single lot into two (2) lots, or the transfer of land from one lot to an adjacent lot without creating a greater number of lots.

Section 3.72 Surveyor

A professional land surveyor registered by the Commonwealth of Pennsylvania.

Section 3.72A Tree Dripline

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

Section 3.72B Tree Protection (TPZ)

An area in which no construction activity shall occur, except as specified below. The tree protection zone shall be an area radial to the trunk of a tree fifteen (15) feet from the trunk of the tree to be retained, or the distance from the trunk to the dripline, whichever is greater. Where there is a group of trees or woodlands, the tree protection zone shall be the aggregate of the protection zones for the individual trees. Encroachment within the TPZ shall only be permitted in that portion of the TPZ between the exterior limit of the TPZ and a single chord located eight feet from the trunk of a tree. This exception shall not apply for a subdivision or land development of more than twenty-five (25) acres.

Section 3.73 Utilities

Those services customarily rendered by public utility corporations, municipalities, or municipal authorities, in the nature of electricity, gas, telephone, water and sewerage, including the appurtenance used in connection with the supplying of such services (buildings, wires, pipes, poles, transformers, and the like). For purposes of this Ordinance cable television transmission equipment shall be included.

Section 3.74 Watercourse

Any natural or artificial swale, stream or structure in which water flows continuously or intermittently.

Section 3.75 Water Facility

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

A. On-Lot Water Distribution System

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

B. Public Water Supply System.

A source of water serving more than one user unit (dwelling unit, business, church, school or other uses approved by the Zoning Ordinance.)

Section 3.76 Wetlands

Areas known as marshes, swamps, or wetlands, including all areas greater than one-quarter (1/4) of an acre, where standing water is retained naturally for a portion of the year and unique vegetation has adapted to the area.

Section 3.77 Woodlands

The area comprising one (1) or more acres of wooded land where the largest trees measure at least six(6) inches diameter at breast height (dbh), 4.5 feet from the ground, or a grove of trees forming one canopy where ten or more trees measure at least ten (1) inches in diameter.

ARTICLE IV PROCEDURES FOR SUBDIVISION AND LAND DEVELOPMENT

Section 4.00 General

The following procedures shall be observed by all applicants, developers, and their agents.

- A. The review process for the plans shall be completed within the time limits established by the Pennsylvania Municipalities Planning Code. The official date of filing (the date the time period begins) shall be consistent with the Planning Code. The applicant may agree to waive or extend the time requirement in writing.
- B. The presentation of a preliminary plan and final plan shall each be a separate submission. The maximum review period authorized by the Municipalities Planning Code may be required for the preliminary plan and the final plan.
- C. The submission of a substantially revised preliminary plan or final plan in the opinion of the Borough shall constitute a new and separate submission. A substantially revised plan must be accompanied by a complete application form, all required information and fees. With a substantially revised plan, the applicant must submit a written withdrawal of the previously submitted plan.
- D. The separate stages of approval normally require the submission of Preliminary Plans and Final Plans. These differ in their purpose and required level of detail. The tables below indicate the required plans for the different types of submission and number of copies required.

PLANS REQUIRED

<u>Plan</u>	<u>Minor Subdivision</u>	<u>Major Subdivision</u>	<u>Land Development</u>
Sketch	Recommended	Recommended	Recommended
Preliminary	Not Required	Required	Required
Final	Required	Required	Required

NUMBERS OF COPIES REQUIRED

<u>Plan</u>	<u>No. of Copies</u>	<u>Distribution</u>
Sketch Plan	Eight (8)	2 copies Borough Council 6 copies P l a n n i n g Commission
Preliminary Plan	Twenty (20)	9 copies Borough Council /Administrator 6 copies P l a n n i n g Commission 1 copy B o r o u g h Solicitor 2 copies B o r o u g h Engineer 2 copies Bucks County P l a n n i n g Commission
Final Plan	Twenty-two (22)	9 copies Borough Council /Administrator 6 copies P l a n n i n g Commission 1 copy B o r o u g h Solicitor 2 copies B o r o u g h Engineer 1 copy Borough Zoning Officer 2 copies Bucks County P l a n n i n g Commission 1 copy Fire Marshall
Reports & Studies	Five (5)	2 copies Borough Council /Administrator 2 copies P l a n n i n g Commission 1 copy B o r o u g h Engineer
Computations	Five (5)	2 copies Borough Council a n d Administrator 1 copy P l a n n i n g Commission 2 copies B o r o u g h Engineer

- E. The owner of the parcel of land to be subdivided or developed shall submit a written statement granting the governing body, its authorized agents and representatives, the Planning Commission, and the representatives of the County and municipal departments and agencies having responsibility for review and/or approval under this Ordinance the right to enter the parcel of land for the purpose of inspection and enforcement of the requirements, terms and conditions imposed herein.
- F. All plans and applications shall be submitted to the Borough Administrator. Plans and applications shall not be deemed submitted until they are accepted by the Borough Administrator as being in proper form and accompanied by the proper filing fee. The Borough shall have this sole responsibility to forward the plans to other reviewing agencies. Plans delivered to any reviewing agency by the owner, developer or his agent are not a basis for Borough action.
- G. Within the review period as specified by the Municipalities Planning Code for the review process, the Borough of New Hope shall:
1. Review the applicant's submission.
 2. Review any reports submitted by the New Hope Planning Commission and other reviewing agencies.
 3. Listen to the applicant's presentation if requested.
 4. Render its decision in writing. It shall be sent to the applicant by mail at the address provided by the applicant on the application form. The decision shall be communicated to the applicant personally or mailed to him within the time limits as specified by the Municipalities Planning Code.
 5. When the application is not approved in terms as filed, the decision shall specify the defects found in the application and describe which have not been met and shall, in each case, cite the provisions of the statute or ordinance.
- H. For any replanning or resubdivision of land, the same procedure, rules and regulations shall apply as prescribed herein for an original subdivision or land development.

- I. Preliminary approval of the site plan must be obtained for the entire proposed development. Final approval may be obtained section by section, but such development sections shall be specified on the preliminary plan and must be numbered in the proposed order that they are to be developed. Such order of development must be adhered to, and if changes are required, plans must be re-filed and reviewed and approved. Approved preliminary plans, however, shall be subject to changes in the Borough Zoning Ordinance in accordance with the provisions of the Pennsylvania Municipalities Planning Code.

Section 4.01 Sketch Plan

Although it is not a prerequisite for approval of a final plan, an applicant may and is encouraged to submit a sketch plan as the basis for informal discussion. A sketch plan should bear the label "Sketch Plan" and is not an official document and involves no obligation on the part of the Borough. It is strongly suggested that the applicant use the sketch plan step which will be a definite advantage to the applicant and the Borough. A sketch plan will be reviewed by the Borough expeditiously and will not be subject to a time limit.

- A. Fee. The sketch plan is not a formal application and, therefore, no fee is required by the Borough. *Unless an applicant desires a formal review of a sketch plan by borough consultants. If such a formal review is requested, the applicant shall submit a sketch plan review agreement (appendix B) and shall establish and fund the related Escrow Account. The Bucks County Planning Commission may also participate at the sketch plan stage. Review by the Bucks County Planning Commission does require payment of a fee.

- B. Purpose. The purpose of the sketch plan is to enable the applicant advantageously to make use of the services of the New Hope Planning Commission and possibly the Borough Council to help him analyze the problems of the development more adequately for its sound coordination with the community.

This informal discussion can simplify official actions and save unnecessary expense and delay by giving guidance to the development at a stage when potential points of difference can be more easily resolved.

- C. Application Procedure. The applicant should submit the required copies of the sketch plan and supporting information and any required application forms to the Planning Commission Secretary.

The New Hope Planning Commission shall initially review the sketch plan submission and advise the applicant how the proposed subdivision or land development may conform or fail to conform with the requirements of this Ordinance and other applicable ordinances. The applicant may attend a meeting of the Planning Commission to discuss the proposal. The Planning Commission shall communicate its comments and recommendations to the applicant by mail at the address provided on the application by the applicant. Similarly, the Borough Council may conduct a review and discuss the plan with the applicant if requested. The review of a sketch plan is advisory only and the opinions expressed by the members of the Planning Commission and/or Council members expressed during sketch plan review and not binding.

Note:

The sketch plan is not a requirement and, therefore, will not receive an official approval. The amount of scope, concept, information, etc. contained in any sketch plans submitted and reviewed by the Borough must be developed in the preliminary plan stage to meet all the requirements of governing Borough ordinances.

D. Data Recommended for Sketch Plan Stage. Although the amount of information submitted at this stage is the option of the applicant, it should be recognized that well researched information can minimize expense at the preliminary plan stage and simplify the preliminary plan review. It is suggested that a sketch plan should contain, at least, the following information:

1. Name of the proposed subdivision or land development and identifying title.
2. Name and address of the owner of record and all equitable owners of the property, any authorized agent, and the applicant.
3. Tract boundaries.
4. North point and scale.
5. Streets on and adjacent to the tract.
6. Significant topographical and physical features.
7. Proposed general street layout
8. Proposed general lot layout.

Section 4.02

Preliminary Plan - Major Subdivision and Land Development

A. Purpose

The purpose of the preliminary plan stage is to ensure that the proposed subdivision or land development will be in strict compliance with the requirements of this Ordinance and other applicable ordinances.

B. Application Procedure

1. The applicant shall submit the required number of copies of the preliminary plan and supporting information along with any required completed application forms and fees to the Borough Administrator. The date of the receipt shall be marked on each copy.
2. The applicant shall submit the five (5) completed copies of the Planning Module for Land Development to supply necessary information for the Sewage Facilities Act (Act 537) reviewing agencies.
3. No preliminary plan shall be accepted by the Borough unless the appropriate fee in accordance with the current fee schedule adopted by resolution by the Borough Council shall be paid by check or money order at the time of submission to the Borough.
4. The preliminary plan shall be clearly labeled as a preliminary plan.
5. Where any revision is made, or when the plan is a revision of a previously approved plan, solid lines shall show the currently proposed features. A symbol and reference number shall identify the aspect revised on the field of the drawing. All revisions shall be noted in a revision block and listed by symbol and reference number. An explanation of each revision shall be included in the revision block.
6. In addition to the review requirements specified in Section 4.00 G., the Borough shall review the accompanying data and impact statements submitted under the requirements of this Section, and prior to granting preliminary approval, specify improvements appropriate and necessary to lessen specific identified negative impacts.
7. Approval of the preliminary plan shall not constitute approval of the final plan or authorize the sale of lots or construction of buildings.

C. Size and Scale of Plans

1. Plans shall be drawn on sheets eighteen (18) inches by twenty-four (24) inches; twenty-four (24) inches by thirty-six (36) inches; or thirty-six (36) inches by forty-eight (48) inches. All sheets comprising a submission shall be on one size. Sheets should be large enough to clearly show all required features but at a scale not less than 1" = 100'.
2. The Site Survey Map, the Natural Features Map and Site Plan shall be drawn at a scale of fifty (50) feet to one (1) inch or one hundred (100) feet to one (1) inch. An appropriate scale shall be used for other documents submitted.
3. The submission shall include a copy of the site plan for the entire property on a single sheet at an appropriate scale that will fit the maximum sheet size submitted.
4. The plan shall be so prepared and bear an adequate legend to indicate clearly which features are existing and which are proposed.
5. Each sheet shall be numbered and shall show its relationship to the total number of sheets.

D. Required Information and Documents

1. A certified Site Survey containing the following information shall be submitted.
 - a. Name of the proposed subdivision or land development or identifying title.
 - b. Name and address of the owner of record and all equitable owners of the property, any additional agent, and the applicant.
 - c. Name of the professional land surveyor responsible for the property survey in accordance with Act 367 of 1979.
 - d. Municipality in which the subdivision or land development is located.
 - e. North point, date and scale (written and graphic).
 - f. Tax map lot numbers.

- g. A location map for the purpose of locating the site at a scale of not less than eight hundred (800) feet to the inch, showing the relation of the tract to adjoining properties and to all streets, roads, zoning districts and municipal boundaries existing within sixteen hundred (1,600) feet of any part of the property.
- h. The names of owners of land immediately adjacent or across contiguous highways, streets and roads, and the names of proposed or existing subdivisions and land developments immediately adjacent or across contiguous highways, streets and roads.
- i. All existing highways, streets and roads on, adjacent to, or within one hundred (100) feet of any part of the tract, including name, right-of-way width and cartway width.
- j. All existing buildings and their uses, bodies of water, sewers, water mains, culverts, petroleum or petroleum product lines, gas lines, electric and telephone lines, fire hydrants, all other utilities and other significant man-made features on or within one hundred (100) feet of the tract.
- k. All existing property lines, easements and rights-of-way, and the purpose for which the easements have been established.
- l. Pursuant to Act 287 of 1974 all underground utility lines shall be shown on the plan. The type of line, the utility company owning the line, the size of the line, and the width of any right-of-way or easement shall be shown.
- m. Site boundaries (bearings in degrees, minutes and seconds and distances to the hundredth of a foot).
- n. Total acreage of the tract to the thousandth of an acre and in hundredths of square feet.
- o. List the date of all references to any subdivision which increased or decreased the size of the subject tract since December 14, 1981.

- p. Existing contours at vertical intervals of two (2) feet for land with average natural slope of four percent (4%) or less, and vertical intervals of five (5) feet for more steeply sloping land.
- q. USC and GS bench mark(s) to which contours refer, including the description and location of the bench mark(s).
- r. Water supply, wells, bodies of water, sewage or sewage disposal systems on the tract and on adjacent properties within one hundred (100) feet.
- s. Location of all existing monuments.
- t. A certification by the registered surveyor which shall read as follows:

I HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL LAND SURVEYOR, LICENSED IN COMPLIANCE WITH THE LAWS OF THE COMMONWEALTH OF PENNSYLVANIA: THAT THIS IS A TRUE AND ACCURATE SURVEY MADE ON THE GROUND COMPLETED BY ME ON _____ (DATE); THAT ALL THE MARKERS SHOWN THEREON ACTUALLY EXIST; THAT THEIR LOCATION, SIZE, TYPE AND MATERIAL ARE ACCURATELY SHOWN: AND THAT NO ENCROACHMENTS, RIGHTS-OF-WAY OR EASEMENTS EXIST EXCEPT AS SHOWN HEREIN.

Signature

Date

Seal

2. Natural Features Map

a. Floodplain areas.

The portion of the land, if any, within the Floodplain District of New Hope Borough and the identification of the land within the Floodplain District which shall include areas subject to inundation by waters of the 100

year flood. The basis for the delineation of this District shall be the current Flood Insurance Study for the Borough prepared by the Federal Insurance Administration. In those areas of the Borough which are not included within the aforementioned Flood Insurance Study, the Floodplain District shall be defined as that area including all soils mapped by the "Soil Survey of Bucks and Philadelphia Counties, Pennsylvania", prepared by the Soil Conservation Service as flood plain soils.

- b. Flood plain soil types.
- c. Slope areas
 - (1) 0 to 15%
 - (2) 15 to 25%
 - (3) 25% and over
- d. Location of forest areas and existing woodlands, and the location of isolated trees of four (4) inches caliper or more.
- e. Streams
- f. Lakes and Ponds
- g. Wetlands
- h. Rock outcroppings
- i. The boundaries of the various soil types and identification key as indicated in the "Soil Survey of Bucks County and Philadelphia county, Pennsylvania", with a description of each soil type and limitations of the soils for on-site sewage disposal.
- j. Name of the engineer or other professional person responsible for the Natural Features Map.

3. Site Plan of Proposed Project

The following information shall be provided.

- a. Name of the proposed subdivision or land development or identifying title.
- b. Name and address of the owner of record and

all equitable owners of the property, and authorized agent and the applicant(s)

- c. Name and address of the engineer, surveyor, architect or landscape architect responsible for the plan.
- d. Data to show compliance with the performance standards of the zoning district of the New Hope Borough Zoning Ordinance as amended.
- e. Number of lots proposed, numbered in consecutive order, proposed lot lines and approximate dimensions, and any restrictions, covenants, etc., under which lots are to be sold.
- f. Zoning requirements, including:
 - (1) applicable district
 - (2) maximum density permitted and proposed density
 - (3) required and proposed lot sizes (gross and net area)
 - (4) required and proposed open space and impervious surface ratios
 - (5) any variance or special exceptions granted
 - (6) minimum building setback lines (front, side, and rear) for each lot
 - (7) lot width requirements.
 - (8) buffer yards.
- g. A restriction requiring all utilities to be underground.
- h. The location, width, length and suggested names of all proposed streets, roads, rights-of-way and easements.
- i. Location and dimension of parks, permanent open space areas, recreation areas, playgrounds, public buildings and other areas designed for appurtenant facilities, public use, or proposed to be dedicated or reserved for public use, together with the condition of such dedications or reservations.
- j. For land developments, the following shall be shown:
 - (1) building locations

- (2) parking facilities
- (3) service access
- (4) lighting
- (5) types of buildings proposed
- (6) number of units of each type proposed
- (7) sidewalks and pedestrian walks
- (8) trash receptacles.

- k. Where the preliminary plan submitted covers only part of the applicant's entire holding, a sketch of a feasible future subdivision of the unsubmitted part shall be furnished; and the street system of the unsubmitted part will be considered in the light of adjustments and connections with future streets in the part submitted.
- l. Municipality in which the subdivision or land development is to be located.
- m. North point, date and scale (written and graphic).
- n. Tax map lot numbers.
- o. A location map for the purpose of locating the site at a scale not less than eight hundred (800) feet to the inch, showing the relation of the tract to adjoining property and to all streets, roads, zoning districts, and municipal boundaries existing within sixteen hundred (1,600) feet of any part of the subject property.
- p. The names of owners and tax map numbers of land immediately adjacent or across contiguous highways, streets and roads, and the name of proposed or existing subdivisions or land developments immediately adjacent or across contiguous highways, streets and roads.
- q. All existing highways, streets and roads on, adjacent to, or within one hundred (100) feet of any part of the tract, including name, right-of-way widths and cartway width.
- r. All existing buildings and their uses, bodies of water, sewers, water mains, culverts, petroleum or petroleum product lines, gas lines, fire hydrants, and other significant man-made features on or within one hundred

(100) feet of the tract. Existing structures whether to remain or to be demolished, shall be shown.

- s. All existing property lines, easements and rights-of-way shall be indicated. The purpose for which the easements have been established shall be specified.
- t. Tract boundaries showing bearings and distances shall be shown.
- u. Total acreage of the tract in thousandths of an acre and hundredths of square feet shall be shown.
- v. The net buildable site area shall be mapped.
- w. The site capacity calculations (See Section 908 of the New Hope Borough Zoning Ordinance) shall be included. All area measurements used for these calculations shall be indicated for each resource on the Natural Features Map.
- x. Existing contours and proposed final contours shall be shown. Existing contours shall be shown in dashed lines and proposed contours shall be shown with solid lines.

4. Landscaping and Grading Plan

Containing the following information:

- a. Existing contours and proposed final contours shall be shown. Existing contours shall be shown with dashed lines and proposed contours shall be shown with solid lines.
- b. Plant materials, botanical and common names, sizes, quantities and locations.
- c. Intended treatment of all disturbed and undisturbed areas: Grass seed, sod, ground cover, natural, etc.
- d. Tree protection measures shall include the following:
 - (1) The location of all trees to be saved, including their trunk and dripline locations. Driplines should be plotted accurately, to scale. When groups of

trees are to be saved, only the locations of the trees on the perimeter must be shown:

- (2) The tree protection zone shall be included on the plan;
- (3) The location of proposed retaining walls around trees shall be shown;
- (4) Construction details of all retaining walls shall be provided, including special soil and fill mediums where applicable. Any grade changes which would alter surface and/or subsurface water movements, either to or from the tree protection zone, must also be indicated.

5. Site Utility Plan(s)

Including profiles and details for the following:

- a. Sanitary sewer systems. Direction and distance to the nearest and serving sewage treatment plant(s) and information as to accessibility and capacity for this project.
- b. Storm water control system
- c. Water supply system
- d. Fire protection system
- e. Lighting system (no profile required)
- f. Underground electric service, telephone, gas and cable television.

6. Dedicated Street Plans including profiles and details.

7. Soil Erosion and Sedimentation Control Plan and Storm Water Management Plan for the construction phase of the project.

8. Required Data to Accompany Preliminary Plan

- a. Public Sewage Facilities if applicable. (See Section 4.02 D.12)
- b. Public Water Supply System if applicable.
- c. Traffic Impact Study (See Section 5.23)
- d. Water Feasibility Study (See Section 5.23)
- e. Methods of assuring responsibility for the maintenance of resource protection lands, open space, recreation lands, parking lots and authorized private streets.. Methods of maintenance shall incur no costs to the

- Borough.
- f. Storm water management computations and reports.
9. Sketches of building plans and elevations for land developments in the Highway Commercial and Planned Unit Development Districts.
10. A written report or narrative of the scope of the proposed project which will be used as the basis for the detailed development of the plan. The purpose of the report is to inform the Borough of the intent, purpose and desire of the developer. The report shall contain but would not be limited to, information on the type of structures, population (including age groups of occupants), water system, sewage system, surface drainage system, erosion control, recreation, rubbish handling, lighting, resource protection, landscaping, proposed type of construction and facing materials, etc.
11. A resource protection map which illustrates: (1) all natural features required by the New Hope Borough Zoning Ordinance and (2) a preliminary regrading plan which illustrates all disturbance of the identified natural feature areas. The amount of each natural feature disturbed shall be indicated and illustrated on the resource protection map.
12. Evaluation of Sewage Facilities
- The applicant shall submit the following information for review to insure that the proposed method of sewage collection, treatment and disposal is adequate to serve the proposed subdivision or land development. The evaluation at the preliminary plan stage must establish that each proposed lot, dwelling or building will be serviced by an appropriate sewage system, thereby avoiding the necessity of major revisions of the plan at the final plan stage. For individual on-lot systems, a lot by lot evaluation is required.
- a. Procedure
- (1) With the preliminary plan application, the applicant shall submit five (5) completed copies of the Planning Module for Land Development as indicated in Section 402.B.2. and any additional

information required in 402.D.12.c. (4 copies for Bucks County Department of Health; 1 copy for Borough files).

- (2) The Borough shall distribute the data above to the appropriate reviewing agencies.
- (3) The New Hope Planning Commission and Engineer shall review any reports submitted by the appropriate reviewing agency and may include these considerations in the Commission's recommendations to the Borough Council.
- (4) The Borough Council shall review any reports submitted by the Planning Commission and Engineer and the reviewing agencies and may consider these in their actions on the preliminary plan application.

b. Systems Consistent with Sewage Facilities Plan

Where the proposed sewage system(s) are consistent with the New Hope Borough Sewage Facilities Plan (Act 537), the applicant shall submit the Planning Modules for Land Development as a supplement to the official sewage facilities plan.

- (1) For on-lot systems with flows up to 10,000 gallons per day the following certification shall appear on the plan, and be signed by an authorized agent of the Bucks County Department of Health.

OBSERVATION OF DEEP TEST HOLES AND PERCOLATION TESTS ON ALL LOTS HAVE BEEN CONDUCTED BY THE BUCKS COUNTY DEPARTMENT OF HEALTH AND IT HAS BEEN DETERMINED THAT LOTS _____ ARE SUITABLE FOR _____ TYPE SEWAGE DISPOSAL SYSTEM(S) UNDER CURRENT RULES AND REGULATIONS. PERMITS FOR THE CONSTRUCTION OF EACH INDIVIDUAL SEWAGE DISPOSAL SYSTEM ON EACH LOT MUST BE OBTAINED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF THE SYSTEM AND/OR BUILDING

(Date)

(Signature of Bucks County Department of Health Agent)

(Title)

(2) For on-site systems with flows greater than 10,000 gallons per day the system must receive approval of the Planning Modules from the Bucks County Department of Health and the Pennsylvania Department of Environmental Resources. The following information shall be provided by the applicant:

- a. type of system
- b. schematic layout of system
- c. location of system
- d. capacity of system
- e. proposed maintenance of system
- f. proposed ownership of system
- g. buffer area to be provided around the system
- h. easements relating to the system
- i. the plan shall contain a title block as follows, signed by an authorized agent of the Bucks County Department of Health.

THE BUCKS COUNTY DEPARTMENT OF HEALTH HAS REVIEWED THE DESIGN OF THE PROPOSED COMMUNITY ON-SITE SUB-SURFACE ABSORPTION SYSTEM ALONG WITH THE REQUIRED DEEP TEST HOLE AND PERCOLATION TESTS AND HAS OBTAINED THE DEPARTMENT OF ENVIRONMENTAL RESOURCES' REVIEW FOR SYSTEMS INVOLVING FLOWS GREATER THAN 10,000 GALLONS PER DAY. IT HAS BEEN DETERMINED THAT THE SYSTEM IS SUITABLE FOR TREATING _____ GALLONS PER DAY OR _____ DWELLING UNITS UNDER THE CURRENT RULES AND REGULATIONS. PLANNING APPROVAL FROM THE MUNICIPALITY UNDER THE REQUIREMENTS OF ACT 537 AND PERMITS FOR CONSTRUCTION MUST BE OBTAINED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF THE SYSTEM AND/OR BUILDING.

_____ (Date)

(Signature of Bucks County Department of Health Agent)

_____ (Title)

(3) Public collection, treatment and disposal service. The proposed system(s) must receive approval of the Planning Modules for Land Development from the Bucks County Department of Health and the Pennsylvania Department of Environmental Resources. The applicant shall provide written certification from the servicing sewer authority that capacity will be available for the proposed subdivision or

land development.

c. Systems Not Consistent with Sewage Facilities Plan

Where the proposed sewer system(s) are inconsistent with the New Hope Borough Sewage Facilities Plan (Act 537), the applicant shall submit a request for revision to the Sewage Facilities Plan which shall include the Planning Modules for Land Development and comprehensive analysis of alternative methods of sewage collection, treatment and disposal. However, the revision will be reviewed and must be approved by the New Hope Borough Council, Bucks County Department of Health and the Pennsylvania Department of Environmental Resources. If the revision to the sewage facilities plan is not approved as requested, the applicant shall resubmit or revise the preliminary plan proposal to be consistent with the adopted New Hope Borough Sewage Facilities Plan. A comprehensive analysis of alternative sewage systems shall include, but not be limited to, the following:

- (1) A detailed wastewater alternative analysis report to include, but not be limited to, the following information:

Detailed soils investigation as it relates to the suitability of the tract of ground for waste disposal

- (2) Detailed geologic and hydrogeologic investigations to determine the ability of the tract to supply water to the proposed development and to address the effect that the proposed wastewater facility will have on ground water.

- (3) A technical environmental and economic comparison of the following wastewater alternatives:

- a. Individual on-lot waste disposal systems
- b. Community on-lot waste disposal systems
- c. Community lagoon system with spray irrigation
- d. Package plant with spray irrigation
- e. Such other waste disposal system as the applicant proposes or the Borough Council may require.

- (4) Preliminary plans of the type of systems to be

utilized in the development shall be submitted.

The preliminary waste disposal plan shall include the following information, but will not be limited to:

- a. type of system
- b. system location
- c. system capacity
- d. proposed system maintenance
- e. proposed system ownership
- f. location of all existing and proposed wells within one-quarter mile of the system
- g. schematic layout of the system
- h. buffer area to be provided around the system
- i. easements relating to the system

(5) If the requested revision of the New Hope Borough Sewage Facilities Plan is approved, the proposed sewage system(s) shall be evaluated as required by Section 402.D.12.c. of this Ordinance.

(6) If the requested revision to the New Hope Borough Sewage Facilities Plan is not approved, the proposed method of sewage collection, treatment and disposal must be changed to be consistent with the Sewage Facilities Plan and shall be evaluated as required by Section 4.02.d.12.c. of this Ordinance.

Section 4.03 Final Plan - Major Subdivision and Land Development

A. Purpose

The purpose of the final plan stage is to insure formal approval by the New Hope Borough Council before plans for all major subdivisions and land developments are recorded as required by Section 4.05 of this Ordinance.

B. Application Procedure

1. The final plan applicant shall submit the required number of copies of the final plan and supporting information along with any required completed application forms and fees to the Borough Administrator. The date of receipt shall be marked

on each copy.

2. No final plan shall be accepted by the Borough unless:
 - (a.) a preliminary plan has been approved, and
 - (b.) the appropriate fee in accordance with current fee schedule adopted by resolution by the Borough Council shall be paid by check or money order at the time of submission to the Borough.
3. The final plan shall be clearly labeled as a final plan.
4. Where any revision is made, or when the plan is a revision of a previously approved preliminary or final plan, solid lines shall show the currently proposed features. A symbol and reference number shall identify the aspect revised on the field of the drawing. All revisions shall be noted in a revision block and listed by symbol and reference number. An explanation of each revision shall be included in the revision block.
5. Within ninety (90) days following the submission of the application, the Borough shall complete the review process specified in Section 4.00 G.
6. If approved by the Borough Council, two (2) exact copies of the approved final plan on linen cloth shall be submitted for the required signatures.
7. If required by the Borough Council, one (1) exact black-line transparent overlay showing roads, lot lines, streams, lakes and ponds shall be submitted at a scale of 1" to 800' for use by the Borough in updating the Borough base map. It shall be submitted at the time the developer's agreement is executed.

C. Size and Scale of Plans

The final plans shall be prepared in accordance with the specifications and requirements of Section 4.02 C.

D. Required Information and Documents

1. A Certified Site Survey shall be submitted with the information required by Section 4.02.D.1.
2. A Natural Features Map shall be submitted with the information required by Section 4.02.D.2.

3. A Site Plan of the Proposed Project shall be submitted with the information required by Section 4.02.D.3. except that all proposed dimensions and bearings of each lot line, areas of lots, and consecutive numbering of lots shall be shown.
4. A Landscaping and Grading Plan shall be submitted with the information required by Section 4.02.D.4.
5. Site Utility Plan(s) shall be submitted with the information required by Section 4.02.D.5.
6. An Improvement Construction Plan shall be submitted with the following information and at either of the following scales:

Horizontal

Vertical

20 feet/inch
50 feet/inch

2 feet/inch
5 feet/inch

- a. Horizontal Plan (streets). The horizontal plan shall show details of the horizontal layout including:
 - i. Center line with bearings, distances, curve data and stations corresponding to the profile.
 - ii. Right-of-way and curb lines with radii at intersections.
 - iii. Beginning and end of proposed construction.
 - iv. Tie-ins by courses and distances to intersection of all public roads, with their names and widths.
 - v. Location of all monuments with reference to them.
 - vi. Property lines and ownership of abutting properties.
 - vii. Location and size of all drainage structures, sidewalks, public utilities, lighting standards, and street name signs.
- b. Horizontal Plan (storm drains and sanitary sewers)
 - i. Location and size of line with stations corresponding to the profile.
 - ii. Location of manholes or inlets with grade between and elevation of flow line and top of each manhole or inlet.

- iii. Property lines and ownership, with details of easements where required.
 - iv. Beginning and end of proposed construction.
 - v. Location of laterals.
 - vi. Location of all other drainage facilities and public sewer lines.
 - vii. Hydraulic design data for culverts and/or bridge structures.
- c. Profile (streets)
- i. Profile of existing ground surface along center line of street.
 - ii. Proposed center line grade with percent on tangents and elevations at fifty (50) foot intervals, grade intersections and either end of curb radii
 - iii. Vertical curve data including length, elevations and minimum sight distance as required by the Borough.
- d. Cross Section (Streets)
- i. Right-of-way width and location and width of paving.
 - ii. Type, thickness, and crown of paving.
 - iii. Type and size of curb or swale, if no curb.
 - iv. Grading of sidewalk area.
 - v. Location, width, type and thickness of sidewalks
 - vi. Typical location of sewers and utilities with sizes.
- e. Profile (Storm drains and sanitary sewers)
- i. Profile of existing ground surface with elevations at top of manholes or inlets.
 - ii. Profile of storm drain or sewer showing type and size of pipe, grade, cradle, manhole, and inlet locations, and elevations along flow line at fifty (50) foot intervals.
7. The Soil Erosion and Sedimentation Control Plan for the construction phase of the project shall be submitted.
8. Other required information. The information required by the following provisions of this Ordinance shall be submitted:

- a. Section 4.02.D.8.c.
- b. Section 4.02.D.9
- c. Section 4.02.D.11.

9. Certification of Sewage Facilities

See Section 4.02.D.12.

10. For wells that are required to be reviewed by the Delaware River Basin Commission (DRBC) certification of DRBC approval shall be submitted prior to the granting of final approval of the subdivision or land development application.

E. Improvements or Guarantee Thereof Prerequisite to Final Plan Approval

1. Improvements

Before approving any subdivision or land development plan for recording, the Borough Council shall either require that the necessary grading, paving and other improvements herein specified shall have been installed in strict accordance with the standards and specifications of the governing body, or that the governing body be assured by means of a proper contract and completion guarantee, as set forth in Section 4.03.E.2. hereof, that the improvements will subsequently be installed by the developer.

2. Contracts

In all cases where the necessary grading, paving and other improvements required herein shall not have been installed in strict accordance with the standards and specifications of the Borough prior to approval of the final plan, the developers shall enter into a written agreement with the Borough in accordance with the requirements of the Municipalities Planning Code in the manner and form approved by the Borough Solicitor, wherein developer shall agree, to the extent applicable: (Appendix A is a model agreement which may be modified by the Borough Solicitor to suit the particular needs of the development.)

- a. To construct or cause to be constructed at his own expense all streets, street signs, curbs, sidewalks, street and buffer plantings, street lights, fire hydrants, water mains, sanitary sewers (including capped sewers and capped

water mains), storm sewers, drainage, grading and erosion control improvements, and other improvements including off-site improvements as may be required by the Borough shown on said subdivision or land development plan, all in strict accordance with the standards and specifications of the Borough and within the time specified in said agreement. (See Appendix A)

- b. To make adequate provisions with the Borough Engineer for the inspection of the construction of the aforesaid improvements to assure strict compliance with the Borough standards and specifications.
- c. To secure the structural integrity of the required improvements for the subdivision as well as the functioning of the required improvements in the subdivision in accordance with the design and specifications of that particular final plat of the required improvements, including streets, street signs, curbs, sidewalks, street and buffer plantings, street lights, fire hydrants, water mains (including capped water mains), sanitary sewers (including capped sewers), storm sewers, drainage, grading and erosion control improvements, and other improvements including off-site improvements, as may be required by the Borough for the period of eighteen months from the date of acceptance of dedication of some or all of the required improvements following completion.
- d. To pay all costs, charges or rates of the utility furnishing electric service for the street lighting facilities installed by the developer until such time as the streets shown on the subdivision and/or land development plan shall have been accepted or condemned by the Borough for public use, and to indemnify and save harmless the Borough from and against all suits, actions, claims and demands for electric service as aforesaid, or any part thereof, to the time that said streets shall be accepted or condemned as public streets in the manner hereinabove set forth.
- e. To post contemporaneous with the execution of such agreement, such financial security as is required by the Pennsylvania Municipalities

Planning Code, as amended.

- f. To obtain the easements and releases required by this Ordinance.
 - g. To reimburse the Borough promptly for reasonable attorney's and engineer's fees and fees for other professionals employed by the Borough to review or process subdivision and land development plans.
3. The provisions of this section shall not relieve the developer from the penalties provided for in Section 515 of the Pennsylvania Municipalities Planning Code for violations of this Ordinance.

F. Approval of Plans

1. Appropriate approval blocks shall appear on the first sheet or title sheet of the set of plans. All approved final plans shall be signed by the Borough Engineer, a designated member of the Planning Commission and the Borough Council. Such signatures shall be placed on linen prints of the approved plan for recording with the County and Borough. All sheets other than the first, shall be date stamped, approved and marked for identification purposes.
2. Before acting on any subdivision or land development plan, the Borough Council may hold a public hearing thereon after public notice.
3. Notes and Certificates - The Record Plan must include the required notes and certificates:
 - a. On all applications where Improvement Construction Plans are required, the following note shall appear on the Record Plan: "The Approved Improvement Construction Plans, Sheets 1 to _____, which may be inspected at the office of the Borough Administrator, have been made a part of the approved Final Plan (Record)."
 - b. The signature of the Registered Engineer or Surveyor certifying that the plan represents a survey made by him; that the monuments shown hereon exist as located; and the dimensional and geodetic details are correct.

c. An acknowledgement as follows:

(1) Where the owner(s) of record are individuals, all shall join as follows:

Commonwealth of Pennsylvania:

SS.

County of _____

On the _____ day of _____ 19____, before me the subscriber, a Notary Public of the Commonwealth of Pennsylvania, residing in _____ personally appeared (name or names of all owners), known to me (or satisfactorily proven) to be the person whose names (is/are) subscribed to the foregoing Plan, and acknowledge that (he/she/they) (is/are) the registered (owner/owners) of the designated land, that all necessary approval of the plan has been obtained and is endorsed thereon, and that (he/she/they) desire that the foregoing plan be recorded according to law.

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

Notary Public
My Commission Expires

(SEAL)

(2) Where the owner of record is a corporation:

Commonwealth of Pennsylvania:

SS.

County of _____

On the _____ day of _____ 19____, before me the subscriber, a Notary Public of the Commonwealth of Pennsylvania, residing in _____ personally appeared (name of officer of corporation), who acknowledged (himself/herself) to be the (president or secretary) of (name of the corporation), a corporation, and that as such (president or secretary), being authorized to do so, (he/she) executed the foregoing plan by signing that the said corporation is the registered owner of the designated land, that all necessary approval of the plan has been obtained and is endorsed thereon, and that the said corporation desires that the foregoing plan be recorded according to law.

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

Notary Public
My Commission Expires

(SEAL)

d. Sample signature blocks:

Approved by resolution of the Borough Council of New Hope, County of Bucks, Commonwealth of Pennsylvania, at a meeting on the _____ day of _____, 19_____.

Recommended for approval by the New Hope Borough Planning Commission on the _____ day of _____, 19_____.

Recommended for approval by the New Hope Borough Engineer on the _____ day of _____, 19_____.

Reviewed by the Bucks County Planning Commission on the _____ day of _____, 19_____.

e. Recording Notation.

"Recorded in the office of the Recorder of Deeds, Bucks County, Pennsylvania in Plan Book _____ Page _____ on the _____ day of _____, 19_____.

f. Signatures to appear on Plan - the following signatures shall be placed directly on the plan in black ink:

- (1) The owner or owners of record of land. If the owner of record of land is a corporation, the signatures of the president and secretary shall appear.
- (2) The notary public acknowledging the owner's statement of intent.
- (3) The licensed engineer or surveyor who prepared the plan. If an architect or a landscape architect collaborated in the preparation of the plan, his signature shall also appear.

- (4) The Chairman and Secretary of the Borough Planning Commission.
- (5) The Council of New Hope Borough.
- (6) The Executive Director of the Bucks County Planning Commission.

G. Declaration of Restrictions and covenants

Before approving any Subdivision or Land Development Plan for recording, the developers shall deliver to Borough Council a Declaration of Restrictions and Covenants which has been fully executed in a form acceptable to the Borough and sufficient for recording. Said Declaration shall provide, inter alia, as follows:

1. That the conditions, restrictions and covenants shall be covenants running with the land.
2. That the conditions, covenants and restrictions shall be enforceable by New Hope Borough.
3. That all improvements and facilities shall be subject to a general easement in favor of the Borough of New Hope, its successors and assigns, its agents, servants, workmen and employees, contractors and sub-contractors, for the purpose of ingress, egress, on foot or with equipment for the purposes of repairing, renovating and maintaining all drainage facilities and other improvements; however, the Borough of New Hope, its successors and assigns shall have no duty to maintain and/or repair any such improvements and shall do so only if such maintenance and/or repair is not performed by the developer, his heirs, executors, administrators, successors and assigns. Furthermore, all such maintenance and repairs by the Borough of New Hope, its successors and assigns, shall be at the expense of the developer and/or his heirs, executors, administrators, successors and assigns, and/or at the expense of each and every owner of a lot or unit, jointly and severally. In addition, all such maintenance and/or repairs shall be performed by the Borough of New Hope only at such times as the Borough, in its sole discretion, determines so to do.
4. That no occupancy permit shall be issued by the Borough for any resident on any lot within any unit within the development until the Borough Engineer shall certify that such lot or unit has completed

roads across its entire frontage, continuous completed road access to public roads now existing, and fully operating supporting facilities such as, but no limited to, drains and sewers.

5. A list of all conditions of final Subdivision Plan approval.
6. A statement that recorded Subdivision Plan represents only one sheet of a number of sheets and documents which comprise the final Plan. That the premises which are the subject of this agreement is subject to all the pages of the final Subdivision Plan and documents as approved, even though such pages and documents are not recorded. That copies of the full set of final plans and documents may be reviewed at the New Hope Borough Office during regular business hours.
7. That the agreement is intended to be recorded in the Office of the Recorder of Deeds in and for Bucks County

Section 4.04 Final Plan - Minor Subdivision

A. Purpose

The purpose of the final plan stage is to insure formal approval by the New Hope Borough Council before a plan for a minor subdivision is recorded as required by Section 4.05 of this Ordinance.

B. Application Procedure

1. The Minor Subdivision applicant shall submit the required number of copies of the final plan and supporting information along with any required completed application forms and fees to the Borough Administrator. The date of receipt shall be marked on each copy.
2. No final plan shall be accepted by the Borough unless the appropriate fee in accordance with current fee schedule adopted by resolution by the Borough Council shall be paid by check or money order at the time of submission to the Borough.
3. The final plan shall be clearly labeled as a final plan.
4. Where any revision is made, or when the plan is a

revision of a previously approved final plan, solid lines shall show the currently proposed features. A symbol and reference number shall identify the aspect revised on the field of the drawing. All revisions shall be noted in a revision block and listed by symbol and reference number. An explanation of each revision shall be included in the revision block.

5. Within the time limits established by the Municipalities Planning Code the Borough Council shall:
 - a. Review the applicant's submission.
 - b. Review any reports submitted by the New Hope Planning Commission and other applicable reviewing agencies.
 - c. Listen to the applicant's presentation if requested
 - d. Render its decision within the provisions of the statute in writing and this shall be sent to the applicant by mail at the address provided by the applicant on the application form.
 - e. When the application is not approved as filed, the decision shall specify the defects found in the application and describe which requirements have not been met and cite the provisions of the statute or ordinance.

C. Size and Scale of Plans

The final plans shall be prepared in accordance with the specifications and requirements of Section 4.02.C.

D. Required Information

1. Site Survey

- a. Name of the proposed subdivision or identifying title.
- b. Name and address of the owner of record of the property to be subdivided, any authorized agent, and the applicant.
- c. Name of the professional land surveyor

responsible for the property survey in accordance with ACT 367 of 1979.

- d. Municipality in which the subdivision or land development is located.
- e. North point, date and scale (written and graphic).
- f. Tax map lot numbers of the property to be subdivided.
- g. A location map for the purpose of locating the site at a scale not less than eight hundred (800) feet to the inch, showing the relation of the tract to adjoining property and to all streets, roads, zoning districts, and municipal boundaries existing within sixteen hundred (1,600) feet of any part of the property.
- h. The names of owners and tax map numbers of land immediately adjacent or across contiguous highways, streets and roads, and the names of proposed or existing subdivisions and land developments immediately adjacent or across contiguous highways, streets and roads.
- i. All existing highways, streets and roads on, adjacent to, or within one hundred (100) feet of any part of the tract, including name, right-of-way width and cartway width.
- j. All existing buildings and their uses, bodies of water, sewers, water mains, on-site septic systems and wells, culverts, petroleum or petroleum product lines, gas lines, electric and telephone lines, fire hydrants, all other utilities and other significant man-made features on the tract.
- k. All existing property lines, easements and rights-of-way, and the purpose for which the easements have been established.
- l. Pursuant to Act 287 of 1974 all underground utility lines shall be shown

on the plan. The type of line, the utility company owning the line, the size of the line, and the width of any right-of-way or easement shall be shown.

- m. Site boundaries (bearings in degrees, minutes and seconds, and distances to the hundredth of a foot).
- n. Total acreage of the tract to the thousandths of an acre and in hundredths of square feet.
- o. List the date and all references to any subdivision which increased or decreased the size of the subject tract since December 14, 1981.

2. Natural Features Map

The following information may be shown superimposed upon a copy of the survey map or may be submitted as a separate sheet.

a. Floodplain areas.

The portion of land, if any, within the Floodplain District of New Hope Borough and the identification of the land within the Floodplain District which shall include areas subject to inundation by waters of the 100 year flood. The basis for the delineation of this District shall be the current Flood Insurance Study for the Borough prepared by the Federal Insurance Administration. In those areas of the Borough which are not included within the aforementioned Flood Insurance Study, the Floodplain District shall be defined as that area including all soils mapped by the Soil Survey of Bucks and Philadelphia Counties, Pennsylvania, prepared by the Soils Conservation Service, as flood plain soils.

b. Flood plain soil types.

- c. General slope areas. The Soil Survey of Bucks and Philadelphia Counties, Pennsylvania, may be used for identification.
 - i. 0 to 15%
 - ii. 15 to 25%
 - iii. 25% and over
- d. The location of forests and woodlands and of isolated trees of four (4) inches caliper or more.
- e. Streams.
- f. Lakes and ponds.
- g. Wetlands.
- h. Rock outcroppings.
- i. The boundaries of the various soil types and identification keys as indicated in the Soil Survey of Bucks and Philadelphia Counties, Pennsylvania, with a description of each soil type and limitations of the soils for on-site sewage disposal.
- j. Name of the engineer or other professional person responsible for the Natural Features Map.

3. Site Plan of Proposed Project

The following information may be shown superimposed upon a copy of the survey map or may be submitted as a separate sheet.

- a. Name of the proposed subdivision or identifying sheet.
- b. Name and address of the owner of record of the property, any authorized agent and the applicant(s).
- c. Name and address of the engineer, surveyor, architect, or landscape architect responsible for the plan.
- d. Zoning requirements, including:
 - (1) applicable district.

- (2) maximum density permitted and proposed density.
 - (3) required and proposed lot sizes.
 - (4) required and proposed open space and impervious surface ratios if applicable.
 - (5) any variances or special exceptions granted.
 - (6) minimum building setback lines (front, side, and rear) for each lot.
 - (7) lot width requirements.
 - (8) buffer yards.
- e. A location map for the purpose of locating the site at a scale no less than eight hundred (800) feet to the inch, showing the relation* of the tract to adjoining property and to all streets, roads, zoning districts and municipal boundaries existing within sixteen hundred (1,600) feet of any part of the property.
 - f. North point, date and scale (written and graphic)
 - g. Site boundaries.
 - h. All existing highways, streets and roads on, adjacent to, or within one hundred (100) feet of any part of the tract, including name, right-of-way width and cartway width.
 - i. Types and locations of proposed buildings
 - j. Resource protection areas.
 - k. Size of the parcel of land to the thousandth of an acre and in hundredths of square feet.
 - l. The size of each parcel after the subdivision to the thousandth of an acre and in hundredths of square feet.
 - m. Setbacks and yard requirements as specified in the New hope Borough Zoning Ordinance along the proposed lot line. Any proposed or existing building which would be located within the proposed setback or yard requirement shall be

illustrated on the Site Plan.

n. Tree protection measures shall include the following:

- (1) The location of all trees to be saved, including their trunk and driplines locations. Driplines should be plotted accurately, to scale. When groups of trees are to be saved only the locations of the trees on the perimeter must be shown;
- (2) The tree protection zone shall be included on the plan;
- (3) The location of proposed retaining walls around trees shall be shown;
- (4) Construction details of all retaining walls shall be provided, including special soil and fill mediums where applicable. Any grade changes which would alter surface and/or subsurface water movement, either to or from the tree protection zone, must also be indicated.

E. The information requirements of Section 4.04 D.1 and 2. may be varied by the New Hope Borough Council if the Council finds the specific requirements to be inappropriate, unnecessary or present a hardship as defined in Section 2.00 of this Ordinance.

F. Approval of Plans

1. Before final plan approval is granted, the applicant shall:
 - a. Obtain the easements and releases required by this Ordinance.
 - b. Reimburse the Borough promptly for attorney's and engineer's fees and fees to other professionals employed by the Borough to review or process subdivision plans.
2. If approved by the Borough Council, two (2) exact copies of the approved final plan on linen cloth shall be submitted for the required signatures.

- a. appropriate approval blocks (see section 4.03 F.3.) shall appear on the first sheet or title sheet of the set of plans. All approved final plans shall be signed by the Borough Engineer, a designated member of the Planning Commission and the Borough Council. Such signatures shall be placed only on linen prints of the approved plan. All sheets other than the first, shall be date stamped, approved and marked for identification purposes.
 - b. Before acting on any subdivision plan, the Borough Council may hold a public hearing thereon after public notice.
3. If required by the Borough Council, one (1) exact black-line transparent overlay showing roads, lot lines, streams, lakes and ponds shall be submitted at a scale of 1" to 800' for use by the Borough in updating the Borough base map.
 4. The provisions of this section shall not relieve the developer from the penalties provided for in the Pennsylvania Municipalities Planning Code for violations of this Ordinance.

Section 4.05 Recording Final Plans for Minor Subdivisions, Major Subdivisions and Land Developments

Upon approval of a final plan of a subdivision or land development the applicant shall, within ninety (90) days of such final approval, record the plan in the office of the Recorder of Deeds of Bucks County. The Borough shall not execute a plan for recording and no plan shall be recorded unless all owners of record have executed the plan. The applicant shall notify the Borough Council in writing, of the date of such recording and the plan book and page wherein the subdivision or land development plan is recorded. If the plan is not recorded within the ninety (90) day period, the approval shall lapse and become void, unless otherwise specified by the Borough Council

Section 4.06 Effect of Recording

- A. Streets, parks and other public improvements shown on a subdivision of land development plan to be recorded, may be offered for dedication to the Borough by formal notation thereof on the plan; or the owner may note on the plan that such improvements have not been offered for dedication to the Borough.

B. Every street, park, or other improvement shown on a subdivision or land development plan that is recorded, as provided herein, shall be deemed to be a private street, park, or improvement until such time as the same has been offered for dedication to the Borough, and accepted by resolution, and recorded in the office of the Clerk of the Court of Common Pleas of Bucks County, or until it has been condemned for use as a public street, park, or other improvement.

ARTICLE V DESIGN STANDARDS FOR SUBDIVISION AND LAND DEVELOPMENT

Section 5.00 Minimum Standards and Requirements

The standards and requirements outlined herein shall be considered minimum.

Section 5.01 General Standards

- A. All portions of a tract being subdivided or developed shall be taken up in lots, streets, public lands or other proposed uses so that remnants and landlocked areas shall not be created.
- B. Reserve strips controlling access to lots, rights-of-way, public lands or adjacent private lands are prohibited.
- C. Lot lines shall not cross Borough boundary lines.
- D. Subdivisions and land developments shall be laid out to minimize cut and to minimize fill.
- E. Land subject to flooding as indicated in the Soil Survey of Bucks and Philadelphia Counties, Pennsylvania, shall be platted for residential occupancy or other uses only in accordance with the resource protection requirements of the New Hope Zoning Ordinance.

Section 5.02 Blocks

- A. The length, width, and shape of blocks shall be determined with due regard to the following:
 - 1. Provisions of adequate sites for the types of buildings proposed.
 - 2. Zoning requirements for lot sizes, dimensions, and minimum lot areas per dwelling unit.
 - 3. The limitations and opportunities of the topography.
 - 4. Safe and convenient vehicular and pedestrian circulation and access.
 - 5. In the design of blocks, special consideration shall be given to the requirements of satisfactory fire protection.
- B. Blocks in subdivisions shall have a maximum length of sixteen hundred (1,600) feet, and a minimum length of five hundred (500) feet.

- C. Loop streets shall have an interval of at least 500 feet between intersections.

Section 5.03 Lots

- A. Lot dimensions and areas exclusive of easements shall not be less than specified by provisions of the Zoning Ordinance.
- B. Corner lots and through lots shall provide for equal front yard setbacks on each street.
- C. Building setback lines shall not be less than specified by the provisions of the Zoning Ordinance.
- D. Residential lots must front on and have wholly owned access to either an existing or proposed street.
- E. Through lots shall be deed restricted to limit access to the lower order street.

Section 5.04 Easement

- A. Utility easements shall be provided as necessary. Joint utilization of easements by two or more utilities is encouraged.
- B. To the fullest extent possible, easements shall be centered on or adjacent to rear or side lot lines.
- C. Easements shall be provided for utilities with a minimum width of twenty (20) feet for a single utility. Where multiple use of an easement is proposed an adequate width shall be determined by the Borough.
- D. Nothing shall be permitted to be placed, planted, set or put within the area of a utility easement except lawns or suitable low ground cover.
- E. Where a subdivision or land development is traversed by a watercourse, there shall be provided a drainage easement or right-of-way provided to the Borough conforming substantially with the line of such watercourse and of such width as will be adequate to preserve natural drainage but not less than thirty (30) feet, or as may be required or directed by the Borough and/or the Department of Environmental Resources. The owner shall properly grade and seed slopes and fence any open ditches when deemed necessary by the Borough.
- F. No right-of-way or easement for any purpose whatsoever shall be created, recited or described in any deed unless

the same has been shown on the approved plan.

Section 5.05 Storm Water Management

- A. General: The developer shall construct and/or install such drainage structures as necessary to:
1. Prevent erosion damage and to satisfactorily carry off or detain and control the rate of release of surface waters.
 2. Encourage all run-off control measures to percolate the storm water into the ground to aid in the recharge of ground waters.
 3. Carry surface water to the nearest adequate street, storm drain, detention basin, natural watercourse or drainage facility.
 4. Take surface water from the bottom of vertical grades, to lead water away from springs, and to avoid excessive use of cross gutters at street intersections and elsewhere.
 5. Not only handle the anticipated peak discharge from the property being subdivided or developed, but also the existing run-off being contributed from all land at a higher elevation in the same watershed.
 6. Maintain the adequacy of the natural stream channels. Accelerated bank erosion shall be prevented by controlling the rate and velocity of run-off discharge to these water courses, so as to avoid increasing occurrence of stream bank overflow.
 7. Preserve the adequacy of existing culverts, and bridges shall be preserved by suppressing the new flood peaks created by new land development.
 8. If in the course of preparing or reviewing the storm water management plan the Borough determines that off-site improvements are necessary to satisfactorily handle the storm water from the proposed development the developer shall be responsible for the off-site improvements.
- B. Retention of existing watercourses and natural drainage features:
1. Whenever a watercourse, stream, or intermittent

stream is located within a development site, it shall remain open in its natural state and location and shall not be piped.

2. The existing points of natural drainage discharge onto adjacent property shall not be altered without the written approval of the affected landowners.
3. No storm water run-off or natural drainage shall be so diverted as to overload existing drainage systems, or create flooding or the need for additional drainage structures on other private properties or public lands.

C. Requirements for drainage structures and/or pipes:

1. Drainage Easements: Drainage easements shall be provided to accommodate all storm drainage requirements and shall be a minimum of twenty (20) feet in width.
2. Storm Drainage Pipe: The minimum diameter of all storm drainage pipe shall be eighteen (18) inches or an equivalent thereto, with the exception of detention basins where smaller pipe may be utilized where necessary to provide the required detention. The minimum grade of piping shall be one half of one percent. Structures shall conform to Pennsylvania Department of Transportation specifications.
3. Storm Water Detention Areas:
 - a. Design of storm water detention areas shall be based upon criteria set forth in the latest edition of Urban Hydrology for Small Watersheds, Technical Release 55 and National Engineering Handbook, Section 4, Hydrology as published by the U.S. Department of Agriculture, Soil Conservation Service.
 - b. Detention areas shall be designed so that the rate of run-off from the site, when developed, will neither exceed nor decrease the run-off from the site that existed before development, except where deemed necessary by the Borough.
 - c. Discharge piping from detention areas shall be designed to control the rate of run-off as referred to in paragraph b. above for a two (2) through 100 year frequency, 24 hour storm.

- d. If permanent ponds are used, the developer shall demonstrate that such ponds are designed to protect the public health and safety.
 - e. Prior to granting the final approval of any subdivision or land development plan the Borough must be satisfied through contractual arrangements that all storm water facilities will be properly maintained. If all or a portion of the facilities are on property which will be conveyed to an individual, homeowners association or any other eventual owner, the guarantees must be in such a form that they will carry through to the new owners.
 - f. When detention basins are provided, they shall be designed to utilize the natural contours of the land whenever possible. When such design is impracticable, the construction of the basin shall utilize slopes as flat as possible to blend the structure into the terrain. All basins shall have slopes less than 4 horizontal to 1 vertical.
 - g. Detention ponds shall be designed so that they return to normal conditions within approximately twelve (12) hours after the termination of the storm, unless the Borough Engineer finds that downstream conditions may warrant other design criteria for storm water release.
 - h. Emergency overflow facilities shall be provided for detention facilities to handle runoff in excess of design flows.
 - i. If the land of the proposed subdivision or land development will be conveyed to two or more separate owners, the developer shall provide written assurance and deed restrictions to the Borough that the detention basins will be properly maintained, by the owners or if acceptable to the Borough be dedicated to the Borough which shall then be responsible for maintaining the detention basins.
- D. Storm Water Management Plan: A storm water management plan for the proposed subdivision or land development shall contain the following:

1. Mapping of the watershed area or areas in which the proposed subdivision or land development is located. (U.S.C. & G.S. Quadrangle Map or similar).
2. A study shall be performed of the watershed in which the subdivision or land development is located to assess the impact the proposal will have on downstream conditions. The storm water management plan shall address all identified impacts to the satisfaction of the Borough.
3. Computations of the storm water run-off for all points of run-off concentration before, during and after development, including all supporting data.
4. Complete drainage systems for the subdivision or land development. All existing drainage features which are to be incorporated in the design shall be so identified with an explanation of the operations of the facilities.
5. Plans showing all existing proposed drainage facilities affecting the subject property.
6. Plan of the proposed storm water drainage systems including storm drain pipes and inlets, run-off control devices, and drainage channels.
7. Plan of the proposed grading.
8. Design computations for the sizing of the pipe barrel and perforated riser.
9. A stage-storage curve for such detention/retention basins.
10. Flood routing and/or storage requirement calculations.
11. A plan showing the berm embankment and outlet structure. The plan shall also indicate the top of berm elevation, top width of berm and side slopes, emergency spillway elevation, elevations of the outlet structure including the riser, dimensions and spacing of anti-seep collars.
12. A detailed plan of the trash rack and anti-vortex device.
13. An overall plan of the basin area, at a scale of one (1) inch equals fifty (50) feet minimum,

showing the grading, and landscaping.

14. A detailed plan of all required off-site improvements.

E. Design Criteria

1. All plans and designs for storm water management facilities shall determine storm water peak discharge and run-off by use of the Soil Cover Complex Method as set forth in the latest edition of Urban Hydrology for Small Watersheds, Technical Release 55 and National Engineering Handbook, Section 4, Hydrology as published by U.S. Department of Agriculture, Soil Conservation Service.
2. The following rainfall intensities shall be used for the 24- hour, type II distribution storm with average antecedent moisture conditions for the frequencies shown:
 - a. 1 year - 2.70 inches
 - b. 2 year - 3.30 inches
 - c. 5 year - 4.20 inches
 - d. 10 year - 5.00 inches
 - e. 25 year - 5.80 inches
 - f. 50 year - 6.40 inches
 - g. 100 year - 7.20 inches
3. All developments shall limit the rate of storm water run-off, so that no greater rate of run-off is permitted than that of the site in its natural condition for the same frequency storm. Where farm field or disturbed earth is the existing condition, meadow shall be used as the starting base for such calculations, regardless of the actual conditions.
4. The increased run-off which may result from subdivision or land development shall be controlled by permanent run-off control measures. All run-off control measures will be evaluated for their effectiveness to maintain the above standard for all storms with a return period of up to one hundred (100) years.
5. An overflow system shall be provided to carry run-off to the detention basin, when the capacity of the storm drain pipe system is exceeded. The overflow system shall have sufficient capacity to carry the run-off difference between the one hundred (100) year storm peak flow rate and the

capacity of the storm drain pipe system. The 100 year storm peak shall be calculated by the Soil Cover Complex Method.

6. Detention basins shall be designed to facilitate regular maintenance, mowing and periodic desilting and reseedling. Basins shall not be located within floodplains or floodplain soils. In residential subdivisions and residential developments, shallow broad basins are preferred to steep sided basins. The area of basins which have more than fifty (50) percent of the perimeter of its sides in slopes of greater than ten (10) percent or basins that retain storm water for more than twenty-four (24) hours shall not be included in the open space required.
7. The maximum slope of the earthen detention basin embankments shall be four (4) to one (1). The top or toe of any slope shall be located a minimum of five (5) feet from any property line. Whenever possible the side slopes and basin shape shall conform to the natural topography.
8. The minimum top width of the detention basin berm shall be ten (10) feet.
9. In order to insure proper drainage on the basin bottom, a minimum grade of two (2) percent shall be maintained for areas of sheet flow. For channel flow a minimum grade of one (1.0) percent shall be maintained.
10. The emergency spillway for detention basins shall be constructed on undisturbed ground. All emergency spillways shall be constructed so that the detention basin berm is protected against erosion. The minimum capacity of all emergency spillways shall be the peak flow rate from the one hundred (100) year design storm after development. The construction material of the emergency spillway shall extend along the upstream and downstream berm embankment slopes. The upstream edge of the emergency spillway shall be a minimum of three (3) feet below the spillway crest elevation. The downstream slope of the spillway shall as a minimum extend to the toe of the berm embankment. The emergency spillway shall not discharge over earthen fill and/or easily erodible material.
11. The minimum freeboard shall be one (1) foot. Freeboard is the difference between the design flow elevations in the emergency spillway and the top of

the settled detention basin embankment.

12. Anti-seep collars shall be installed around the pipe barrel within the normal saturation zone of the detention basin berms. The anti-seep collars and their connections to the pipe barrel shall be watertight. The anti-seep collars shall extend a minimum of two (2) feet beyond the outside of the principal pipe barrel. The maximum spacing between collars shall be fourteen (14) times the minimum projection of the collar measured perpendicular to the pipe. A minimum of two anti-seep collars shall be installed on each outlet pipe.
13. All outlet pipes through the basin berm shall be reinforced concrete pipe with watertight joints.
14. Energy dissipating devices (rip-rap, end sills, etc.) shall be placed at all basin outlets.
15. A perforated riser shall be provided at each outlet of all detention basins during construction for sediment control. The riser shall be constructed of metal or concrete. The riser shall extend to a maximum elevation of two (2) feet below the crest elevation of the emergency spillway. The perforated riser shall be designed so that the rate of outflow is controlled by the pipe barrel through the basin berm when the depth of water within the basin exceeds the height of the riser. Circular perforations with a maximum diameter of one (1) inch shall be spaced eight (8) inches vertically and twelve (12) inches horizontally. The perforations shall be cleanly cut and shall not be susceptible to enlargement. All metal risers shall be suitably coated to prevent corrosion. A trash rack or similar appurtenance shall be provided to prevent debris from entering the riser. All risers shall have a concrete base attached with a watertight connection. The base shall be of sufficient weight to prevent flotation of the riser. An anti-vortex device, consisting of a thin vertical plate normal to the basin berm, shall be provided on the top of the riser.
16. All drainage channels shall be designed to prevent erosion of the bed and banks. The maximum permissible flow velocity shall not exceed those outlined in Table 3 Section 5.07. Suitable stabilization shall be provided where required to prevent erosion of the drainage channels.

17. Any vegetated drainage channel requiring mowing of the vegetation shall have a maximum grade of three (3) horizontal to one (1) vertical on those areas to be mowed.
18. Because of the critical nature of vegetated drainage channels, the design of all vegetated channels shall, as a minimum, conform to the design procedures outlined in the Bucks County Erosion and Sediment Control Handbook.

Section 5.06 Erosion and Sediment Controls

A. General Provisions and Compliance:

1. No changes shall be made to the contour of the land, and or grading, excavating, removal or destruction of the topsoil, trees or other vegetative cover of the land shall be commenced, until such time as a plan for minimizing erosion and sedimentation has been processed, and reviewed by the Planning Commission, the Bucks County Conservation District and the Borough Council.
2. Approval by the Borough Council of all preliminary and/or final plans of subdivision and land development does not relieve the developer of his obligation to execute the erosion and sediment control measures as contained in subsections B, C, D, and E of this Section.
3. Final approval of plans and specifications by the Soil Conservation Service for the control of erosion and sedimentation shall be concurrent with the approval of plans of subdivision or land development, and become part thereof. Final plans for minimizing erosion and sedimentation as approved will be incorporated in the agreement and bond requirements as required by the Borough. (See Article VI).
4. At the time a building permit is applied for, a review shall be conducted by the Borough Engineer to insure conformance with the plan as approved. During construction, further consultative technical assistance will be furnished, if necessary, by the Bucks County Conservation District. During the development phase, the Borough Engineer shall inspect the development and enforce compliance with the approved erosion and sediment control plans.

B. General Performance Standards:

1. Measures used to control erosion and reduce sedimentation shall, as a minimum, meet the standards and specifications of the Bucks County Conservation District. In cases where the Bucks County Conservation District does not have standards and specifications for erosion and sedimentation control, other known and commonly accepted standards and specifications may be used as approved by the Borough Engineer.
2. The following measures to minimize erosion and sedimentation shall be included where applicable in the control plan:
 - a. Stripping of vegetation, regrading, or other development shall be done in a way that will minimize erosion
 - b. Development plans shall preserve salient natural features, keep fill operations to a minimum, and ensure conformity with topography so as to create the least erosion potential and adequately handle the volume and velocity of surface water run-off.
 - c. Whenever feasible, natural vegetation shall be retained, protected, and supplemented.
 - d. The disturbed area and the duration of exposure shall be kept to a practical minimum, but shall not exceed ninety (90) days.
 - e. Disturbed soils shall be stabilized as quickly as practical, but shall not exceed ninety (90) days.
 - f. Temporary vegetation and/or mulching shall be used to protect exposed critical areas during development.
 - g. The permanent (final) vegetation and mechanical erosion control and drainage shall be installed as soon as practical in the development.
 - h. Provisions shall be made to accommodate effectively the increased run-off caused by changed soil and surface conditions during and after development within the site. Where necessary, the rate of surface water run-off

will be mechanically retarded.

- i. Sediment in the run-off water shall be trapped until the disturbed area is stabilized by the use of debris basins, sediment basins, silt traps, or similar measures.

C. Site grading for Erosion Control.

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

1. All lots, tracts or parcels shall be graded to provide proper drainage away from buildings and dispose of it without ponding, and all land within a development shall be graded to drain and dispose of surface water without ponding, except where ponding (detention basins, etc) is part of the storm water management plan for the site.
2. Concentration of surface water run-off shall be permitted only in swales, watercourses, or detention basins. Swales shall be sodded, utilize jute matting, or other similar measures to insure proper growth of ground cover.
3. Grading shall in no case be done in such a way as to divert water onto an adjacent property.
4. During grading operations, necessary measures for dust control must be exercised.
5. Grading equipment will not be allowed to cross live streams. Provisions shall be made for the installation of temporary culverts or bridges.
6. Tire cleaning areas shall be provided at each point of access to the development site

D. Excavations and Fills

1. No excavation shall be made with a cut face steeper than three horizontal to one vertical, except under one or both of the following conditions:
 - a. The material in which excavation is made is sufficiently stable to sustain a slope of steeper than three horizontal to one vertical. A written statement to that effect from a civil engineer licensed by the Commonwealth of

Pennsylvania and experienced in erosion control, shall be submitted to the Borough Engineer and approved by him. The statement shall affirm that the site has been inspected and the deviation from the slope will not result in injury to persons or damage to property.

- b. A concrete, masonry or other retaining wall is provided to support the face of the excavation.
2. Edges of slopes shall be a minimum of five (5) feet from property lines or right-of-way lines of streets in order to permit the normal rounding of the edge without encroaching on the abutting property.
3. Adequate provisions shall be made to prevent surface water from damaging the cut face of excavations and the sloping surfaces of fills.
4. Cut and fill shall not endanger adjoining property.
5. Fill shall be placed and compacted so as to minimize sliding or erosion of the soil.
6. Fills shall not encroach on natural watercourses or constructed channels.
7. Fills placed adjacent to natural watercourses or constructed channels shall have suitable protection against erosion during periods of flooding.

E. Responsibility

1. Whenever sedimentation is caused by stripping of vegetation, regrading or other development, it shall be the responsibility of the person, corporation or other entity causing such sedimentation to remove it from all affected surfaces, drainage systems and watercourses on and off-site, or to repair any damage at his expense as quickly as possible.
2. Maintenance of all drainage facilities and watercourses, both existing and proposed, within any proposed subdivision or land development shall be the responsibility of the developer until such time as one of the following is accomplished:
 - a. An easement for these facilities is offered

for dedication by the developer and is accepted by the Borough it shall then be the responsibility of the Borough.

- b. If an easement acceptable to the Borough is established, the maintenance shall then be the responsibility of the individual lot owners over whose property the easement passes. For land developments, the maintenance shall then be the responsibility of the owner.
 - c. A homeowners association or other approved legal entity, approved by the Borough assumes the responsibility for the maintenance of the development. Including the maintenance of the watercourses and/or drainage facilities.
3. It is the responsibility of any person, corporation, or other entity doing any work on or across a stream, watercourse, or swale, or upon the floodplain or right-of-way during the period of the work, to return it to its original or equal condition after such activity is completed.
4. No person, corporation, or other entity shall block, impede the flow of, alter, construct any structure or deposit any material or thing or perform any work which will affect normal or flood flow in any communal stream or watercourse without having obtained prior approval from the Borough and/or Department of Environmental Resources whichever is applicable.
5. Each person, corporation or other entity which makes any surface changes shall be required to:
 - a. Collect on-site surface run-off and control it to a point of discharge into the natural watercourse of the drainage area.
 - b. Handle existing off-site run-off through his development by designing it to adequately handle all upstream run-off
 - c. Provide and install at his expense, in accordance with Borough requirements, all drainage and erosion control improvements (temporary and permanent) as required by the approved erosion and Sediment Control Plan.

Section 5.07 Storm and Surface Drainage

A. General

1. All subdivision and land development plans shall include designed methods to withhold and release, at a controlled rate, any run-off onto adjacent property.
2. Lots shall be laid out and graded to provide positive drainage away from buildings.
3. Storm sewers, culverts, and related installations shall be provided:
 - a. to permit unimpeded flow of natural watercourses and in such a manner as to protect the natural character of the watercourses and to provide regulated discharge;
 - b. to insure adequate drainage of all low points along the line of streets; and,
 - c. to intercept storm water run-off along streets at intervals reasonably related to the extent and grade of the area drained and to prevent substantial flow of water across intersections.
4. Storm sewers shall be placed in the right-of-way parallel to the roadway and shall be designed as a combination storm sewer and underdrain. When located in undedicated land, they shall be placed within an easement not less than twenty (20) feet wide.
5. Manholes shall be not more than three hundred (300) feet apart on sizes up to twenty-four (24) inches, and not more than four hundred fifty (450) feet apart on greater sizes. Inlets may be substituted for manholes, on approval by the Borough Engineer at the same spacing as required for manholes. In no case shall inlets be spaced more than four hundred fifty (450) feet apart.
6. Inlets and manhole covers and frames shall conform to Pennsylvania Department of Transportation Specifications. At street intersections, inlets shall be placed in the tangent and not in the curved portion of the curbing.

7. Storm water roof drains shall not discharge water directly onto a sidewalk or a street, and shall be constructed to retain all discharge wholly on the property except where such discharge can be conveyed to a storm sewer system.
8. Drainage structures, which drain watershed areas in excess of one half square mile (320) acres, or which have a span of eight (8) feet or more, shall be designed for a maximum expected run-off as calculated using the Soil Conservation Service Technical Release 55 "Urban Hydrology for Small Watersheds (less than 2000 acres)." The design storm shall be a minimum 50-year storm. A 100-year storm shall be used if the structure will significantly affect the existing 100-year floodplain. A Water Obstruction Permit shall be obtained from the Pennsylvania Department of Environmental Resources for the waterway opening before final design is undertaken.

The cartway area over the bridge shall be as wide as the widest road connecting with the bridge, or if the character of the road is expected to change for future planning, the cartway of the bridge shall be made to anticipate this condition.

B. Maximum Expected Discharge

1. The maximum expected discharge (M.E.D.) shall be defined as the maximum expected quantity of water, created by the design storm, arriving at a particular location (inlet, ditch, etc.).
2. The design storm is a selected intensity of rainfall, which tends to occur once during a specified period of years.
3. The Soil Conservation Service Technical Release # 55 "Urban Hydrology for Small Watersheds (less than 2000 acres)" shall be used for the calculation of the maximum expected discharge.
4. The maximum expected discharge from drainage areas contributing to the storm drain pipe system may be determined by the use of the Rational Equation, when the total drainage area does not exceed 100 acres.

The Rational Equation is as follows:

$$Q = CIA$$

WHERE

Q = maximum expected discharge in cubic feet per second.

C = run-off factor expressed as a percent of the total water falling on an area.

I = the rate of rainfall for the time of concentration of the drainage area in inches per hour for a given storm frequency.

A = the drainage area expressed in acres.

The above equation assumes that one inch of rainfall falling on one acre of land falls at the rate of one cubic foot per second. Thus, the total quantity of water falling on an acre is represented by IA.

5. It is necessary to adjust the total quantity of water falling on an area (IA) because a certain percentage of the water is dissipated by evaporation, transpiration, percolation, ponding, and physical characteristics such as sinkholes. Therefore, the run-off factor "C" is introduced into the Rational Equation to account for the dissipated water.
 - a. The run-off factor "C" is a percentage factor which represents the proportion of the total quantity of water falling on the area that remains as run-off.
 - b. Consideration should be given to future land use changes:

The Rational Equation is as follows:

$$Q = CIA$$

WHERE

Q = maximum expected discharge in cubic feet per second

C = run-off factor expressed as a percent of

total water falling on an area.

I = the rate of rainfall for the time of concentration of the drainage area in inches per hour for a given storm frequency.

A = the drainage area expressed in acres.

The above equation assumes that one inch of rainfall falling on one acre of land falls at the rate of one cubic foot per second. Thus, the total quantity of water falling on an area is represented by IA.

5. It is necessary to adjust the total quantity of water falling on an area (IA) because certain percentage of the water is dissipated by evaporation, transpiration, percolation, ponding, and physical characteristics such as sinkholes. Therefore, the run-off factor "C" is introduced into the Rational Equation to account for the dissipated water.
 - a. The run-off factor "C" is a percentage factor which represents the proportion of the total quantity of water falling on the area that remains as run-off.
 - b. Consideration should be given to future land use changes in the drainage area in selecting the "C" factor. For drainage areas containing several different types of ground cover, a weighted value of "C" must be used.
 - c. In no case shall a weighted value of "C" be less than 0.40 for an area to be changed from its natural state.

6. RUN-OFF FACTORS FOR THE RATIONAL EQUATION

<u>Description of Area</u>	<u>Run-Off Coefficient(C)</u>
Residential	
2 Ac. Lots (R-2)	0.40
1 Ac. Lots (R-1)	0.46
1/2 Ac. Lots	0.50
1/4 Ac. Lots	0.56
Townhouses - Multi-family	0.70
Commercial	0.75
Industrial	0.80
Parks, Cemeteries	0.38
Unimproved	0.35

Where the above table is not applicable the following factors may be used:

Roofs and all impervious surfaces	0.90
All other surfaces except forest	0.40
Forest	0.30

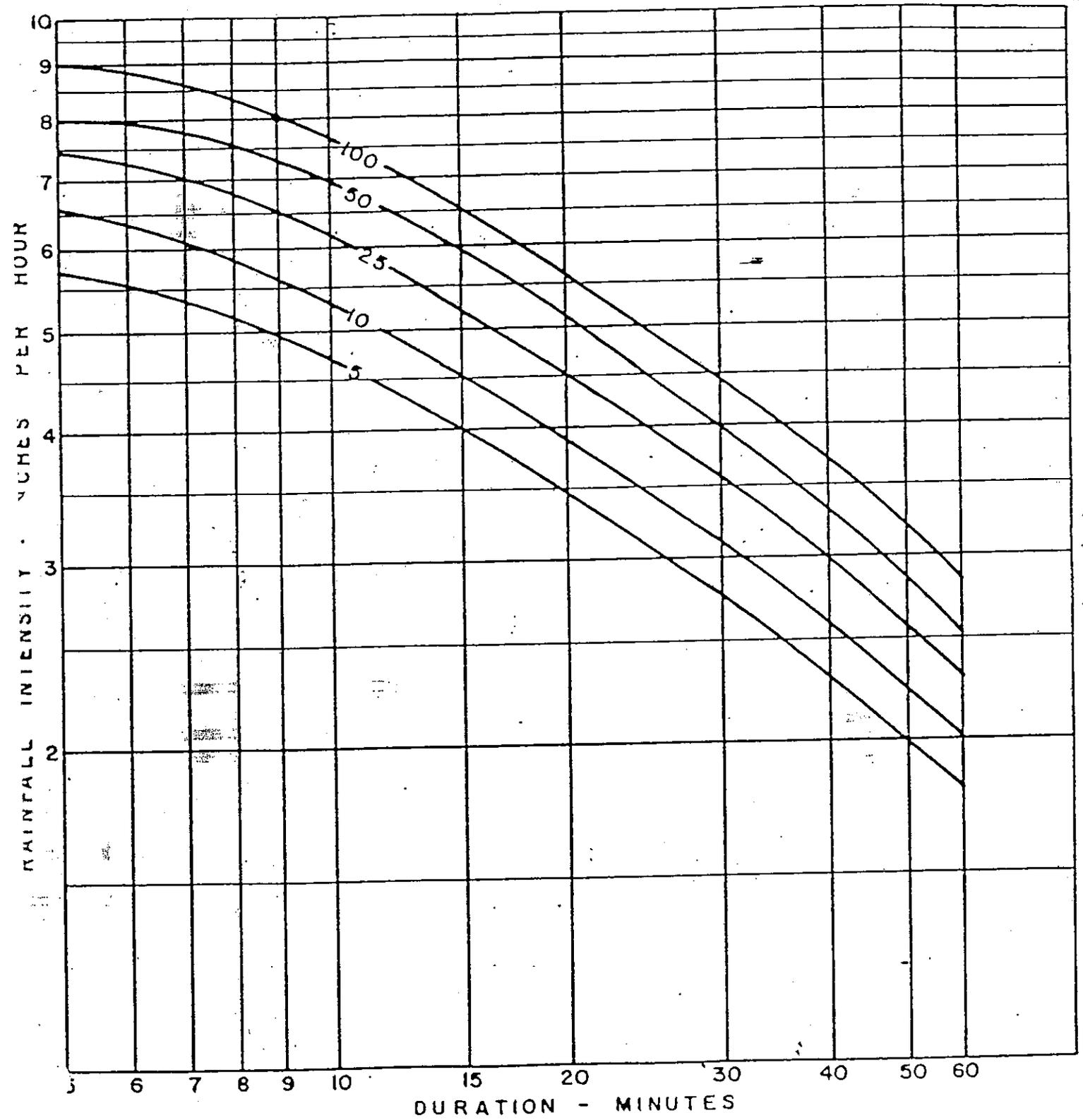
7. The coefficients in these two tabulations are applicable for storms of ten year frequency and less. The coefficients are based on the assumption that the design storm does not occur when the ground is frozen. Less frequent, higher intensity storms will require the use of higher coefficients because infiltration and other losses have a proportionally smaller effect on run-off.
8. For less frequent storms, the coefficients can be used if they are multiplied by the following factors for the return frequency required.

<u>Storm Frequency (yrs)</u>	<u>Factors</u>
10 & less	1.0
25	1.1
50	1.2

9. Rainfall Intensity "I" curves are presented in Figure E. The curves provide for variation in rainfall intensity according to:

FIGURE E

RAINFALL INTENSITY -
DURATION - FREQUENCY CURVES



a. Storm Frequency

- (1) A fifty (50) year storm frequency shall be used for the design of all storm sewer systems within the Borough. Provisions shall be made for a 100-year storm frequency to protect health and property from injury or damage.
- (2) In all cases where storm drainage is picked up by means of a headwall or inlet structure, and inlet or outlet conditions control, the pipe shall be designed as a culvert for a fifty (50) year design storm frequency.

b. Storm Duration -

- (1) A five (5) minute storm duration shall be used if this duration does not result in a maximum expected discharge that exceeds the capacity of a 30-inch pipe.
- (2) If a five (5) minute storm duration results in a pipe size exceeding 30 inches, the time of concentration approach shall be used in determining storm duration.
- (3) If a five (5) minute storm duration results in a pipe size exceeding 30 inches, within any run of pipe, the time of concentration approach may be used for sizing pipes from that point on by adjusting the time of concentration.

Time of concentration may be defined as the interval of time required for water from the most remote portion of the drainage area to reach the point in question.

c. Time of Concentration may be influenced by:

- (1) The type of terrain over which the water must flow. see Table 1 for recommended average velocities of run-off flow.
- (2) Stream velocities - prior to reaching the point in question, the water may flow over land and subsequently flow into a stream. The stream velocities shall be calculated from Manning's Equation. (See

C. below)

- (3) The time of concentration shall be determined by the above indicated criteria.

3. Drainage Area "A" The extent of an individual drainage area shall be outlined on a map of highest order available and submitted in duplicate to the Borough Engineer with the Design Calculations for Storm Sewers. The plan shall also indicate the "Q" anticipated at each proposed inlet and the slope of the street or swale used to compute the inlet capacity. Care should be taken to assure that all areas delivering run-off to the point under consideration shall be included.

TABLE 1
RECOMMENDED AVERAGE VELOCITIES
OF RUN-OFF FLOW FOR DETERMINING
TIME OF CONCENTRATION

Description of Course of Run-off Water	Velocities in feet/second						
	0-3	4-7	8-10	11-15	16-20	21-25	26-30
Slope in Percent							
Forest	0.5	1.0	1.5	1.7	2.0	2.7	3.5
Meadow	0.8	1.5	2.2	2.6	3.0	4.1	4.5
Cultivated (Row- Crop)	1.0	2.0	3.0	3.5	4.0	4.5	5.0
Pavement	5.0	12.0	15.5	18.0	-	-	-
Natural Draw Not Well Defined	0.8	2.5	4.0	6.0	-	-	-
Lawn	1.0	1.8	3.2	4.9	-	-	-

C. Capacity of Waterway Areas

1. This section is primarily concerned with the removal of the water Arriving at a particular location.

It is necessary that the drainage facilities assisting in removal of water from the surface of the highway and adjacent ground have adequate capacity to do so.

2. The capacity of the drainage facilities is measured in terms of discharge and may be determined by the equation of continuity:

$$Q = AV$$

WHERE,

Q = discharge of water in cubic feet per second.

The discharge capacity for a drainage facility at a particular location shall be equal to or greater than the maximum expected discharge (M.E.D.) for the location.

A = the net effective area in square feet provided by the drainage facility.

By net effective area is meant that cross sectional area of the facility which may be

used to carry water. It may not be desirable that the entire cross sectional area of the drainage facility be utilized to carry water.

V = the velocity of the water in feet per second. The velocity shall be determined by Manning's equation.

Manning's equation is as follows:

$$V = \frac{1.486 R^{2/3} S^{1/2}}{n}$$

WHERE,

V = velocity in feet per second

R = hydraulic radius is equal to the net effective area (A) divided by the wetted perimeter (W.P.):

$$R = \frac{A}{W.P.}$$

The wetted perimeter is the lineal feet of the drainage facility cross-section which is wetted by the water.

S = slope of energy line (for approximation, use water surface slope in wetted stream and stream bed slope in dry stream)

n = the roughness coefficient. Acceptable roughness coefficients are presented in Table 2.

TABLE 2

Roughness Coefficient "n" for Manning's Equation

<u>Description</u>	<u>"n"</u>
Concrete Pipe	.012
Corrugated Metal Pipe or Pipe Arch	
a. Plain or coated	.024
Vitrified Clay Pipe	.012
Cast Iron Pipe	.013
Asphalt Pavement	.015
Concrete Pavement	.014
Grass Medians	.05
Earth	.02
Gravel	.02
Rock	.035
Cultivated Areas	.03 - .05
Dense Brush	.07 - .14
Heavy Timber - Little Undergrowth	.10 - .15
Streams	
a. Some grass and weeds-little or no brush	.03 - .035
b. Dense growth of weeds	.035 - .05
c. Some weeds-heavy brush on banks	.05 - .07

Note: In considering each factor, more critical judgement will be exercised if it is kept in mind that any condition that causes turbulence and retards flow results in a greater value of "n".

Roughness Coefficient (n) for Helical Corrugated Metal Pipe

<u>Corrugations</u>	<u>2-2/3" x 1/2"</u>								<u>3" x 1"</u>	
	<u>Diameters</u>	18"	24"	36"	48"	60"	72"	84"	96"	All Dia.
Plain or Coated	.014	.016	.019	.020	.021	.021	.021	.021	.021	.024

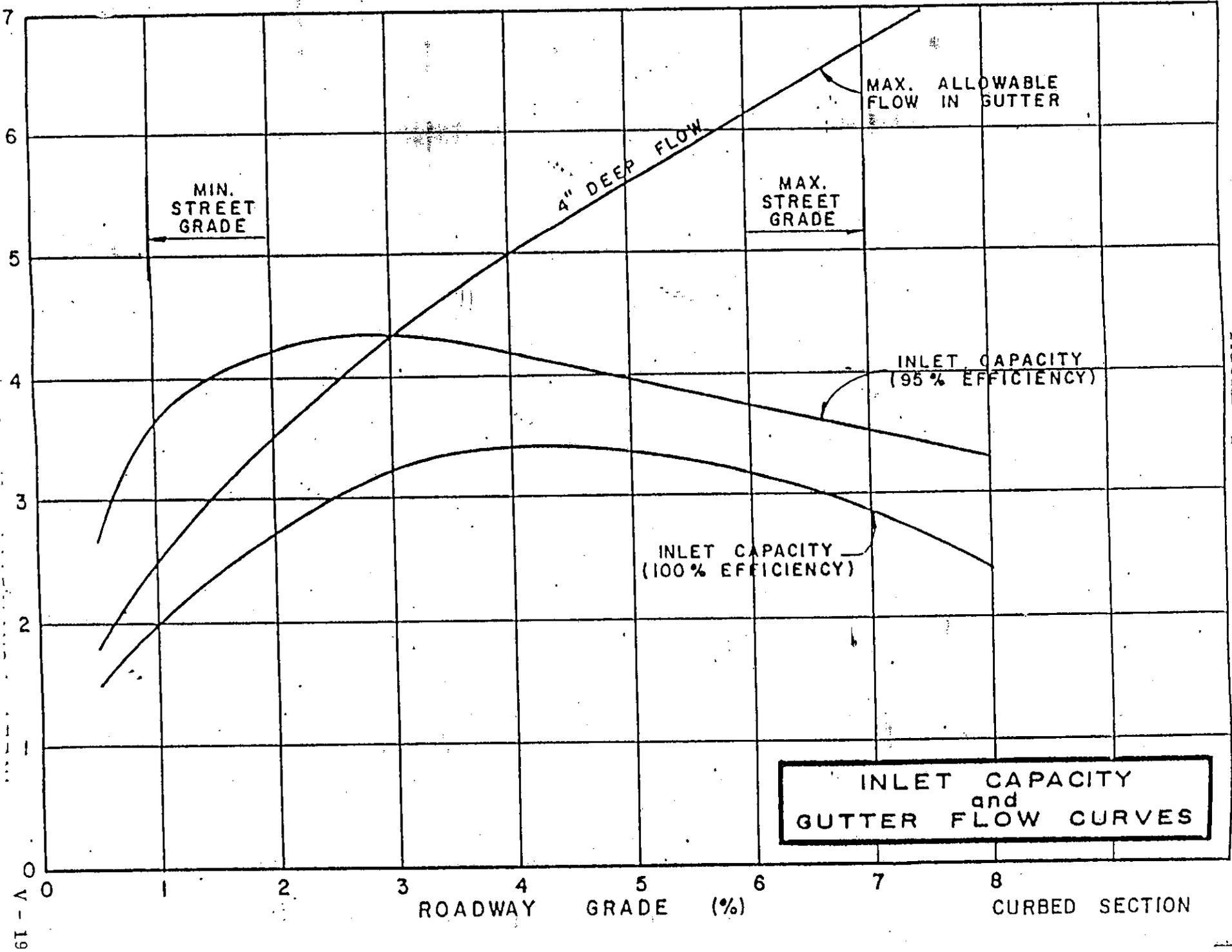


FIGURE F

INLET CAPACITY
and
GUTTER FLOW CURVES

61-19

ROADWAY GRASS SWALE CAPACITY

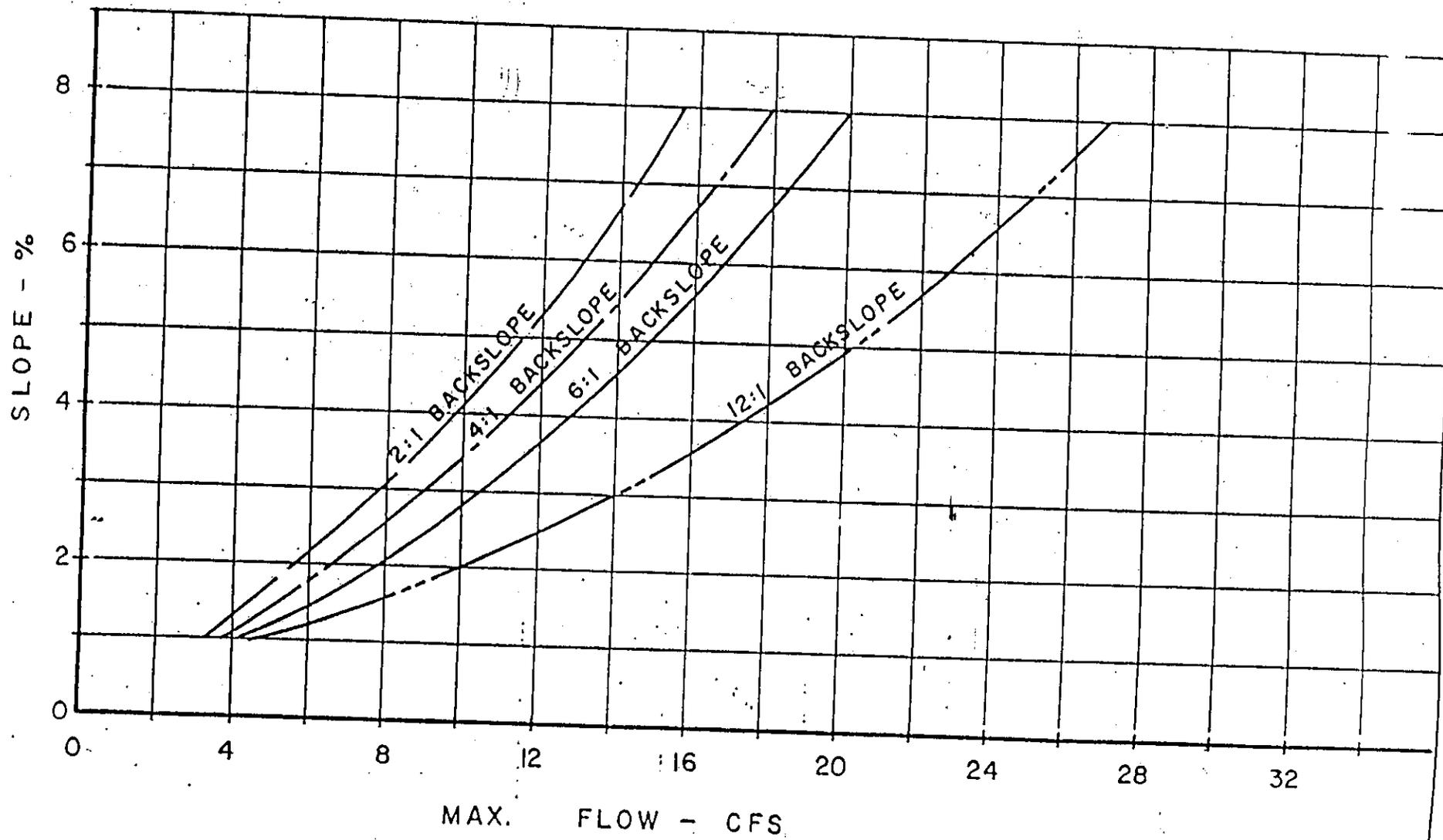
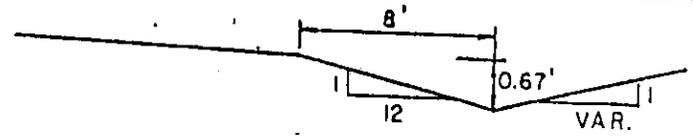


FIGURE G

D. Design Criteria

Additional design criteria for specific drainage facilities are required as follows:

1. Shoulders in Cut Areas (without swales)

Water flowing in the shoulder shall not encroach more than two thirds the shoulder width during a 25-year frequency storm of five minute duration.

The maximum velocity as determined by Manning's equation shall not exceed the allowable velocities as shown in Table 3 for the specific type of shoulder material.

Inlets shall be provided to control the shoulder encroachment and water velocity.

2. Swales adjacent to shoulders

When swales are provided in cut areas, the water shall not encroach upon the roadway area during a 25-year frequency storm of 5 minute duration.

The maximum velocity as determined by Manning's equation shall not exceed the allowable velocities as shown in Table 3 for the specific type of swale material.

Capacity of the swale shall be as shown in Figure G.

3. Curbed Sections

The maximum encroachment of water on the roadway pavement shall not exceed 4 inches in depth at the curb during a 25-year frequency storm of five minute duration (see figure F)

Inlets shall be provided to control the encroachment of water on the pavement.

4. Inlets

- a. Where there is a change in pipe size in the inlet, the elevation for the top of pipes should be the same or the smaller pipe higher. A minimum drop of two inches should be provided in the inlet between the lowest inlet pipe invert elevation and the outlet pipe invert elevation.

- b. If the capacity of the shoulder, swale, curb section or depressed median section exceeds the assumed inlet capacities, the inlet capacities shall govern the spacing or inlets.
- c. If the capacity of the shoulder, swale, curb section, or depressed median section is less than the inlet capacities, then the shoulder, swale, curb section or depressed section capacity shall govern the spacing of inlets.
- d. Type C Inlets
 - (1) This type inlet is designated for installation in nonmountable curbs.
 - (2) It should be noted that inlets will operate more efficiently when they are spaced so that 5% of the gutter flow is permitted to bypass the inlet (95% efficiency). Therefore, 95% efficiency will be acceptable if 100% efficiency is not practical.
 - (3) Inlet capacities shall be based on Figure F "Inlet and Gutter Flow Curves."
 - (4) The capacity of an inlet at a low point of a street vertical curve may be designed to accept 4.0 cfs from each direction or a maximum of 8.0 cfs.
- e. Type M and S Inlets
 - (1) Type S Inlets are designated for installation in shoulder swale areas with back slopes 6:1 and steeper. Type M Inlets are designated to be used in swale areas where the back slope is flatter than 6:1.
 - (2) Inlet capacities shall be based on Table 4 "Type M & S Inlet Capacities."
 - (3) Where a drainage dike is used the side slope of the dike shall be 8:1 or flatter.
 - (4) The capacity of an inlet at a low point in the swale (sump condition) is a 16 cfs maximum.

5. Storm Pipes

- a. To facilitate the solution of Mannings's Equation as applied to storm pipes, charts are presented in "Design Charts for Open-Channel Flow" prepared by the U.S. Department of Commerce, which permit a direct determination of the capacity of circular pipes.
- b. Where headroom is restricted, equivalent pipe arches may be used in lieu of circular pipe.
- c. The minimum diameter of storm pipe shall be 18 inches.
- d. Storm pipes will be provided in 6 inch increments of diameter.
- e. Abrupt changes in direction or slope of pipe shall be avoided. Where such abrupt changes are required, an inlet or manhole shall be placed at the point of change.
- f. The minimum slope in a pipe shall provide a minimum velocity of 2.5 fps. but, shall not have a minimum slope of less than 0.5%
- g. The top of storm pipes shall be at least six inches below sub-grade elevation, except cast iron pipe, which may be 3 inches.

TABLE 3

Allowable Water Velocities

<u>Material</u>	<u>Allowable Velocities</u> <u>feet per second</u>
1. Well established grass on good soil	
a. short pliant bladed grass	5 - 6
b. bunch grass - soil exposed	2 - 4
c. stiff stemmed grass	2 - 3
2. Earth without vegetation	
a. Fine sand or silt	1 - 2
b. ordinary firm loam	2 - 3
c. stiff clay	3 - 5
d. clay and gravel	4 - 5
e. course gravel	4 - 5
f. soft shale	5 - 6
3. Shoulders	
a. earth	
b. stabilized	see 2 above
c. paved	6 10 - 15

TABLE 4

Type M or S Inlet Capacities (in swale)

BACK SLOPE

<u>Grade</u>	<u>2:1</u>	<u>4:1</u>	<u>6:1</u>	<u>12:1</u>	<u>Dike</u>
1.0	3.2	3.6	3.9	4.1	9.1
2.0	3.0	3.3	3.5	3.7	8.3
3.0	2.5	2.8	3.2	3.5	7.4
4.0	1.6	2.0	3.0	3.2	6.4
5.0	1.6	2.0	2.5	3.0	6.3
6.0	1.6	2.0	2.5	2.8	6.1
7.0	1.5	2.0	2.4	2.6	6.0
8.0	1.5	2.0	2.2	2.4	5.8

Section 5.08

General Street Requirements

- A. At the time any application, petition or request is filed by any person, partnership, association or corporation for the approval of the construction, opening or dedicating of any proposed road or street, the Borough shall be assured that said proposed street or road shall be satisfactorily completed and said assurance shall be governed by the provision of Section 509 of the Pennsylvania Municipalities Planning Code.
- B. Any person, partnership, association or corporation making any application or request for the approval of the construction, opening or dedication of any proposed road, shall bear all costs of inspection of such roads and any drainage facilities connected therewith, all engineering costs, all costs of survey, and all other expenses and costs incidental to construction, approval and dedication of such street or road for public use, including legal fees.
- C. Proposed streets shall conform to such county and state street and highway plans as have been prepared, adopted and filed as prescribed by law.

- D. If lots resulting from the original subdivision are large enough to permit resubdivision, or if a portion of the tract is not subdivided, adequate street right-of-way to permit further subdivision shall be provided.
- E. Streets that are extensions to existing streets shall bear the name of the existing streets. Street names shall not be repeated within the Borough, and all street names shall be subject to the approval of the Borough Council.
- F. Dead-end streets shall be prohibited, except for cul-de-sacs.
- G. Private streets will be permitted only in the Planned Residential Development (PRD) District. No private streets shall be permitted except by express consent of the Borough in which case the private streets are to be designed and constructed to meet all requirements of public street standards and the recorded plan and other recorded documents shall disclose the parties or persons responsible for the cleaning, maintaining, improving and repairing of said private streets.
- H. New half or partial streets shall be prohibited, except where essential to reasonable subdivision or land development 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 is secured by escrow funds or surety bonds that said construction will be completed.
- I. Wherever a tract to be subdivided or developed borders on an existing half or partial street, the other part of the street shall be platted within such tract.
- J. Any applicant whose property encroaches within the legal right-of-way of a state highway is required to obtain a highway occupancy permit from the Pennsylvania Department of Transportation.
- K. Streets shall be logically related to topography so as to produce reasonable grades, satisfactory drainage and suitable building sites. Streets shall be so arranged as to be generally parallel to, rather than cross, contour lines, as well as to prevent the necessity for excessive cut and fill. Streets shall be laid out to avoid hazardous areas such as floodplains, steep slopes and other hazardous natural features.

Section 5.09 Street Standards

A. Street Hierarchy

The intent of this section is to create an integrated street system for New Hope Borough to include all existing streets and highways; all new residential and development streets; and all new private, state, or federal streets and highways. The street hierarchy is related to average daily traffic (ADT) levels and other applicable standards. The following hierarchy is hereby established:

1. Arterial Streets
2. Collector Streets
3. Primary Streets
4. Secondary Streets
5. Local Access

B. Classification

All streets shall be classified according to a category in the street hierarchy in accordance with one of the following descriptions:

1. Arterial Streets

Arterial streets and highways are those which are primarily for throughways which carry fast-moving and heavy traffic, or may be considered to handle interstate traffic. Such streets or highways are generally restricted to limited access, and for the most part the authority for control of access or construction within their right-of-way is vested within the Pennsylvania Department of Transportation, Bureau of Public Roads, or the United States Department of Commerce, or both, Average Daily Traffic (ADT) of 3001+.

2. Collector Streets

Collector streets are those which carry traffic from other collector, primary, or secondary streets into the system of arterial or major highways. Collector streets will generally carry the largest volume of traffic at higher speeds, but will also include streets necessary to carry traffic from one neighborhood to another or to other areas in the

community. This level of street is unsuitable for providing direct access to homes. ADT of 1001 to 3000.

3. Primary Streets

Primary streets are those which carry traffic from the secondary streets to the system of collector streets. It is considered the highest order street permitting direct access to homes and shall be designed to exclude all external through traffic from other primary streets. ADT of 501 to 1000.

4. Secondary Streets

Secondary streets are those which are used primarily for access to abutting properties and generally serve only internally developed areas. Secondary streets shall provide an acceptable, if not maximum environment for a residential neighborhood. ADT of 201 to 500.

5. Local Access Streets

Local access streets are those serving areas of low population density to carry the least amount of traffic at the lowest speed. This category shall include only those streets which restrict through traffic such as a cul-de-sac street or a marginal access street in a residential subdivision. ADT of 0 to 200.

- a. Cul-de-sac Streets are those which are closed at one end, of less than four hundred feet (400') in length, and terminate in a turn around with a minimum right-of-way radius of sixty (60) feet and an outer paving radius of fifty (50) feet.
- b. Marginal Access Streets are minor streets which are parallel to and adjacent to arterial or collector streets and which provide access to abutting properties where residential frontage on the main street is prevented.
- c. Alleys are streets which provide access to the rear of residential lots and are not permitted.
- d. Single Access Streets. A street with only one point of intersection with a through street but where the street continues around and

intersects itself. Lots or dwelling units may be located in the island created by street configuration. The distance from the right-of-way line of the through street to the point where the single access street intersects itself shall not exceed 400 feet.

C. Minimum Width Standards.

The following chart is a guide to minimum dimensional standards for various classifications of streets.

<u>Classification</u>	<u>Traffic Volume</u>	<u>R.O.W. (Ft)</u>	<u>Pavement Width (Ft)</u>		
			<u>No Street Parking</u>	<u>Park one Side</u>	<u>Park Both Sides</u>
Arterial*	3000+	-	-	-	-
Collector	1000-3000	60	24	34	44
Primary	500-1000	50	24	32	40
Secondary	200-500	50	22	30	36
Local Access	0-200	40	20	28	30

*As required by State or Federal Requirements

The above standards are minimum requirements. If it is determined by the Borough, during the review process, that in order to prevent an increase in traffic congestion or to provide safety from fire and unsafe turning movements additional widths are required, that standards will be increased appropriately. Also if it is determined that restricted parking or parking on one side of a street is not desirable, the greater widths will be required.

Section 5.10 Street Design Requirements

A. Purpose

The purpose of these provisions is to establish appropriate standards for the design of streets that will (1) promote the safety and convenience of vehicular traffic, (2) protect the safety of residents, (3) minimize the long terms costs for the maintenance and repair of the streets, (4) minimize crime in residential areas, (5) protect the residential qualities of neighborhoods by limiting traffic volume, traffic speed,

noise and fumes, (6) encourage the efficient use of land, (7) minimize the cost of street construction and (8) minimize the construction of impervious surfaces.

B. Classification

1. New streets will be classified according to the expected ADT level of the street. The expected ADT will be based on existing and proposed development conditions as well as future development conditions permitted by zoning regulations. No new street shall connect to an existing street if the expected ADT will exceed the allowed ADT level of the existing street classification.
2. Trip generation rates shall be established in accordance with current acceptable design standards. Minimum standard rates shall be as follows:

Housing Type	<u>Average Weekday Trip Generation Rates</u>
Single-family Detached	10.0 Trips/D.U.
Duplex (Twin), Multiplex, Townhouse, etc.	8.1 Trips/D.U.
Apartment	5.4 Trips/D.U.
Retirement Village	3.3 Trips/D.U.

C. Parking Requirements

On-street and off-street parking requirements may be used to determine street pavement width. The minimum parking requirement of Article VIII of the Zoning Ordinance shall be satisfied. In addition, spill over parking spaces shall be provided to accommodate the vehicles of infrequent visitors. Such spill over parking may be provided on the development or on the street at the rate of 1.0 space per dwelling unit. When spill over parking is provided on individual lots, the following criteria must be met:

1. each space shall be 8 feet by 18 feet
2. the spaces may be provided in the driveway or in a turn-around; and
3. the spill over spaces shall be clearly shown and noted on the subdivision or land development plan.

D. Curbs and Sidewalks

All streets shall be designed with curbs and sidewalks unless otherwise approved by the Borough Council of New Hope.

E. General Design Criteria

All streets shall be designed in accordance with the current regulations and recommended standards of the American Association of State Highway and Transportation Officials (A.A.S.H.T.O.) and the Pennsylvania Department of Transportation (PennDOT). Minimum standards for the primary, secondary, and local access streets shall be as follows:

<u>Criteria</u>	<u>Primary</u>	<u>Secondary</u>	<u>Local Access</u>
Vertical Alignment			
Minimum Grade	1.0%	1.0%	1.0%
Maximum Grade	7.0%	7.0%	10.0%
Typical within 50' of Intersection	3.0%	4.0%	4.0%
Horizontal Alignment			
Minimum Center Line Radius	350'	140'	100'
Min. Tang. between Curves	150'	100'	50'
Min. Stopping Sight Distance	275'	200'	175'

F. Cul-de-sac Streets

Cul-de-sac streets shall be used in lieu of dead-end streets. Stub streets will be permitted only within sub-sections of a phased development only when a temporary cul-de-sac is constructed and adequate guarantees are made to insure construction of a permanent cul-de-sac if the street is not extended within three (3) years. A cul-de-sac or stub street shall not be in excess of four hundred (400) feet in length. This maximum length is measured from the right-of-way line of the intersecting street to the center of the cul-de-sac.

G. Driveways

1. Driveways to Single-family Lots and to attached housing units:

a. Driveways shall be located no less than forty (40) feet from any street intersection. Driveways to corner lots shall gain access from the street of lower classification when a

corner lot is bounded by streets of two different classifications as described herein.

- b. There shall be adequate driveway turn-around space on each lot so that no car need back out onto a street in order to leave the lot.
- c. Driveways shall be so located, designed, and constructed as to provide a reasonable sight distance at intersections with streets on a stopping space, not to exceed a four (4) percent grade, twenty (20) feet behind the right-of-way line.
- d. All driveways shall be at least five (5) feet from any side or rear lot line for single-family lots and at least two (2) feet from the property line for attached housing units.
- e. For properties abutting curbed and uncurbed streets, the following standards shall apply to the driveway apron at the street line:
 - i. minimum curb cut or driveway width at the street line: 10 feet.
 - ii. maximum curb cut or driveway width at the street line: 20 feet.

2. Access to Parking Areas:

- a. All entrance drives serving four or less dwelling units shall, at a minimum, be designed to single-family driveway standards above.
- b. All entrance drives which may be expected to convey less than 200 ADT volume and greater than (a) above shall be laid out to conform to the design, service, and access standards established in this Ordinance for local access streets and shall be considered a local access street for purposes of establishing the street hierarchy.
- c. All entrance drives which may be expected to convey greater than 200 ADT but less than 1000 ADT volume shall be laid out to conform to the minimum design, service, and access standards specified in this Ordinance for secondary streets and shall be considered a secondary street.

Section 5.11 Special Purpose Streets

A. Industrial/Commercial Streets

1. Street Access: Special purpose streets may only intersect existing streets.
2. Cartway Width, Right-of-way, and Curbing: A minimum paved cartway width of 26 feet with curbing and a 60 foot right-of-way is required if on-street parking is prohibited. A minimum paved cartway width of 44 feet with curbing and a 70 foot right-of-way is required if on-street parking is allowed.
3. Moving Lanes: All industrial/commercial streets shall be provided with a minimum of two continuous moving lanes in which no parking is permitted.
4. Engineering Criteria: All features of the geometric design of an industrial/commercial street specified below shall be designed for a design speed of 30 miles per hour to be able to accommodate truck traffic.
 - a. Minimum Grade: 1.0%
 - b. Maximum Grade: 5.0%
5. Dedication: The Borough reserves the right to refuse dedication of a special purpose street. An appropriate legal mechanism for ownership and maintenance will be required where the streets are not accepted for dedication.

Section 5.12 Marginal Access Streets

- A. Classification and Design: Marginal access streets are required, unless specifically waived by the Borough as an alternative to stripping off lots along existing or proposed arterial or collector streets. Marginal access roads shall be classified and designed to conform with the design standards and service restrictions of local access streets.
- B. Intersection Spacing: The minimum distance between intersections of the marginal access street with other streets shall be 350 feet.
- C. Distance Between Cartways: A minimum distance of 30 feet shall be provided between the marginal access street cartway and the higher order street cartway. This area shall be used to provide a visual screen between the roadways by landscaping or by use of a berm.

Section 5.13 Intersections

A. Corner Sight Distance (Clear Sight Triangle)

- Whenever a proposed street intersects an existing or proposed street of higher order in the street hierarchy, the street of lower order shall be made a stop street. The street of lower order shall also be designed to provide a minimum corner sight distance as specified in the accompanying chart:

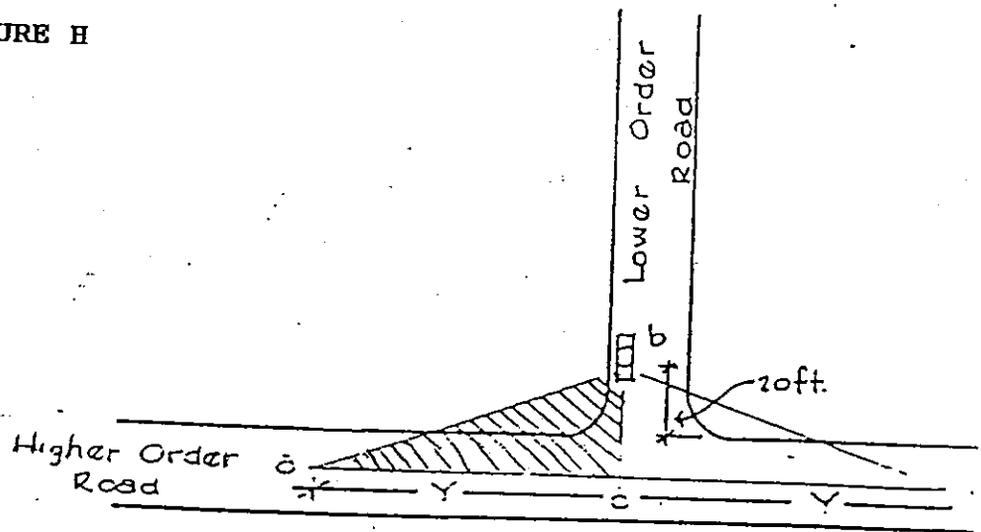
Y = CORNER SIGHT DISTANCE, measured from point a to point c and c to d .

a and d = a point 3.5 feet above the centerline of the major roadway.

b = eye level from a car stopped at the intersection on the minor road; for this ordinance b is situated 3.5 feet above the roadway, 20 feet from the edge of paving of the major road.

c = approximate center of intersection of two streets.

FIGURE H



shaded area represents
CLEAR SIGHT TRIANGLE

MINIMUM CORNER SIGHT DISTANCE Y	
MAJOR ROAD TYPE/DESIGN SPEED	Y (in feet)

Existing street/50 mph	500
Existing street/40 mph	400
Primary street/353 mph	350
Secondary street/30 mph	300
Local access/25 mph	200

2. The entire area of the clear sight triangle, described by points a, b, and c above, shall be designed to provide an unobstructed view across it from point b to all points 3.5 feet above the cartway along the center line from point a to points c and d.
3. Curb Radius: Minimum curb or edge of pavement radius shall be determined according to the specifications for the street of higher classification in the street system hierarchy, as specified below:

Secondary	10 feet
Primary	15 feet
Existing Streets	40 feet

- C. Intersection Spacing: Proposed streets which intersect opposite sides of another street (either existing or proposed) shall be laid out to intersect either directly opposite each other, or with a minimum offset or spacing measured from centerline to centerline as specified below.

MINIMUM INTERSECTION SPACING

MAJOR ROAD TYPE	Spacing (in feet)
Existing Streets	1600
Primary Streets	300
Secondary Streets	125
Local Access	NA

- D. Intersection Angle: Intersecting streets shall intersect at a 90 degree angle for a minimum of 50 feet beyond the intersection of the right-of-way lines.

- E. Turning Lanes: Deceleration or turning lanes may be required by the Borough along existing and proposed collector and/or arterial roads whenever these intersect other collector or primary roads.

1. Deceleration or turning or merging lanes may be required by the Borough along existing and proposed streets as determined by a traffic impact study required by Section 5.23.
2. Deceleration lanes shall be designed to the following standards:
 - a. The lane width shall be the same as the required width of the roadway moving lanes.
 - b. The lane shall provide the full required lane width for its full length. It shall not be tapered.
 - c. The minimum lane length shall be as follows:

<u>Design Speed of Road</u>	<u>Minimum Deceleration Lane Length</u>
30 mph	165 feet
40 mph	230 feet
60 mph	310 feet

Section 5.14 Landscape Regulations

- A. Intent - The intent of this section is to provide for minimum landscaping requirements for subdivision and land development in order to maintain the Borough's natural vegetation, to provide for the harmonious development of contiguous properties, and to prevent environmental pollution.
- B. Required Locations - The following landscaping requirement shall be the minimum provided in any land subdivision or development.
 1. Land used for residential, multi-family residential, office, commercial, institutional, industrial or public uses shall devote a minimum of ten percent (10%) of the total site area to the landscape requirements.
 2. Land used for public or private off-street parking with an area greater than ten thousand (10,000) square feet shall be landscaped, as part of (1) above, with a perimeter strip at least four (4) feet wide along the side and rear property lines and at least twenty-five (25) feet wide along any street line. In addition, one (1) internal planting

area shall be provided for each ten thousand (10,000) square feet, or fraction thereof, of paved surface area, provided, that in no event shall the area devoted to interior landscaping be less than four (4) percent of the total paved area. Such planting areas shall be placed so as to control vehicular and pedestrian traffic.

3. Buffer yards between noncomplimentary zoning districts shall be landscaped as required by the Borough Zoning Ordinance, and may be included as part of the ten (10) percent landscape requirements.

C. Material Requirements - The following standards shall apply for all required locations except where noted for a specific location.

1. Trees - Each land area devoted to the landscaped requirements shall contain at least one (1) tree for each one-tenth (0.1) acre of required area. This requirement shall be met, whenever possible, by preserving existing trees. The number of trees required shall be reduced by a credit for approved preserved trees in accordance with current approved guidelines for tree preservation and at least 50% of the ground area under the drip line of each tree is maintained at the existing grade level. Any existing grove or large area of trees shall not be disturbed nor any trees removed without prior approval.

<u>Preserved Tree Caliper</u>	<u>Credited Trees</u>
3 - 7 inches	1
8 - 12 inches	2
13 - 19 inches	3
20 - 29 inches	5
30 inches or greater	7

New trees and other required plants shall be a twice transplanted, nursery-grown specimen. They shall be of symmetrical growth, free of insects, pests and disease and suitable for street use and durable under the maintenance contemplated.

Each tree must have a minimum trunk diameter measured at a height of six (6) inches above the finished grade level of two and one-half (2 1/2) inches and a maximum height of twelve (12) feet.

In particular, approved trees for street planting include the following:

- a. *Acer saccharum* - Sugar Maple
 - b. *Celtis Occidentalis* - Hackberry (dry areas)
 - c. *Fraxinus americana lanceolata* - Green Ash
 - d. *Fagus grandifolia* - American Beech
 - e. *Fagus sylvatica* - European Beech
 - f. *Gleditsia triacanthos* - Continental Honey Locust
 - g. *Ginkgo biloba* - Male species only
 - h. *Liquidambar styraciflua* - Sweet Gum (wet areas)
 - i. *Liriodendron tulipifera* - Tulip Tree
 - j. *Magnolia acuminata* - Cucumber Tree
 - k. *Nyssa sylvatica* - Black Gum Tupelo
 - l. *Phellodendron amurense* - Amur Cork Tree
 - m. *Platanus acerifolia* - London Plane Tree
 - n. *Quercus* - Oak; the following species: *alba* (white), *coccinea* (Scarlet), *prinus* (Chestnut), *borealis* (red), *velutina* (Black).
2. Perimeter of Parking Areas - There shall be a minimum of one (1) tree for each forty (40) linear feet of parking area perimeter strip. Grass or other ground cover shall be planted in all such strips. A sight triangle shall be observed at all permitted access ways such that an unobstructed view is maintained.
 3. Buffer Yards - Where required, buffer yards shall be constructed in accordance with the Borough Zoning Ordinance.
 4. Street Trees - Within any land development or subdivision, street trees shall be planted along all streets where suitable trees do not exist. As part of the requirements of (C.1) above, one (1) street tree shall be planted for each forty (40) linear feet of road frontage. Street trees shall not be planted opposite each other along any street and shall be set on the right-of-way line.
 5. Miscellaneous - All required landscape areas shall be protected from vehicular encroachment by the use of wheel stops, curbing, or other suitable methods. No landscape area shall be used for parking; accessory structures; garbage, trash or material storage; or any other functional use contrary to the intent and purpose of this ordinance.
 6. Guarantee - Prior to the release of applicant's improvement construction maintenance guarantee, an inspection shall be made by the Borough to determine that both newly planted and existing plant material is alive

and healthy, and is continuing to satisfy the intent of this Ordinance. Any material which is unacceptable at the time of inspection must be replaced in order to satisfy this Ordinance as it originally applied and to effect release of the maintenance guarantee.

7. Landscape Plan - All existing and/or proposed landscaping required to satisfy the provisions stated herein shall be shown on a landscaping plan or shall be included on other required Improvement construction plans.

Section 5.15 Street Signs

- A. The developer shall erect at every street intersection a street sign or street signs meeting Borough approval, having thereon the names of the intersecting streets. At intersections where streets cross, there shall be at least two (2) such street signs and at the intersections where one (1) street ends or joins with another street, there shall be at least one (1) such street sign.
- B. Street signs are to be erected on or before occupation of the first dwelling on the street. Temporary street signs may be erected on the approval of the Borough but shall be made permanent when the first dwelling unit is occupied on the street.
- C. The installation of all traffic control signs, equipment or devices, required within the development and along the frontage shall be shown on the plan, approved by the Pennsylvania Department of Transportation, where required and otherwise by the Borough and all installation and material costs shall be borne by the developer.

Section 5.16 Street Construction Specifications

- A. General Requirements
 1. All specifications and requirements, materials and equipment shall conform to the requirements of the Pennsylvania Department of Transportation as outlined in their Specifications Manual, except where more stringent requirements are specified in this Article.
 2. Any person, partnership, association or corporation may use in place of the surfacing method outlined below any other surfacing method which is approved by the Pennsylvania Department of Transportation and the Borough Council.

- B. Subgrade: All roadways shall be constructed with no fill to be placed in lifts over six (6) inches in depth without thorough Compacting as set forth by Specifications Form 408 of the Pennsylvania Department of Transportation.
- C. Base Course: The base course shall be constructed one foot (1') outside of each side of the finished roadway surface, except on streets requiring curbing.
- D. Bituminous Surfacing
1. No earlier than six (6) months but within one (1) year after the completion of the bituminous surface course, the surface shall be further treated by an application of 4/10 of one (1) gallon per square yard of E2 or E3 or the approved equivalent. A final stone course using thirty (30) pounds of 3/8 inch stone per square yard, thoroughly rolled, shall be placed.
 2. The finished surface shall have a two and one-half (2 1/2) inch crown or a 1/4 inch to one foot cross slope to conform with the sub-base and shall be uniform and conform to the grade line as established on the approved plan.
 3. The slope of all fills and cuts within the right-of-way and ground adjacent to the right-of-way shall have a maximum slope of 3 to 1.
- E. Minimum Street Standards: The following are considered to be minimum street construction standards. Each applicant shall evaluate the site conditions to determine if more restrictive standards are required. The Borough may require more restrictive standards on streets being dedicated if site conditions warrant such standards.

BASE COURSE

Street	Subbase	Bitumimous Concrete Base Course	Bituminous Binder Course (ID-2)	Bit. Wearing Course
Arterial	6"	6"	2"	1 1/2"
Collector	6"	6"	2"	1 1/2"
Primary	6"	5"	1 1/2"	1 "
Secondary	6"	5"	1 1/2"	1"
Local Access	6"	5"	1-1/2"	1"
Single Access	6"	5"	1 1/2"	1"
Industrial/ Commercial	6"	6"	2"	1 1/2"
Marginal	6"	5"	1 1/2"	1"

- F. Protective Barriers: Guide rails meeting Pennsylvania Department of Transportation specifications shall be placed at locations along the right-of-way as required by Pennsylvania Department of Transportation specifications and design manuals. This requirement shall be applicable to all streets and highways regardless of ownership.

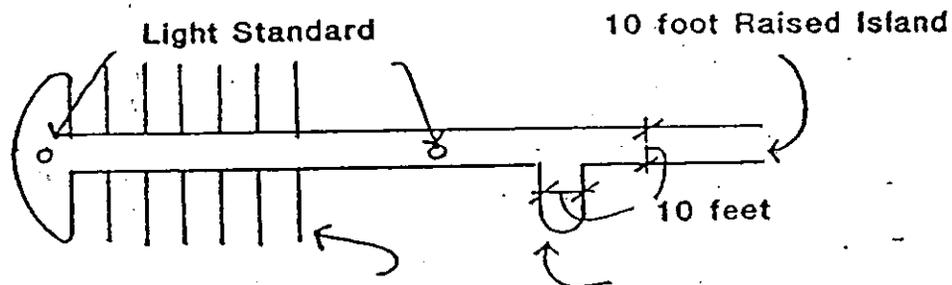
Section 5.17 Automobile Parking

- A. A parking space is a paved stall or berth covered or uncovered for parking motor vehicles, excluding space(s) within a public cartway. Parking facilities shall be provided off-street in accordance with the requirements of New Hope Zoning Ordinance and this Ordinance. Use of any parking space for any other purpose is prohibited.
- B. Parking areas shall be designed to permit each motor vehicle to proceed to and from the parking space provided for it without requiring the moving of any other motor vehicles(s).
- C. At no time shall angle or perpendicular parking be provided along public or private streets. All parking lots and bays permitting parking other than parallel shall be physically separated from the street and confined by curbing or other suitable separating device.

- D. Vehicles shall not be permitted to exit parking spaces by backing into a public street. Access areas shall be designed so as to allow vehicles to enter a public street in a forward direction.
- E. The design standards specified below shall be required for all off-street parking facilities with a capacity of three (3) or more vehicles.
 - 1. No one row of off-street parking of motor vehicles shall exceed twenty (20) cars in capacity. Separate areas on a parcel shall be physically separated from one another by ten (10) foot wide planting strips,.

FIGURE I

TYPICAL PARKING ISLAND



STALLS: (Per Chart on Page 107)

SEPARATION: 20 CARS MAX.

- 2. Design standards for parking stalls shall not apply where the primary purpose is that of vehicle storage related to sales, service or other use, Unless otherwise specified, parking stalls shall conform to the following minimum dimensional standards based upon their intended function.

Parking Area Dimensions

Minimum parking area dimensions shall be listed in the following table:

Angle of Parking	Stall Width	Stall Depth	Driveway One-Way	Driveway Two-Way
<u>Degree</u>				
90	9'	19'	24'	24'
60	9'	19'	18'	21'
45	9'	19'	15'	18'
30	9'	19'	12'	18'
Parallel	8'	22'	12'	18'
Handicapped Oversized*	12.5'	19'		

(As determined by Borough)

*Depth indicated in chart is for all vehicles except recreational vehicles, tandem trailers, trucks and buses.

- a. Stall depth shall be measured from the curb, tire stop, or other control device and shall be measured parallel with the parking angle of the vehicle. Stall width shall be measured perpendicular to distance between stalls and/or stalls and the curb line.
- b. Parking for the handicapped or physically disabled shall be provided for as follows:

<u>Total Non-residential Parking</u>	<u>Required Handicapped Parking</u>
0 - 9	None
10 - 50	1 Space
51 - or more	1 space/50 spaces

3. All dead-end parking areas shall be designed to provide sufficient area for backing and turning movements from the end stalls of the parking area.
4. No less than a five (5) foot radius of curvature shall be permitted for all curb lines in all parking areas.
5. Except at entrance and exit drives, all parking areas shall be set back from the right-of-way line,

and all property lines at least fifteen (15) feet or as required by the New Hope Zoning Ordinance (the greater provision shall prevail). The distance between this required set back and the cartway shall be maintained as a planting strip.

6. All automobile parking areas and access roads shall be paved and constructed in accordance with minimum street standards except for a single-family residential dwelling driveways.
7. The depth and width of parking areas reserved or laid out for commercial and industrial uses shall be appropriate to those uses.
8. The layout of every parking area shall be such as to permit safe and efficient internal circulation, in accordance with accepted traffic engineering principles and standards, including truck traffic where applicable.
9. Entrances and exits to and from off-street parking areas shall be located so as to avoid interference with street traffic.
10. Every off-street parking area shall include sufficient stacking space to accommodate entering and exiting vehicles without overflowing into adjacent streets or service roadways.
11. Pedestrian crosswalks and islands shall be provided at intervals not exceeding 200 feet along the length of each parking area. These can be incorporated into the ten foot division required in E. above.
12. For the purpose of servicing any property held under single and separate ownership, entrance and exit drives crossing the street lot line shall be limited to two (2) along the frontage of any single street, and their center lines shall be spaced at least eighty (80) feet apart. On all corner properties, there shall be spaced a minimum of sixty (60) feet, measured at the curb line, between the center line of any entrance or exit drive and the street line of the street parallel to said access drive.
13. Access drives shall be at least twelve (12) feet from any property line, except for the additional requirements of buffer yards.

14. Concrete tire bumpers shall be installed so as to prevent vehicle overhand on the sidewalk area.
- F. Lighting - Parking areas for commercial, industrial and multi-family residential developments shall be lighted. All artificial lighting used to illuminate any parking area shall be so designed that no direct rays shall fall upon any neighboring property or street. A minimum level of one (1) foot candle of light shall be maintained. Lighting standards shall be located not less than five) feet from the paving of parking spaces, drives or streets.
- G. Parking lots with less than twenty (20) spaces shall not have a grade exceeding five (5) percent. Parking lots with twenty (20) or more spaces shall not have a grade exceeding three (3) percent.
- H. All parking areas shall have at least one (1) tree of 1 1/2 inch caliper minimum for every five (5) parking spaces in single bays and one (1) tree of 1 1/2 inch caliper minimum for every ten (10) parking spaces in double bays. Trees shall be planted in such a manner as to afford maximum protection from the sun for parked vehicles.
- I. All parking spaces shall be marked with a four (4) inch wide painted line so that individual spaces are identifiable.
- J. Curbs or tire stops shall be designed for the protection of planting strips and pedestrian walks.

Section 5.18 Open Space

- A. All subdivisions and land developments shall satisfy requirements for the preservation, ownership, and maintenance of open space as specified in the New Hope Borough Zoning Ordinance or as part of this Ordinance. Open space shall include both improved and unimproved areas of natural resources, lands for public or private facilities, lands for recreation, and lands restricted or limited from development.
 1. Natural Resources shall include such items as open waterways, steep slopes, forest, lakes, ponds, wetland, and shorelines, or other lands with similar resource limitations.
 2. Public and Private Facilities shall include areas proposed for storm water management facilities,

buffer yards, utility easements, water and sewage disposal facilities, etc.

3. Recreation Areas shall include either active or passive recreation facilities such as playgrounds, parks, etc.
4. Restricted Lands shall include flood prone areas (Floodplains, alluvial soils, floodways, floodway fringes) and storm water management facilities which are regulated by other sections of this Ordinance.

B. Site Requirements

1. Areas proposed for open space shall be of a size and configuration which will insure the function of the open space, which will be easily maintained and managed, and which will be accessible for the purpose of the area designated. If publicly owned, all open space shall be accessible to all residents of the Borough. If privately owned, the open space shall be accessible to all residents of the development.
2. Access to all open space shall be provided from a private or public street depending upon the form of ownership, but in no case shall access be taken from other than a street.
3. Open space shall not include any land occupied by buildings roads, or rights-of-way, yards or lots of single or multi-family dwelling units, or parking areas.

C. Where Required: Open space shall be required where specified in the New Hope Borough Zoning Ordinance. In addition, all land developments and subdivisions shall provide such areas of natural resources or restricted lands as required by other Ordinances of New Hope Borough. Additional areas of open space may be designated if the requirements of this Ordinance are satisfied.

D. Ownership: All forms of ownership identified in Section 904 of the Borough Zoning Ordinance may be used to preserve and maintain open space subject to the requirements and restrictions set forth.

1. All open space shall be clearly identified as to location and purpose on development plans.

2. All open space shall be delineated from private lots by the use of shrubbery, trees, markers or other method acceptable to the Borough.
3. The applicant shall be responsible for establishing a form of ownership, which is acceptable to the Borough, and which will insure that the areas will be preserved and maintained in perpetuity.

E. Installation and Maintenance - Each subdivision and land development shall be required to develop the method and means for the installation and/or maintenance of all open space areas.

1. A Performance Bond or other security shall be established to cover costs of improving, constructing, or installing open space or facilities within same. Any planting, recreational facilities, storm water management facilities, etc. shall be fully guaranteed.
2. The maintenance of all open space shall be guaranteed by the establishment of an approved form of ownership. Any lands to be dedicated to New Hope Borough shall be further guaranteed by the establishment of a preservation fund which shall consist of a cash contribution to New Hope Borough in an amount which will generate income equivalent to the annual maintenance cost of the open space.

Section 5.19 Recreation Areas

The New Hope Zoning Ordinance requires a minimum amount of open space for certain types of residential development. A portion of that open space is required to be for recreation purposes. In conjunction with good site design practices, the following criteria are to be used in evaluating the recreation area proposed on a development plan.

- A. The recreational activities and/or facilities for which the area is intended must be specified on the development plans.
- B. Recreation areas shall be readily accessible to all development residents; or, in the case of recreation areas dedicated to the Borough shall be easily and safely accessible to the general public. At least one side of the recreation area shall abut a street for a minimum distance of fifty (50) feet for access of emergency and maintenance vehicles.

1. Measures must be taken to ensure that unsafe conditions will be avoided when recreation areas are adjacent to streets or parking lots.
- C. The configuration of the recreation area must be able to accommodate recreation activities proposed by the development plans. The required minimum area shall not include narrow or irregular pieces of land which are remnants from lotting and/or street and parking areas. Recreational areas shall have a minimum dimension of twenty (20) feet and a minimum area of 10,000 square feet.
- D. Recreation areas required by the New Hope Zoning Ordinance shall not include lands identified as open space with natural resources, public or private facilities, or restricted lands.
- E. Recreation areas shall not be traversed by utility easements unless said utilities are placed underground and no part of them or their supportive equipment protrudes above ground level.
- F. The following may not be located in recreation areas: sewage treatment or disposal facilities of any type, water storage tank, well pump house, and any similar use or other use which is not related to or associated with recreation.
- G. Active recreation areas shall be located in such a location that the use of the facility will not be a nuisance to the residents of nearby dwelling units.

Section 5.20 Sidewalks

- A. Sidewalks shall be required on both sides of all streets.
- B. The minimum width of all sidewalks shall be four (4) feet. There shall be a minimum of two (2) foot wide planting strip between the curb and sidewalk. This planting strip can be used for the location of the underground utilities.
- C. The grades and paving of the sidewalks shall be continuous across driveways except in non-residential and multi-family residential developments and in certain other cases where heavy traffic volume dictates special treatment.
- D. Sidewalks shall be constructed of 3,500 p.s.i. concrete with a minimum thickness of four (4) inches on a

compacted four (4) inch insulation bed composed of slag, crushed stone, or gravel. Sidewalks at residential driveways shall be six (6) inches thick and eight (8) inches thick at commercial and industrial driveways.

- E. Sidewalks shall be laterally pitched at a slope not less than three eighths ($3/8$) inch per foot to provide for adequate surface drainage.
- F. At corners and pedestrian street-crossing points, sidewalks shall be extended to the curbline with an adequate apron area for pedestrian traffic.
- G. Sidewalks shall not exceed a seven (7) percent grade. Steps or a combination of steps and ramps shall be utilized to maintain the maximum grades, where necessary. Where sidewalk grades exceed five (5) percent, a non-slip surface texture shall be used.
- H. In addition to the preceding requirements, all sidewalks shall provide ramps for adequate and reasonable access for the safe and convenient movement of the physically handicapped, including those in wheelchairs, across curbs at all pedestrian crosswalks. These facilities shall be constructed in accordance with the chapter titled "Pedestrian Facilities" of the PennDOT Design Manual Part 2 or any amendments thereto.

Section 5.21 Multi-family Residential Developments

In addition to all other applicable provisions of this Ordinance, multi-family residential developments are subject to the following requirements.

A. Arrangement of Buildings and Facilities

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

B. Access and Circulation

1. Access to the dwellings and circulation between buildings and other important project facilities for vehicular and pedestrian traffic shall be comfortable and convenient for the occupants.
2. Access and circulation for fire-fighting and other emergency equipment, moving vans, fuel trucks, garbage collection, deliveries and snow removal shall be planned for efficient operation and convenience.
3. Walking distance from the main entrance of a building to a street, driveway or parking area shall usually be less than one hundred (100) feet; any exception to this standard should be reasonably justified by compensating advantages, such as desirable views and site preservation through adaptation to topography. In no case shall the distance exceed two hundred (200) feet.

C. Yards

Yards shall assure adequate privacy, desirable outlook, adequate natural light and ventilation, convenient access to and around the dwellings, and other essential uses.

D. Grading

1. Grading shall be designed for buildings, lawns, paved streets and other facilities, to assure adequate surface drainage, safe and convenient access to and around the buildings and for the screening of parking and other service areas and the conservation of desirable existing vegetation and natural contours of the land.
2. Grading around buildings shall be designed to be in harmony with natural topography.

E. Streets

1. Streets shall be provided on the site where necessary to furnish principal traffic-ways for convenient access to the living units and other important facilities on the property.
2. Streets shall conform to the design requirements and specifications of this Ordinance.

F. Driveways

1. Driveways shall be provided on the site where necessary for convenient access to the living units, garage compounds, parking areas, service entrances of buildings, collection of refuse and all other necessary services. Driveways shall enter public streets at safe locations.
2. Driveways shall be planned for convenient circulation suitable for traffic needs and safety.
3. All driveways shall be constructed and paved in accordance with minimum street standards.

G. Parking Areas

1. Paved parking areas shall be provided to meet the needs of the residents and their guests without interference with normal street traffic.
2. Parking areas shall conform to the standards and requirements of this Ordinance and those of the Zoning Ordinance.

H. Sidewalks

1. Street sidewalks and on-site walks shall be provided for convenience and safe access to all living units from streets, driveways, parking areas or garages and for convenient circulation and access to all facilities.
2. Width, alignment and gradient of walks shall provide safety, and convenience for pedestrian traffic. Small jogs in the alignment shall be avoided.
3. The alignment and gradient of walks shall be coordinated with the grading plan to prevent the passage of concentrated surface water on or across the walk and to prevent the pocketing of surface water by walks.
4. Sidewalks shall be constructed in accordance with the requirements of Section 5.20

I. Refuse Collection Stations

1. Outdoor collection stations shall be provided for garbage and trash removal when individual collection is not made and indoor storage is not

provided.

2. Collection stations shall be located so as to be separated adequately from habitable buildings to avoid being offensive, but at the same time be convenient for both collectors and residents and shall be screened and landscaped.

J. Planting

The appeal and character of the site shall be preserved and enhanced by retaining and protecting existing trees and other site features; and additional new plant material shall be added for privacy, shade, beauty of buildings and grounds and to screen out objectionable features. The requirements of Section 608 Buffer Yards of the New Hope Borough Zoning Ordinance shall be met.

Section 5.22 Non-Residential Developments

- A. Additional width of streets adjacent to areas proposed for non-residential use may be required to assure the free flow of through-traffic unimpeded by vehicles entering or leaving parking areas.
- B. The access requirements of this Ordinance shall be met.
- C. For commercial uses, the developer may be required to provide separate access for service vehicles and loading areas from the vehicular access ways and parking areas intended for patron use. This may be accomplished by using a separate access point for service vehicles to move from the road to the loading area. The applicant may also be required to screen the loading area when deemed necessary by the Borough.
- D. Streets in non-residential developments shall not be directly connected to streets in existing residential developments.
- E. Parking areas shall be located or designed in such a manner that they are visibly secluded from eye level in any surrounding residential area. Grading to depress the parking area, raised berms, landscaping, or fencing are satisfactory methods to create such seclusion.
- F. All area, design, and parking requirements shall conform to the New Hope Borough Zoning Ordinance and this Ordinance.

G. Refuse Collection for Non-Residential Developments.

1. Outdoor collection stations shall be provided for garbage and trash removal when indoor collection is not provided.
2. Collection stations shall be located to avoid being offensive and shall be screened from view and landscaped.
3. Collection stations shall not be located in buffer yards.

H. Off-Street Loading Facilities

1. Off-Street Loading facilities shall be designed to conform to the following specifications:
 - a. Each required space shall be no less than fourteen (14) feet wide and fifty-five (55) feet long, exclusive of drives and maneuvering space, and located entirely on the lot being served.
 - b. There shall be appropriate means of access to a street as well as adequate maneuvering space.
 - c. The maximum width of driveway openings measured at the street lot line shall be thirty-five (35) feet; the minimum width shall be twenty (20) feet.
 - d. All driveways and entrance ways shall be graded, surfaced and drained in accordance with minimum street standards.

Section 5.23 Impact Studies

- A. A traffic impact study and a water feasibility study shall be required with the preliminary plan submission for all subdivisions and land developments that meet one or more of the following criteria:

Residential: 10 or more dwelling units.

Commercial, Office and Industrial: a development, commercial building or buildings consisting of 25,000 square feet or more of gross floor space, or five (5) or more lots or units.

B. These impact and feasibility studies will be reviewed by the Borough in order to determine the impact of the proposed subdivision on the Borough. The problems identified therein, whether on or off-site, which bear a reasonable nexus to the needs created by and benefits conferred upon the subdivision, must be solved to the Borough's satisfaction prior to granting preliminary approval. Any required improvements identified by reference to the studies whether on or off-site, will be a required improvement at the time final plan approval is granted. The Borough shall have the right to hire an independent consultant(s) to review the Impact and Feasibility Studies if the Borough Council deems such an independent review to be necessary and the cost of said consultant(s) shall be charged to the applicant, pursuant to Section 2.01 of this Ordinance.

C. Traffic Impact Study - the study will enable the Borough to assess the impact of a proposed development on the traffic system. Its purpose is to ensure that proposed developments do not adversely affect the traffic network and to identify any traffic problems associated with access from the site onto the existing roads. The study's purpose is also to delineate solutions to potential problems and to present improvements to be incorporated into the proposed development.

1. Traffic impact statements shall be based on the following criteria:

a. General Site Description - the site description shall include the size, location, proposed land uses, construction staging and completion date, or types of dwelling units. A brief description of other major existing and proposed land developments within one half mile of the proposal.

b. Traffic Facilities Description - the description shall contain a full documentation of the proposed internal and existing highway system. The report shall describe the external roadway system within the area. Major intersections in the area shall be identified and sketched. All future highway improvements, including proposed construction and traffic signalization, shall be noted. Any proposed roadway improvements which are part of proposed surrounding developments shall be noted and included in the calculations.

c. Existing Traffic Conditions - Existing traffic conditions shall be measured and documented for all roadways and intersections in the area. Existing traffic volumes for average daily traffic, including weekends as appropriate due to the special characteristics of the area, peak highway hour(s) traffic, and peak development-generated hour(s) traffic shall be recorded. Manual traffic counts at major intersections in the study area shall be conducted, encompassing the peak highway and development generated hour(s), and documentation shall be included in the report. A volume/capacity analysis based upon existing volumes shall be performed during the peak highway hour(s) and the peak development-generated hour(s) for all roadways and major intersections in the study area. Levels of service shall be determined for each location.

This analysis will determine the adequacy of the existing roadway system to serve the current traffic demand. Roadways and/or intersections experiencing levels of service E or F shall be noted as congestion locations.

TABLE 6 TRIP GENERATION RATES

TYPE OF LAND USE	TYPE OF DEVELOPMENT	AVERAGE TRIP GENERATION RATES	WEEKDAY									SATURDAY								
			PEAK HOUR RATES OF GENERATOR						PEAK HOUR OF ADJACENT STREET TRAFFIC						AVERAGE TRIP GENERATION RATES			PEAK HOUR OF GENERATOR		
			A.M.			P.M.			AM Between 7 & 9			PM Between 4 and 6			IN	OUT	TOTAL	IN	OUT	TOTAL
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL						
		10 trips per D.U.	0.3	0.6	0.8	0.7	0.4	1.0	0.3	0.6	0.8	0.7	0.4	1.0	10.1 trips per D.U.	0.5	0.5	1.0		
Residential	Single-family detached														2.6 trips per D.U.	-	-	-		
	Townhouse, Multiplex, Twin, Duplex, Patio, Atrium*	8.1 trips per D.U.	0.18	0.55	0.73	0.45	0.28	0.93	-	-	-	-	-	0.4	-	-	-			
	Garden Apartment	5.4 trips per D.U.	0.1	0.4	0.5	0.4	0.2	0.6	0.1	0.4	0.5	-	-	0.3	-	-	-			
	Mid & High Rise Apt.	4.3 trips per D.U.	-	-	0.3	-	-	0.5	-	-	-	0.4	0.2	0.6	-	-	-			
	Mobile Home	5.38 trips per D.U.	0.12	0.35	0.44	0.37	0.22	0.59	0.08	0.38	0.46	-	-	0.3	-	-	-			
	Retirement Community	3.3 trips per D.U.	-	-	0.4	-	-	0.4	-	-	0.4	0.37	0.22	0.59	5.53 trips per D.U.	0.28	0.24	0.52		
Commercial	Shopping Center								1.1	0.9	3.5	7.2	7.2	14.7	156.3/1000 sq. ft. GFA	-	-	-		
	0-49,999 gross sq. ft.	115.8/1000 sq. ft. GFA	-	-	8.5	6.8	7.0	15.5	-	-	2.9	2.4	2.7	8.2	107.6/1000 sq. ft. GFA	4.2	5.6	12.6		
	50,000-99,999 gross sq. ft.	79.1/1000 sq. ft. GFA	-	-	7.7	3.3	3.4	9.1	-	-	-	2.6	2.9	5.0	797/1000 sq. ft. GFA	4.1	3.8	7.9		
	100,000-199,999 Gr. sq. ft.	60.4/1000 sq. ft. GFA	-	-	3.8	3.0	2.8	5.5	-	-	-	2.1	2.3	4.8	82.7/1000 sq. ft. GFA	4.3	4.1	8.3		
	200,000-299,999 Gr. sq. ft.	49.9/1000 sq. ft. GFA	2.6	2.5	4.1	2.7	2.5	5.3	-	-	-	-	-	5.2	78.9/1000 sq. ft. GFA	-	-	10.0		
	300,000-399,999 Gr. sq. ft.	40.4/1000 sq. ft. GFA	-	-	3.4	-	-	5.2	-	-	-	-	-	5.7	66.1/1000 sq. ft. GFA	-	-	-		
	400,000-499,999 Gr. sq. ft.	40.4/1000 sq. ft. GFA	-	-	3.9	-	-	5.0	-	-	-	1.23	1.29	3.30	43.9/1000 sq. ft. GFA	2.69	3.34	-		
	500,000-999,999 Gr. sq. ft.	47.6/1000 sq. ft. GFA	-	-	-	2.22	1.92	3.01	0.64	0.32	-	1.37	1.81	-	41.7/1000 sq. ft. GFA	-	-	-		
	1,000,000-1,242,999 Gr. sq. ft.	34.5/1000 sq. ft. GFA	-	-	-	0.68	4.22	4.90	-	-	-	1.10	1.48	2.58	34.3/1000 sq. ft. GFA	2.04	2.27	4.31		
	Over 1,250,000 Gr. sq. ft.	31.1/1000 sq. ft. GFA	-	-	-	1.40	1.66	3.06	0.35	0.15	0.50	1.4	1.9	3.3	-	-	-			
	Discount Store	26.5/1000 sq. ft. GFA	-	-	-	2.6	2.4	6.3	-	-	-	-	-	-	-	-	-			
	Restaurant	64.6/1000 sq. ft. GFA	-	-	-	-	-	-	0.03	0.02	0.02	0.07	0.05	0.07	1.87 trips per seat	0.22	0.28	0.69		
	Sit down, low turnover	1.20 trips per seat	-	-	-	0.16	0.15	0.15	-	-	47.5	9.9	4.0	10.5	67.8/1000 sq. ft. GFA	-	-	-		
	Sit down, high turn-over	164.4/1000 sq. ft. GFA	10.1	5.5	15.7	13.0	9.2	22.2	-	-	-	-	-	-	-	-	-			
	Drive-in Restaurant		-	-	-	44.4	41.9	78.8	49.7	40.2	89.9	17.0	14.6	31.6	-	-	-			
	Fast Food	551/1000 sq. ft. GFA	-	-	-	6.0	7.4	15.7	-	-	-	3.7	3.3	10.9	-	-	-			
	Supermarket	125.5/1000 sq. ft. GFA	-	-	-	4.70	5.00	9.70	-	-	-	-	-	-	-	-	-			
	Freestanding Retail Store*	69/1000 sq. ft. GFA	0.60	0.40	1.00	0.19	1.48	2.09	1.90	0.36	2.34	0.19	1.48	2.09	5.43/1000 sq. ft. GFA	-	-	1.14		
	Office														34.7/1000 sq. ft. GFA	-	4.3	-		
	General Office Building	11.69/1000 sq. ft. GFA	1.90	0.36	2.34	2.80	2.80	5.60	-	-	-	0.36	0.37	0.73	8.1 trips per room	-	-	0.67		
	Medical Office Building	53/1000 sq. ft. GFA	-	-	0.90	-	-	0.87	0.58	0.29	0.85	-	-	0.71	8.35 trips per room	-	-	0.81		
	HOTEL	10.5 trips per room	-	-	0.86	-	-	0.88	-	-	0.65	-	-	1.05	-	-	-			
	Motel	9.58 trips per room	-	-	-	-	-	-	-	-	0.83	-	-	0.81	-	-	-			
Industrial	General Industrial	5.43/1000 sq. ft. GFA	-	-	0.97	-	-	0.84	-	-	0.58	-	-	1.63	-	-	-			
	Manufacturing	4.10/1000 sq. ft. GFA	-	-	0.79	-	-	0.76	-	-	0.58	-	-	1.63	-	-	-			
	Warehousing	5.01/1000 sq. ft. GFA	-	-	1.61	-	-	1.63	-	-	0.16	-	-	0.01	-	-	-			
Institutional	Elementary Schools	0.51 trips per student	0.11	0.05	0.16	0.04	0.07	0.11	-	-	0.14	-	-	0.06	0.77 trips per student	0.11	0.04	0.15		
	High School	1.22 trips per student	0.19	0.07	0.26	0.07	0.13	0.23	0.15	0.02	0.18	0.04	0.08	0.12	-	-	-			
	Jr./Community College	1.55 trips per student	0.16	0.03	0.18	0.05	0.11	0.16	-	-	-	-	-	-	-	-	-			
	Colleges*	2.5 trips per student	0.17	0.03	0.20	0.05	0.12	0.17	-	-	-	-	-	-	8.53 trips per bed	0.57	0.63	1.26		
	Hospital	14 trips per bed	0.56	0.24	0.80	0.66	0.24	0.90	-	-	-	-	-	-	-	-	-			

D.U. - Dwelling Unit
 GFA - Gross Floor Area
 (-) - Data not available

Sources: Trip Generation, Institute of Transportation Engineers, 1976.
 "Transportation Impact Study Model Ordinance", Bucks County Planning Commission, 1975,
 (as indicated by asterisk(*)).

These rates shall be reviewed by the Township Planning Commission for any changes that may be appropriate. The applicant is required to use the above rates where applicable. Where the appropriate data is not available, the developer shall provide the rates and document the appropriate source. If the developer requests to use significantly different rates than those given, he shall submit the rates and the specific justification to the Township Planning Commission prior to submission of the Transportation Impact Study for their approval or denial.

d. Traffic Impact of the Development-Estimation of vehicular trips to result from the proposal shall be completed for the average daily peak highway hour(s). Vehicular trip generation rates to be used for this calculation shall be obtained from the Trip Generation Rates (See Table 6). These development-generated traffic volumes shall be provided for the in-bound and out-bound traffic movements as estimated, and the reference source(s) and methodology followed shall be documented. All turning movements shall be calculated. These generated volumes shall be distributed to the area and assigned to the existing roadways and intersections throughout the area. Documentation of all assumptions used in the distribution and assignment phase shall be provided. Traffic volumes shall be assigned to individual access points. Any characteristics of the site that will cause particular trip generation problems shall be noted.

e. Analysis of Traffic Impact - The total future traffic demand shall be calculated. This demand shall consist of the combination of the existing traffic expanded to the completion year (using an annual traffic rate available from the Delaware Valley Regional Planning Commission or PennDOT), the development generated traffic, and the traffic generated by other proposed developments in the study area. A second volume/capacity analysis shall be conducted using the total future demand and the future roadway capacity. If staging of the proposed development is anticipated, calculations for each stage of completion shall be made. This analysis shall be performed during the peak highway hour(s) and peak development generated hour(s) for all roadways and major intersections in the study area.

Volume/capacity calculations shall be completed for all major intersections

All access points shall be examined as to the necessity of installing traffic signals. This evaluation shall compare the projected traffic to the warrants for traffic signal installation.

- f. Conclusions and Recommendations - Levels of service for all roadways and intersections shall be listed. All roadways and/or intersections showing a level of service below C shall be considered deficient, and specific recommendations for the elimination of these problems shall be listed. This listing of recommended improvements shall include, but not be limited to, the following elements: internal circulation design, site access location and design, external roadway and intersection design and improvements, traffic signal installation and operation including signal timing, and transit design improvement. All physical roadway improvements shall be shown in sketches.

The applicant shall be responsible for the implementation of and the costs of all recommended improvements. The estimated cost of the improvements shall be listed along with the projected completion date of the work.

D. Water Feasibility Study

1. A water feasibility study shall be signed by the person(s) preparing the study and shall include the following information:
 - a. Calculations of the project water needs using the criteria of Section 5.24 of this Ordinance
 - b. a geologic map of the area with a radius of at least one mile from the site;
 - c. the location of all existing on-lot sewage disposal systems within 1000 feet of the site.
 - d. the location of all existing and proposed wells within 1000 feet of the site, with a notation of the capacity of all high yield wells;
 - e. the location of all streams within 1000 feet of the site and all known point sources of pollution;
 - f. the location of all known faults and lineations within 1000 feet of the site;
 - g. based on the geologic formation(s) underlying the site the long-term safe yield shall be

determined; and

- h. a determination of the effects of the proposed water supply system on the quantity and quality of water in nearby wells, streams and the ground water table.
 - i. a statement of the qualifications of the person(s) preparing the study.
2. PUBLIC SYSTEMS - In addition to the above, the following shall apply to public water systems:

a. Public system - where a well, or primary well and secondary (back-up) well, supplies water to two or more dwellings, or a single commercial or industrial use through a distribution system.

b. At least one test well shall be constructed.

(1) During construction, the well driller shall keep an accurate record of the elevation to which the water stabilizes as each aquifer is encountered and the top of each stratum penetrated.

(2) Samples shall be taken from each 20 feet of drilling and at every change in formation. Each sample shall be placed in a non-breakable container. The containers, in a sturdy box, shall be made available to the Borough. Upon completion of a pump house, they shall be stored in the pump house.

c. At least two monitoring wells per test well shall be constructed to monitor the impact of the test well. Monitoring wells at least 200 feet apart shall be a minimum distance of 100 feet and a maximum distance of 200 feet from the test well.

d. Existing wells, within a radius as determined by the chart below, shall be shown on a plan.

<u>Quantity of Cumulative Proposed Withdrawal</u>	<u>Radius from the Proposed Withdrawal to be Considered</u>
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10,000 to 50,000 GPD	0.5 miles
50,000 to 100,000 GPD	0.75 miles
in excess of 100,000 GPD	1.00 miles

- (1) All property owners with an identified well shall be notified in writing that a well test will be conducted, the date of the test, the reason for the test, and what it will consist of.
 - (2) In order to determine the impact of the test well on existing wells a representative sample, evenly distributed throughout the area, of existing wells shall be monitored. The number of location of wells to be monitored shall be approved by the Borough.
- e. A yield test of 72 hours duration shall be performed on the test well at a rate not less than 125 percent of that calculated for projected water needs, except for wells that are located in Brunswick formations which shall be tested at not less than 200 percent of the projected water needs. Well yields in Brunswick formations have a tendency to decrease from the original yield after the well has been in production for several years.* (Groundwater Resources of Bucks County, PA., by David W. Greenman, Topographic and Geologic Survey, Bulletin W11, 1955.)
- (1) Prior to pumping, the static water level shall be recorded in all wells.
 - (2) The test well shall be pumped at the test flow rate until the water level has stabilized. Then the water level has stabilized the 72 hour test period may begin. A falling pumping level at discharge rates at or below the required test flow rate shall not be considered acceptable for purposes of yield testing.
 - (3) Test pumping equipment shall be capable of operating at a flow range of between 50 and 150 percent of the test flow rate.
 - (4) A means of accurately measuring the flow of water shall be provided subject to approval by the Borough.
 - (5) Piping shall be installed as required to direct pumpage to a discharge point suitable to the Borough.

(6) The method of determining the depth of the water surface at all wells shall be subject to approval by the Borough.

- f. Test pumping shall be continuous for the duration of the test period. An interruption will require extension of the test period subject to approval by the Borough.
- g. During the test period the pump rate and corresponding depth to the water surface in the test well, monitoring wells and existing wells shall be logged at an interval not exceeding one hour.
- h. Upon completion of yield testing, the depth to the water surface in the test and monitor wells shall be recorded at the following minimum time intervals:

<u>Interval Not Exceeding</u> <u>Test Well</u>	<u>Monitor Wells</u>	<u>Minimum Time Period</u> <u>from Pump Shutdown</u>
1 minute	5 minute	0 to 15 minutes
5 minute	5 minute	15 min. to 2 hours
1 hour	1 hour	2 hours to 8 hours
24 hours	24 hours	0 hours to 7 days
1 month	1 month	monthly until the wells have been integrated into the public water system

- i. Records shall be compiled in typewritten form to include the following information:
 - Name of driller and personnel conducting tests.
 - Description of test well to include horizontal and vertical dimensions and casing installed.
 - List of formation samples.
 - Static water level immediately prior to yield testing.
 - Log of depth of water surface during test pumping and recovery period at the test well showing corresponding pump discharge rate in gallons per minute and time readings taken.

- j. A report shall accompany the test well data which analyzes and interprets all of the data as to the impacts on the groundwater supply and existing wells. The report shall contain a section of conclusions. The credentials of the individual(s) preparing the report shall be included.
- k. The submission to the Borough shall include any and all applications, reports, or supplemental information submitted to the Pennsylvania Department of Environmental Resources and/or the Delaware River Basin Commission.

Section 5.24 Standards for the Construction and Operation of Public Water Systems

- A. The intent of this section is to:
 - 1. Promote the general health, welfare and safety of the community.
 - 2. Encourage the utilization of appropriate construction practices in order to provide water for fire protection and domestic consumption in the future.
 - 3. Minimize danger to public health and safety by providing a public water system for fire protection and domestic consumption.
 - 4. Reduce financial burdens imposed on the community, its governmental units, and its residents, by preventing the unwise design and construction of public water systems that will not provide sufficient water for fire protection and domestic consumption.
 - 5. Specify minimum system sizes, flow rates, water storage capacity and construction materials that shall be used in the design and construction of a public water system.
 - 6. Reduce the required parts inventory and increase the efficiency of maintenance by requiring that each type of appurtenance, or component, of the public water system be a standard design and model manufactured by one company.

B. This Ordinance, by reference, hereby incorporates the most recently published edition of the following standards pertaining to design, construction, testing and maintenance of public water systems as part of this Ordinance:

1. Public Water Supply Manual, Bureau of Water Quality Management Publication No. 15 by the Pennsylvania Department of Environmental Resources, Harrisburg, Pennsylvania.
2. Guide for Determination of Required Fire Flow by the Insurance Services Office (ISO) as modified.
3. American Water Works Association Standards and Manuals by the American Water Works Association, Denver, Colorado, as follows:

REFERENCED STANDARDS

<u>AWWA Std. Designation</u>	<u>Other Designation</u>	<u>Title (Standard)</u>
A100		Deep Wells
C104	ANSI A21.4	Cement-Mortar Lining for Cast-Iron and Ductile-Iron Pipe and Fittings for Water
C105	ANSI A21.5	Polyethylene Encasement for Gray and Ductile Cast-Iron Piping for Water and Other Liquids
C110	ANSI A21.10	Gray-Iron and Ductile-Iron Fittings, 3 Inches through 48 Inches, for Water and other Liquids
C111	ANSI A21.11	Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings
C115	ANSI A21.15	Flanged Cast-Iron and Ductile-Iron Pipe with Threaded Flanges
C150	ANSI A21.50	Thickness Design of Ductile-Iron Pipe
C151	ANSI A21.51	Ductile-Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds, for Water and Other Liquids
C500	--	Gate Valves - 3 inch through 48 inch - for Water and Other Liquids

<u>AWWA Std. Designation</u>	<u>Other Designation</u>	<u>Title (Standard)</u>
C502	--	Dry-Barrel Fire Hydrants
C600	--	Installation of Gray and Ductile Cast Iron Water Mains and Appurtenances
C601	--	Disinfecting Water Mains
C700	--	Cold-Water Meters - Displacement Type
C706	--	Direct-Reading Remote Registration Systems for Cold-Water Meters
C800	--	Threads for Underground Service Line Fittings
D100	AWS D5.2	Welded Steel Tanks for Water Storage
D101	--	Inspecting and Repairing Steel Water Tanks Stand-pipes, Reservoirs, and Elevated Tanks, for Water Storage
D102	--	Painting Steel Water-Storage Tanks

4. Additional standards incorporated by reference in 1, 2, 3, or as the Borough Engineer may deem applicable to a particular design and construction detail.

C. If a referenced standard allows for more than one option, the option listed in this Ordinance shall govern the design and construction of the public water system. All standards referenced are to be the latest revision thereof.

D. The minimum water storage capacity of a tank in the public water system shall be 500,000 gallons or, sufficient to provide fire flow in accordance with the following table plus all other anticipated flow for 1 day; whichever is greater:

<u>Design Fire Flow Rate</u> (gmp)	<u>Duration</u> (hours)	<u>Minimum Fire Flow Storage</u> (gallons)
up to 1000	2	120,000
1250	2	150,000
1500	2	180,000
1750	2	210,000
2000	2	240,000
2250	2	270,000
2500	2	300,000
3000	3	540,000
3500	3	630,000
4000	4	960,000
4500	4	1,080,000
5000	5	1,500,000
5500	5	1,650,000
6000	6	2,160,000

E. The water storage tank shall be designed to provide a minimum of 20 pounds per square inch residual pressure throughout the water distribution system during periods of design flow rate.

F. The water storage system shall have a fire hydrant installed at its base. The water storage system and the fire hydrant at its base shall have a paved access road leading to them and a paved turnaround area to make the water and fire hydrant accessible to fire trucks serving New Hope Borough.

G. The general requirements for the water distribution system are that it shall:

1. be a looped system
2. be designed based upon fire flows determined from the Guide for Determination of Required Fire Flow as amended and made a part of this Ordinance except that:
 - a. Minimum fire flow rates in areas zoned R-1, R-2, or R-B shall be 500 gallons per minute.
 - b. Minimum fire flow rates in all areas of New Hope Borough zoned other than R-1, R-2, or RB shall be 1,000 gallons per minute.
3. Provide residual pressure of 20 psig at all points in the distribution system during periods of design flow rate.
4. be constructed of Ductile Iron Pipe Cement Lined manufactured and installed in accordance with AWWA standards. Cement lining shall be double thickness.
5. be constructed of Ductile Iron Pipe Cement Lined having a diameter able to pass the design flow rate and maintain 20 psig residual pressures during periods of design flow rate.
 - a. fire hydrant branches shall be 6 inches in diameter.
 - b. All other water mains shall be a minimum diameter of 8 inches.
6. be constructed using either mechanical joints or push-on joints conforming to AWWA C111.
7. be constructed using either gray iron or ductile iron fittings conforming to AWWA C110.
8. be constructed using gate valves conforming to AWWA C500.
9. be constructed using fire hydrants conforming to AWWA C502.
10. have gate valves installed along the water mains at such intervals and locations that no more than 800 lineal feet of water main shall have to be closed

down in case of repairs to or breaks in the water main.

11. have fire hydrants installed:
 - a. at the base of each water storage reservoir.
 - b. at each high point and each low point along the water mains.
 - c. within 400 feet of all structures in all areas zoned other than R-1, R-2, or R-B.
 - d. within 600 feet of all structures in areas zoned R-1, R-2 or R-B
 12. be mechanically anchored or installed with thrust blocks at locations approved by, or designated by, the Borough Engineer.
 13. be constructed with a minimum ground cover of 42 inches around the water main.
 14. be installed and pressure tested in accordance with AWWA C600.
 15. be flushed, disinfected and tested for bacteriologic quality in accordance with AWWA C601.
- H. : Water distribution system mains shall not begin or terminate under paved areas, within tax parcels, or in cul-de-sacs. It is intended that the water distribution system will ultimately be a looped system; therefore:
1. water distribution system mains within a land development area shall be extended to the outer limits of the land development property for connection to existing mains or possible future mains.
 2. water distribution system mains shall be constructed along all existing roads abutting a land development for the full length of the existing roadway frontage.
- I. Each building or portion of building in separate ownership shall have its own water service line. Each water service line shall:
1. be connected to the water distribution system main with a corporation stop.

2. have a curb shut-off valve and valve box.
3. have a cold water meter of the displacement type equipped with a direct reading registration system complying with AWWA C700 and AWWA C706.
4. have the cold water meter installed inside the house and the direct reading registration meter mounted on the outside of the house at a location approved by the Borough Engineer, or his designated representative.

J. All gate valves in the public water systems shall:

1. be manufactured and installed in compliance with the content of this Ordinance and AWWA C500.
2. be of the Metropolitan New York Pattern type as manufactured by United States Pipe and Foundry Company.
3. be of the double-disc, parallel-seat, side-wedge and non-rising stem design.
4. open to the left, counterclockwise.
5. have cast iron discs accurately machined to receive bronze disc seat rings. The disc seat ring surfaces in contact with the iron disc and the dovetail projections shall be fully machined and the disc rings shall be rolled, peened or pressed into the machined grooves on the iron discs and when secured in place a rough and finish cut shall be taken over the disc seat ring bearing surfaces.
6. have valve wedges made of bronze for valves 8 inch and smaller in size.
7. have valve wedges of cast iron bronze mounted construction for valves 10 inch and larger in size.
8. have the housing for the valve stem thrust collar accurately machined and fully bronze lined.
9. be provided with "O" ring seals. The ring seal plate shall be fitted with at least two (2) "O" rings, the lower "O" ring shall serve as the pressure seal, the upper "O" ring as the dirt seal. The design of the valve and seal plate shall be such that the seal plate can be fitted with new "O" rings while the valve is under pressure in the fully open position. The "O" rings shall be a

high quality compounded material as recommended by the valve manufacturer for potable water supplies.

10. be installed with a valve box having the word "water" cast in raised metal on its cover.
11. be furnished with sworn foundry certification of inspection and conformance to this Ordinance.

K. All fire hydrants in the public water system shall:

1. be manufactured and installed in compliance with this Ordinance and AWWA C502.
2. be Series II, Rotary Head, Safety Construction Hydrant Model No. 11205 as manufactured by the United States Pipe and Foundry Company.
3. be of a post type, be self-draining, and have a dry standpipe (or barrel). The internal valve shall open against and close with the pressure. The design shall be such that all internal operating parts can be removed through the standpipe and the standpipe and main valve rod extended without excavating.
4. have an internal valve diameter of 5 1/4 inches.
5. have an inlet size of 6 inches
6. be equipped with 1-1/4 inch I.D. Pumper Nozzle with National Standard Thread.
7. be equipped with 2-1/2 inch I.D. Hose Nozzles with National Standard Thread.
8. Open to the left, counterclockwise; the direction of opening shall be noted by an "arrow" and the word "open" cast in raised metal on the hydrant bonnet.
9. have National Standard Pentagonal Operating Nut and Cap Nuts, measuring 1-1/2 inch from the point to the flat.
10. have a hydrant "O" ring type seal plate so constructed that a moisture-proof lubricant chamber is provided which encloses the opening threads, thereby automatically lubricating the treads and bearing surfaces each time the hydrant is operated. The seal plate assembly shall be fitted with at least three "O" rings. The two lower "O" rings

shall serve as pressure seals; the third "O" ring as a combined dirt and moisture seal to prevent foreign matter from entering the lubricant chamber. No part of the threaded section of stem shall be in the water-way when the hydrant is open. The "O" rings shall be a high quality compounded material as recommended by the hydrant manufacturer for such rings. The lubricant shall have a temperature rating minus 50 degrees F, to plus 250 degrees F.

11. have standpipe sections connected at the groundline by a two part safety flange that bears 360 degree on a boss at the top of the lower barrel. The main valve rod sections shall be connected at the groundline by a flangible coupling. The standpipe and nozzles can be rotated to any desired position without disassembling the top section of the hydrant standpipe, or removing flange bolts and nuts. Breakaway or cut down bolts, lugs, or keeper pieces will not be allowed.
12. have cast-on flanges on the lower barrel.
13. have travel stops designed and located such that the main valve rod cannot be placed in compression and deformed if any attempt is made to over open the hydrant valve.
14. have a drain valve that operates with the operation of the main valve and involves a momentary flushing of the drain ports each time the hydrant is opened. The drain ports shall be full closed when the hydrant valve is more than 2-1/2 turns open and the drainage channel in the bronze valve seat ring shall connect to two or more threaded outlet drain ports. No springs may be employed in the hydrant valve or drain valve operating mechanism.
15. have a test pressure rating of 300 psig and working pressure rating of 150 psig.
16. have the caps securely chained to the hydrant barrel.
17. be painted in accordance with the informational Appendix B, "Uniform Color Scheme for Fire Hydrants", or AWWA C502 except that all hydrants shall be classified and rated based upon a 20 psig residual pressure.
18. be furnished with a manufacturer's affidavit that the hydrant and all material used in its

construction conforms to this Ordinance and that all tests required have been performed and all test requirements have been met.

19. be connected to the main with a hydrant tee; a 6 inch branch (D.I.P.C.L.) not exceeding 50 feet in length; and be controlled by an independent 6 inch gate valve.
 20. be installed with the center of the nozzles 18 inches above the groundline and the vertical center of the barrel 24 inches in back of the curblines. Where curbs will not be installed, the hydrant shall be placed 36 inches in back of the pavement edge and protected by two bollards to be placed as directed by the Borough.
- L. All corporation stops in the public water system shall:
1. be the same size as the service line.
 2. be Mueller Company Catalog No. H-15000
 3. shall have the Standard Corporation Stop Thread, commonly known to the trade as the Mueller Thread, meeting the requirements of AWWA C800.
- M. All curb stops in the public water system shall:
1. be the same size as the service line
 2. be Mueller Company Catalog No. H-15164, Mark II Oriseal Valve with Drain.
 3. open by turning to the left, counterclockwise.
 4. be of the Minneapolis Pattern for use with the threaded base of a Minneapolis Pattern Base Curb Box.
 5. be installed with the Minneapolis Pattern Base Curb Box complete with lid, plug, and stationary rod.
 6. be installed on the water users property not more than 2 feet outside of the roadway right-of-way.
- N. All cold water meters in the public water system shall:
1. be of the positive displacement oscillating piston type with magnetic drive and generator register conforming to AWWA C700.

2. be equipped with a direct reading remote registration system conforming to AWWA C706
3. be the Rockwell SR Meter model equipped with the Rockwell Generator Remote, a self-generating remote readout.
4. have a non-corrosive water works bronze outer case with a separate measuring chamber which can be easily removed from the case. All meters shall have cast on them, in raised characters, the size and direction of flow through the meter. Bronze bottoms shall be provided on 5/8", 3/4" and 1". 1-1/2" meters shall be the split case type with bronze lower and upper shell assemblies.
5. have all external bolts and washers of corrosion resistant material easily removable from the main case.
6. have a register of the straight reading type with a test dial. It shall read in U.S. gallons of volume and be capable of direct visual reading both at the meter. All reduction gearing and the generator shall be contained in an permanently hermetically sealed, tamper-proof enclosure made from a corrosion resistant material and shall be secured to the upper main case by means of a locking device located in the interior of the meter so the register cannot be removed externally. The meter register shall be provided with two terminal connections to allow transmission of the water meter reading to the remote totalizer. The register output pulse shall not be diminished or inhibited if it is submerged in water.
7. have the measuring chamber constructed of water works bronze. It shall not be cast as part of the main case. All piston assemblies shall be interchangeable in all measuring chamber assemblies of the same size. The chamber's division plate shall be stainless steel with a bonded rubber coating. The chamber's bottom plate shall be held in place without the use of fasteners.
8. have the motion of the piston transmitted to the sealed register through the use of a direct magnetic drive without any intermediate magnetic coupling.
9. be provided with a corrosion resistant strainer

which is easily removable from the meter without the meter itself being disconnected from the pipeline.

10. have a register which is identical and completely interchangeable with all other registers of the same registration and meter size in the system.
11. conform to current AWWA test flow and accuracy standards.
12. operate up to a working pressure of 150 pounds per square inch, without leakage or damage to any parts. The accuracy shall not be affected when operating at this pressure due to possible distortion.
13. have a direct reading remote register which is compact, sturdy, tamper-proof, and conforms with AWWA C708. The sealing of the unit shall be accomplished by a plastic tab which will accommodate seal wire and a lead seal. The remote odometer shall be easily resettable to the desired reading. The word "Water" shall appear on the face plate to denote the type of the remote counter. The remote counter shall be provided with two terminal connections to accept the two-conductor cable which mates with the meter register.
14. be furnished with an affidavit of compliance to this Ordinance and a certificate that it has been tested for and met the requirement for accuracy.

Section 5.25 Tree Protection Standards

If woodlands, trees, or forests are required to be preserved and are not permitted to be disturbed or destroyed in accordance with provisions of either the Borough Zoning Ordinance or the Borough Subdivision and Land Development Regulations, the following tree protection standards shall apply. Borough Council may modify these requirements in consideration of unique circumstances where such modifications will better serve the interest of the residents.

A. General requirements shall be as follows:

1. Grade changes and excavations on any location within the site shall not:
 - a. Encroach upon a tree protection zone; or

- b. Result in an alteration to soil or drainage conditions which would adversely affect site disturbance, unless adequate provisions are made to protect such vegetation and its root systems.
2. No toxic materials, including petroleum based and/or derived products shall be stored within one hundred (100) feet of a tree protection zone.
 3. The area within a tree protection zone shall not be built upon or covered by impervious materials, either temporarily or permanently.
 4. The storage of equipment, materials, debris or fill and the parking of vehicles shall be prohibited within a tree protection zone.
 5. Sediment, retention, and detention basins shall not discharge or be located into or within the tree protection zone.
- B. Tree protection zone construction requirements shall be as follows:
1. Prior to construction, any tree protection zone shall be identified on the site in conformance with the approved subdivision or land development plan and in the following manner:
 - a. All trees scheduled to remain shall be clearly marked. Only trees on the outer edge of tree groups or forests are required to be marked.
 - b. A four-foot high wooden snowfence mounted on steel posts located eight (8) feet on center, or similar fencing materials or barrier approved by the Borough shall be placed along the boundary of the tree protection zone. Immediately following the installation of said fencing, the Borough Engineer shall inspect and approve the same prior to the commencement of any development activity on the site. The fencing shall be properly maintained until all development activity has ceased. Damaged fencing shall be repaired or replaced before any development may recommence.
 - c. In addition to such fencing, trees outside the tree protection zone may be temporarily retained to the limits of grading and utilized as an additional buffer area during

construction. Such trees shall be removed prior to the completion of development.

2. The operation of heavy equipment shall not occur within a tree protection zone.
3. Trees being removed shall not be felled, pushed or pulled into a tree protection zone or into any other trees which are required to be retained.
4. Any tree stumps located within ten (10) feet of tree protection zone shall be removed by means of a stump grinder to minimize their effect on surrounding root systems.
5. Tree roots which must be severed shall be:
 - a. Cut by a backhoe or similar equipment aligned radially to the tree, in such a manner so as to reduce the lateral movement of roots during excavation.
 - b. Trimmed cleanly so that their edges are smooth and are cut back to a lateral root, if exposed.
 - c. Covered temporarily with peat moss, moist burlap or other moist biodegradable material within four (4) hours of any severance in order to avoid their drying out.
6. Damaged areas shall be treated promptly and as may be required by the Borough Engineer.
 - a. Damaged bark shall be cut back to a point where the bark is intact and tight to the tree.
 - b. Exposed roots shall be cleaned up and covered with topsoil.
 - c. Tree limbs shall be cut back in proportion to root area loss.
 - d. Liquid or dry fertilizer shall be applied to trees with disturbed root zones to compensate for any loss of roots.
 - e. All pruning shall be undertaken in accordance with the standards of the National Arborist Association, as noted in the National Arborist Association Book of Standards, as amended.

- f. Trees shall not be used for roping, cables, signs, fencing, or lighting. Nails and spikes shall not be driven into trees.

7. Fertilization

- a. All trees which have been disturbed or which have tree roots damaged as a result of development shall be fertilized.
- b. Such trees shall be fertilized during the months of September through October or April through May.
- c. Fertilizer having approximately three (3) parts nitrogen to one (1) part phosphorus and potassium each (3:1:1 ratio) shall be broadcast over the soil surface in an area twice the size of the tree protection zone at a rate equivalent to one (1) pound nitrogen per one thousand square feet. A minimum of one thousand (1,000) square feet per tree shall receive fertilization

8. Retaining Walls

- a. Any regrading which causes a change in the original grade at the tree protection zone line shall require the installation of a retaining wall designed to comply with borough standards, outside of the tree protection zone.
- b. The top of such retaining wall shall be four (4) inches above the finished grade line.
- c. The retaining wall shall be constructed of large stones, brick, building tile, concrete blocks or treated woodbeams not less than six (6) inches by six (6) inches.
- d. A means for drainage through the wall shall be provided, as approved by the Borough Engineer.
- e. A layer of clean stone, sized three-fourths (3/4) to one (1) inch shall be placed one (1) foot out from the retaining wall to aid in drainage.

9. Trenching and Tunneling

- a. Utility lines shall be located outside tree

protection zones.

- b. Tunneling shall be used for the installation of any utility line approved by Borough Council for location within a tree protection zone. Trenching may only be used where, in the opinion of the Borough Engineer, the survival of a tree or trees would not be affected.
- c. Upon the completion of the installation of any utility line, the trench shall be filled immediately and tamped lightly to avoid air spaces.

Section 5.26 "Driveways to Single Family Lots"

The following requirements shall apply to driveways for single family dwellings:

- A. Driveways shall be located no less than sixty (60) feet from any street intersection which shall be measured from the intersection of curb lines. Driveways to corner lots shall gain access from the street of lower classification when a corner lot is bounded by streets of two different classifications.
- B. There shall be a driveway turn-around space provided on each lot that fronts on a primary and collector street and arterial highway so that no vehicle need back out onto a street in order to leave the lot or back into the lot in order to enter the lot.
- C. Driveways shall be designed and constructed to provide a stopping area not exceeding a four percent (4%) grade, twenty (20) feet behind the right-of-way. Driveways shall not exceed a grade of ten (10%) percent.
- D. Driveways shall be designed and constructed to provide sight distance in accordance with the Minimum Sight Distance requirements for the posted speed of the intersecting highway, as determined by AASHTO.
- E. All driveways shall be located at least five (5) feet from any side or rear lot line.
- F. For properties abutting curbed and uncurbed streets, the following standards shall apply to the driveway apron at the street line:

1. The curb cut or driveway width at the street line for single-width driveways shall be fourteen (14) feet.
 2. The curb cut or driveway width at the street line for double-width driveways shall be twenty-four (24) feet.
- G. All driveways shall be a minimum of ten (10) feet in width.
- H. All driveways shall be paved twenty-five (25) feet from the edge of the cartway using the following minimum standards:
1. Coarse aggregate (PennDOT #2A) having a compacted depth of six (6) inches.
 2. A bituminous wearing course (ID-2) to a compacted depth of two (2) inches.

Section 5.27 "On-Lot Sewer and Water Locations"

The dimensioned location of the on-lot sewage system and the well must be shown on the plan as well as any required isolation distances required by the Pennsylvania Department of Environmental Resource prior to the issuance of a building permit. The on-lot sewage system and the well must be installed where shown on the plan.

Section 5.28 "Electric, Telephone, and Communication Facilities"

- A. All electric, telephone, cable television and communication facilities, both main and service lines, shall be provided by underground cables, installed in accordance with the prevailing standards and practices of the utility and other companies providing such services.
- B. Where practical, all utilities shall be located within the street right-of-way; otherwise, easements or rights-of-way of sufficient width for installation and maintenance shall be provided.

ARTICLE VI REQUIRED IMPROVEMENTS

Section 6.00 Purpose

- A. The purpose of this article is to establish required improvements.
- B. All improvements shall be constructed in accordance with the specifications of this Ordinance.
- C. If it is determined during the course of the review that off-site improvements are necessary to satisfactorily accomplish the objectives and requirements of this Ordinance, the applicant shall be also responsible for the installation of the off-site improvements, or cost thereof.

Section 6.01 Application

The improvements included in this article are minimum requirements. However, the New Hope Borough Council reserves the right in any case to increase the same, if conditions so warrant.

Section 6.02 Specifications

The minimum requirements of improvements shall be those contained in the Pennsylvania Department of Transportation's Specifications (Form 408) as last revised.

Section 6.03 Maintenance

Adequate provisions for the satisfactory maintenance of all improvements shall be made by means acceptable to the Borough.

Section 6.04 Streets

- A. The construction of streets, roads, and driveways, as shown upon final plans and as contained in contract agreements, shall in every respect conform to such requirements as the Borough may by resolution require for the construction of streets.
- B. All streets shall be graded as shown on the street profiles and cross-section plan submitted with the preliminary plan and approved with the final plan.
- C. Along the existing street on which a subdivision or land development abuts, improvements required by this Ordinance shall be made.

Section 6.05 Street Signs

- A. The developer shall erect at every street intersection a street sign or street signs having thereon the names of the intersecting streets. At intersections where streets cross, there shall be at least two (2) such street signs and at the intersections where one (1) street ends at or joins with another street, there shall be at least one (1) such street sign.
- B. Street signs are to be erected before the first dwelling on the street is occupied.
- C. Street signs shall be consistent in design and specification.

Section 6.06 Street Lights

The developer shall install or cause to be installed, at the developer's expense, street lights serviced by underground conduit in accordance with a plan to be prepared by the developer's engineer and approved by the Philadelphia Electric Company and by the Borough Council. Provisions shall be made for energizing said lighting after fifty (50) percent or more of the dwelling units in a given subdivision or land development or section of a subdivision or land development have been occupied. The developer shall be responsible for all cost involved in lighting the streets.

Section 6.07 Monuments

- A. Monuments shall be placed at each change in direction of boundary; two (2) to be placed at each street intersection and one (1) on one side of each street at angle points and at the beginning and end of curves. Utility easements shall be monumented at their beginning and at their end; and areas to be conveyed for public use shall be fully monumented at their external boundaries.
- B. Monuments shall be placed in the ground after final grading is completed, at a time specified by the Borough Engineer. Monumentation of the external boundaries of the subdivision must be completed prior to final plan approval.
- C. All monuments shall be certified for accuracy by the developer's engineer to within three one-hundredths (3/100) of a foot.

Section 6.08 Sidewalks

- A. All sidewalks shall be constructed in accordance with this Ordinance and Borough specifications. These

standards shall apply on all new streets and on existing streets.

- B. Within multi-family residential developments, it is required to install sidewalks, on-site walks for convenience and access to all living units from streets, driveways, parking areas or garages, and for convenient circulation and access to all project facilities.
- C. Width, alignment and gradient of walks shall provide safety, and convenience for pedestrian traffic. Small jogs in the alignment shall be avoided.
- D. The alignment and gradient of walks shall be coordinated with the grading plan to prevent the passage of concentrated surface water on or across the walk and to prevent the pocketing of surface water by walks.

Section 6.09 Curbs

- A. Curbs shall be provided as required by this Ordinance.
- B. All curbs shall be designed and constructed in accordance with the standards and specifications of this Ordinance.

Section 6.10 Storm Water Management System

The developer shall construct storm water drainage facilities, including retention and detention basins, curbs, catch basins and inlets, storm sewers, culverts, road ditches, open channels and other structures required by this Ordinance.

Section 6.11 Public Water Supply and Distribution Systems

- A. When a public water supply system is required, it shall be designed to meet the requirements of this Ordinance. All parts of the system shall be at the expense of the applicant.
- B. All on-site wells and all components of the distribution system shall be shown on all plans.

Section 6.12 On-Lot Water Distribution System

Where public water is not accessible or required, water shall be furnished on an individual lot basis. If wells are installed on each lot, the well shall be of the drilled type, cased and grout-sealed.

Section 6.13 Public Sanitary Sewers

- A. Sanitary sewers shall be installed and connected to the public sanitary sewer system.
- B. All public sanitary sewers shall be designed and constructed in accordance with the "Sewerage Manual" issued by the Pennsylvania Department of Environmental Resources and the specifications of the Bucks County Water and Sewer Authority.
- C. No public sanitary sewer or treatment plant shall be constructed until plans and specifications have been submitted to the State Department of Environmental Resources and the New Hope Borough Council and approved in accordance with existing laws.

Section 6.14 Private Sewage Disposal System

- A. If public sewer facilities are not available, the applicant shall provide for sewage disposal on an individual lot basis according to the rules, regulations, terms, definitions, and conditions of the Individual Sewage Disposal System application and certification procedure for Bucks County, Pennsylvania, adopted by the Bucks County Board of Commissioners on March 24, 1971, and any amendments made thereto.
- B. No plat for which on-site sewage disposal is proposed shall be finally approved until there appears upon it a signed statement by an authorized agent of the Bucks County Department of Health indicating that all such lots are capable of providing on-site treatment.

Section 6.15 Electric, Telephone and Communication Facilities

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

Section 6.16 Planting

- A. Street trees and other required planting shall be in accordance with this Ordinance.
- B. Street trees and other required plant material shall not be planted until the finished grading of the subdivision or land development has been completed.
- C. Plans for proposed street planting or buffer zone planting shall be reviewed by the Shade Tree Commission during the preliminary plan process and approved by Borough Council
- D. Replacements shall be made during the first spring or fall planting season following the death of plants. The cost of such replacements shall be borne by the developer.

ARTICLE VII "COMPLETION OF REQUIRED IMPROVEMENTS, CONTRACTS AND SECURITY."

Section 7.01 Completion of Improvements

A. Before Borough Council shall cause its approval to be endorsed on the final plans of any subdivision or land development and as a requirement for the approval thereof, the developer shall enter into a written agreement with the Borough in the manner and form set forth by the Borough Solicitor, to guarantee the construction and installation of all improvements at the developer's expense required by this Ordinance. When requested by the developer, in order to facilitate financing, Borough Council shall furnish the developer with a signed copy of a resolution indicating approval of the final plan contingent upon the developer obtaining satisfactory financial security. The final plan or record plan shall not be signed nor recorded until the financial improvements agreement is executed. The resolution or letter of contingent approval shall expire and be deemed to be revoked if the financial security agreement is not executed within 90 days, unless a written extension is granted by Borough Council.

B. The Borough shall have no obligation to take over and make public any street or other improvement unless the required improvements shown on the approved plan have been constructed in accordance with all requirements to the satisfaction of the Borough Engineer and Borough Council. An information certificate showing the state of the title of all improvements, issued by a title insurance company, shall be supplied to the Borough and a deed of dedication to the Borough and release of mortgage or other liens executed by all parties shown on the certificate to have an interest in the improvements shall be delivered to the Borough. The Borough shall have no responsibility with respect to any street or other improvement, notwithstanding the use of the same by the public, unless the street or other improvement is accepted by an ordinance or resolution of Borough Council.

Section 7.02 Acceptable Security

A. No plan shall receive final approval unless the streets shown have been improved to a permanently passable condition, or improved as may be required by this Ordinance and any walkways, bikeways, curbs, gutters, street lights, fire hydrants, shade trees, water mains, sanitary sewers, storm drains and other improvements as

may be required by this Ordinance have been installed. In lieu of the completion of any improvements, the developer shall furnish to the Borough such surety as Borough Council shall approve, in an amount sufficient to cover the costs of any improvements which may be required. Such security, shall provide for and secure to the public the completion of any improvements which may be required on or before the date fixed in the formal action of approval or accompanying agreement for completion of improvements. The amount of financial security to be posted for completion of the required improvements shall be equal to 110 percent of the cost of completion estimated as of 90 days following the date of scheduled for completion by the developer. Annually the Borough may adjust the amount of the financial security by comparing the actual cost of the improvements which have been completed and the estimated cost for the completion of the remaining improvements as of the expiration of the 90th day after either the original date scheduled of completion or a rescheduled date of completion. Subsequent to said adjustment, the Borough may require the developer to post additional security in order to assure that the financial security equals said 110 percent. Any additional security shall be posted by the developer in accordance with this section.

Section 7.03 Amount of Security

- A. The amount of financial security required shall be based upon an estimate of the cost or completion of the required improvements, submitted by an applicant and prepared by a professional engineer licensed as such in the Commonwealth of Pennsylvania and certified by such engineer to be a fair and reasonable estimate of such cost. The Borough, upon recommendation of the Borough Engineer, may refuse to accept such estimate for good cause shown. If the applicant or developer and the Borough are unable to agree upon an estimate, the procedures set forth in the Pennsylvania Municipalities Planning Code, Article V, Section 509(g) shall be followed. If the developer requires more than one year from the date of posting of the financial security to complete the required improvements, the amount of financial security may be increased by an additional ten percent (10%) for each one year period beyond the first anniversary date from posting of financial security or to an amount not exceeding one hundred ten percent (110%) of the cost of completing the required improvements as re-established on or about the expiration of the preceding one year period by using the above bidding procedure.

Section 7.04 Completion in Stages or Phases

- A. In the case where development is projected over a period of years, Borough Council may authorize submission of final plans by section or stages of development subject to such requirements or guarantees as to improvements in future stages of development as it finds essential for the protection of any finally approved section of the development. As the work of installing the required improvements proceeds, the developer may request the Borough to release, from time to time, portions of the escrow fund, necessary for payment to the contractor performing the work. Any such request shall be in writing addressed to Borough Council, and the Council shall have forty-five (45) days from receipt of such request within which to allow the Borough Engineer to certify, in writing, to the Council that the improvements have been completed in accordance with the approved plan. If Borough Council fails to act within the forty-five (45) day period, the Council shall be deemed to have approved the release of funds as requested. The Council may, prior to final release at the time of completion and certification by the Borough Engineer, require retention of ten percent (10%) of the estimated cost of the afore-said improvements.
- B. If financial security has been provided in lieu of the completion of improvements required as a condition for the final approval of a plan as set forth in this section, the Borough shall not condition the issuance of building, grading or other permits relating to the construction of the improvement, including buildings, upon lots or land as depicted upon the final plan. Moreover, if an escrow fund has been established, occupancy permits for any building or buildings to be erected shall not be withheld following: the improvement of the streets providing access to and from existing public roads to such building or buildings to a permanently passable condition as well as the completion of all other improvements as depicted upon the approved plan, either upon the lot or lots or beyond the lot or lots in question if such improvements are necessary for the reasonable use of or occupancy of the building or buildings.

Section 7.05 Releases of Escrow

- A. When the developer has completed all of the necessary and appropriate improvements, the developer shall notify the Borough by certified or registered mail, of the completion of the improvements and shall send a copy to the Borough Engineer. The Borough shall, within ten (10)

days after receipt of such notice, direct and authorize the Borough Engineer to inspect all of the improvements. The Borough Engineer shall file a report with the Borough and shall mail a copy of the report to the developer. The report shall be made within thirty (30) days after receipt by the Borough Engineer of the authorization from the Borough. This report shall indicate approval or rejection of the improvements, and if the improvements, or any portion thereof, shall not be approved by the Borough Engineer, this report shall contain a statement of reasons for such non-approval.

- B. The Borough shall notify the developer, within fifteen days of receipt of the Engineer's report, in writing by certified or registered mail of their actions in response to the Borough Engineer's review of improvements.
- C. If the Borough or the Borough Engineer fails to comply with the time limitation provisions, all improvements will be deemed to have been approved and the developer shall be released from all liability, pursuant to its performance guarantee bond or other security agreement.
- D. If any portion of the improvements shall not be approved or shall be rejected by the Borough, the developer shall proceed to complete the improvements and, upon completion, the same procedure of notification, as outlined, shall be followed.
- E. The applicant shall reimburse the Borough for the reasonable and necessary expense incurred for the inspection of such improvements. Such reimbursement shall be based upon a schedule adopted by resolution and shall be reasonable and in accordance with the ordinary and customary fees charged by the Borough Engineer or consultant for work performed for similar services in the Borough, and in no event shall the fees exceed the rate or cost charged by the Borough engineer or consultant to the Borough when fees are not reimbursed or otherwise imposed on applicants. In the event that the applicant disputes the amount of such expense in connection with inspection of improvements, the procedure set forth in the Pennsylvania Municipalities Code (Act 247, as amended), Section 510 (g), subsections (1) through (5), shall be adhered to.

Section 7.06 Retention of 15 Percent

- A. Where the Borough accepts dedication of all or some of the required improvements following completion, the Borough may require the posting of financial security to secure structural integrity of the improvements in

accordance with the design and specifications as depicted on the final plan for a term not to exceed eighteen (18) months from the date of acceptance of dedication. The amount of this financial security shall not exceed fifteen percent (15%) of the actual cost of installation of the improvements.

Section 7.07 Maintenance Guarantee

- A. Where the Borough accepts dedication of all or some of the required improvements following completion, the Borough shall require the posting of financial security to secure structural integrity of said improvements as well as the functioning of said improvements in accordance with the design and specifications as shown on the final plan. The maintenance period shall be 18 months from the date of acceptance of dedication. The financial security shall be of the same type as described in Section 12-2 of these regulations, and the amount of the financial security for maintenance shall be 15 percent of the actual cost of installation of said improvements.

Section 7.08 Remedies to Effect Completion of Improvements

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

Section 7.09 Improvement Contract

- A. The contract shall also provide for engineering inspections, insurance, reimbursement of expense to the Borough, procedure upon default, and other subjects related to the development of land.

Section 7.10 Stormwater Detention Basin Fund

- A. All applicants submitting plans for a subdivision or land development on which a detention basin which is offered for dedication to the Borough is proposed or required shall contribute the Borough's Detention Basin Maintenance Fund. The Borough shall have the option to accept the detention basin or to refuse to accept its dedication. If the Borough accepts the detention basin, a contribution to the Basin Fund shall be made which shall be equal to \$3,500 for every acre or portion thereof in the detention basin. The minimum contribution for any basin, regardless of size, shall be \$7,000.

B. All detention basins whether offered for public dedication or privately owned shall be included in all provisions of this Ordinance dealing with improvements and shall be included in coverage by Performance and Maintenance Bonds.

- C. At such time as the applicant submits his request for release of Maintenance Bond, he shall submit required contribution to the Detention Basin Fund. Maintenance of the basin(s) by the Borough shall commence upon release of applicant's Maintenance Bond.

Section 7.11 Fees and Costs

- A. The applicant or owner submitting plans for a subdivision or land development shall be required to pay fees in accordance with the fee schedule adopted by resolution by the Borough Council, and in addition shall pay all costs to the Borough for the services of the Borough Administration, Borough Solicitor and Borough Engineer and such other necessary and reasonable costs incurred in reviewing the plans, processing the application and assuring construction in accordance with approved plans.
- B. Application Filing Fees - The applicant or owner submitting plans for a subdivision or land development shall pay Application Filing Fees made payable to New Hope Borough at the time of application in accordance with a fee schedule adopted by resolution by the Borough Council.
- C. Escrow Fund (Plan Review) - In addition to application filing fees, the applicant shall be required to furnish an escrow fund to pay the professional fees and other costs incurred in reviewing the plans and/or processing the application. Such fees shall include the reasonable and necessary charges for the Borough Engineer and other

professional consultants to review the plans, in accordance with a fee schedule set by resolution of Borough Council. The amount of the escrow fund shall be set by resolution by Borough Council. Upon completion of the review, whether the application is approved or rejected, any monies not expended in the review shall be refunded to the applicant. Fees in excess of the escrow fund will be charged to the applicant.

Section 7.12 On-Going Inspection

- A. The construction of all improvements (streets, curbs, storm drainage facilities, public sewer and water services, grading, detention/retention basins, etc.) shall be inspected by the Borough Engineer. It is the responsibility of the developer to notify the Borough Engineer a minimum of forty-eight (48) hours in advance of any such construction. Any construction not inspected while in progress, may not be approved by the Borough Engineer. If said construction is not approved, it shall be the responsibility of the developer to remove said item (at developer's cost) and replace to acceptable standards. The costs for all inspection by the Borough Engineer shall be borne by the developer.

Section 7.13 As-Built Drawings

- A. Prior to processing a Final Escrow Release, the developer shall submit two (2) sets of as-built drawings to the Borough. The as-built drawings shall contain: plans and profiles showing finished grades for all roads; location, length, and slope of all storm sewer, sanitary sewers and water mains; location of all sanitary sewer laterals and water services - tie distances to be provided to buildings and roadway stationing; final grading plan for retention/detention basins with volume calculations; invert and top elevations for all sanitary manholes, storm manholes, inlets, endwalls, and location and depth of all utilities, etc. The as-built plans shall be certified as to their correctness by the preparing engineer. All plans shall be sealed by a registered engineer and labeled "AS-BUILT DRAWINGS" and include date of preparation. A computer disk of the as-built information shall be provided to the Borough in a format specified by the Borough Engineer for all major subdivisions and land developments.

APPENDIX A

DEVELOPMENT AND ESCROW AGREEMENT

THIS AGREEMENT, made this _____ day of _____ 19____, among the Borough of New Hope, Bucks County, Pennsylvania (hereinafter referred to as the "BOROUGH"), having an address of _____, (hereinafter referred to as "OWNER"), and with an office at _____ referred to as "BANK").

W I T N E S S E T H:

WHEREAS, OWNER owns certain land within BOROUGH, and a final plan for subdivision thereof known as "_____" dated _____, last revised _____, as prepared by _____, has been approved by BOROUGH and is about to be filed in the Office for the Recording of Deeds in and for Bucks County (said Final Plan for Subdivision is hereafter referred to as the "Plan"); and

WHEREAS, OWNER, BANK and BOROUGH are desirous of clarifying and stipulating in detail OWNER's and BANK's obligations pursuant to BOROUGH's Subdivision and Land Development Ordinance; and

WHEREAS, OWNER intends to construct all improvements referred to herein within twelve (12) months of the signing of this Agreement; and

WHEREAS, BANK hereby agrees to financially guarantee the fulfillment of the terms and conditions of this Agreement as it relates to the construction of the improvements by OWNER; and

WHEREAS, the estimated costs of improvements for the development of the premises shown on the Plan are attached hereto and made a part hereof as Exhibit "A".

NOW, THEREFORE, IN CONSIDERATION OF THE WITHIN PROMISES OF OWNER, BOROUGH, AND BANK, AND INTENDING TO BE LEGALLY BOUND HEREBY, OWNER, BOROUGH AND BANK HEREBY AGREE AS FOLLOWS:

1. OWNER herewith represents and warrants to BOROUGH that he is the owner of the tract of land described in Exhibit B, said tract of land being known as _____ and that OWNER agrees that the Plan presented to BOROUGH is and shall be in compliance with BOROUGH Subdivision and Land Development Ordinance and all amendments and related Ordinances in regard thereto subject to only such deviations as are reflected on such Plan, and that the Plan is incorporated herein by reference even though not physically attached hereto; said Plan to be duly signed by the parties to the Agreement simultaneously with the execution of this Agreement.

2. That the improvements to be undertaken and completed in the project include, but are not limited to: road work, storm drainage facilities, sedimentation and erosion control, street trees, survey monuments, street signs, and such other improvements shown and specified on the Plan or required by BOROUGH Ordinances. All improvements shall be completed at the sole cost and expense of

OWNER. All work shall be completed in a good and workmanlike manner in accordance with generally prevailing engineering practices.

3. The Borough Engineer has estimated the costs of improvements, said estimate of costs being more fully set forth in Exhibit "A" which is incorporated herein, attached hereto and made a part hereof by reference.

The aforesaid costs set forth in Exhibit "A" are estimates of the costs to complete the improvements. OWNER agrees that he will complete the improvements regardless of what the cost shall be, at OWNER'S sole cost and expense. OWNER further agrees that he will pay all costs for the completion of this project in accordance with the Plan and this Agreement, whether or not such costs are shown non Exhibit "A". OWNER further agrees that, if deemed necessary by the BOROUGH in reasonable exercise of its discretion, OWNER shall, within the thirty day period commencing twelve (12) months from the date of this Agreement, and annually thereafter, increase the amount of its escrow delivered to BOROUGH in accordance with this Agreement and pursuant to the terms and provisions of Section 509 of the Pennsylvania Municipalities Planning Code, as amended.

4. OWNER herewith represents and warrants to BOROUGH that the Plan conforms to all BOROUGH standards and specifications and to the Pennsylvania Department of Transportation Specification Form 408, as amended. In case of conflict of regulations, the more strict regulation shall apply.

5. OWNER hereby insures the structural integrity of the said improvements as well as the functioning of said improvements in accordance with the design and specifications as depicted on the Plan and/or standards and specification of BOROUGH in the Subdivision and Land Development Ordinance and other applicable Ordinances.

6. OWNER warrants that the aforementioned work and/or improvements shall be completed within twelve (12) months from the date hereof.

To secure or guarantee the completion of the work or improvements in accordance with the terms hereof, OWNER hereby posts financial security to Borough in the form of an irrevocable and unconditional letter of credit from BANK to BOROUGH in the amount of _____ (said amount being 110% of the estimated costs of improvements) which amount will be paid by BANK to BOROUGH upon demand without notice to OWNER and without right of set-off of OWNER. Said letter of credit and draft to be in a form acceptable to BOROUGH.

If OWNER fails to complete said work or improvements within twelve (12) months from the date hereof or breaches any provision or condition set forth in this Agreement, OWNER acknowledges that OWNER is then in default under this Agreement and that BOROUGH may, at it's option, after notice in writing, collect all money held by BANK under the said letter of credit, enter into possession of the premises, complete the said work by contract with a reputable contractor and the full cost of so doing shall be the measure of damages due to said failure or breach on the part of

OWNER. If the said amount of money collected by BOROUGH from BANK shall not be sufficient to pay for the costs of all improvements, then in that event, OWNER shall remain liable to BOROUGH for said costs. If the cost to complete the improvements by BOROUGH are less than the amount of money collected from BANK by BOROUGH, then in that event, upon the completion of all improvements BOROUGH shall return any excess sums to BANK. Costs of improvements shall include, but not be limited to, costs of hiring contractor(s), legal and engineering fees, BOROUGH administration costs, construction and purchasing costs, labor costs, and any and all costs or fees relating to or associated with the completion of improvements.

7. OWNER hereby acknowledges that no road or roads or curbs shall be constructed between October 15th and April 15th of any year. Where grading is such that surface water drains along a swale or ditch at the rear of properties, the deeds shall contain a restriction requiring that no change in grade shall be permitted in the line of such swale or ditch nor any obstruction be placed in such a way as to interfere with such surface drainage.

8. OWNER hereby agrees to maintain barricades as are necessary during the course of construction of the improvements so as to give all reasonable protection to the traveling public and to maintain such warning lights or flares as are necessary for this purpose.

9. OWNER hereby agrees to indemnify BOROUGH for any monies paid or recovered against BOROUGH arising out of OWNER's negligence, or otherwise, in performing the work contemplated by

this Agreement. Further, OWNER hereby agrees to furnish BOROUGH a certificate establishing that OWNER carries public liability and property damage insurance in an amount not less than Three Hundred Thousand Dollars/Five Hundred Thousand Dollars/One Million Dollars and that interests of BOROUGH are protected and covered by said insurance and that BOROUGH is insured by and under said policy as an "additional insured".

10. At all times prior to acceptance by BOROUGH, OWNER agrees that OWNER shall keep roadways free from obstructions, including iced, snow, debris, equipment, etc., the removal of which from said roads shall be the sole responsibility of OWNER.

11. When the improvements hereinabove referred to are fully completed to the satisfaction of BOROUGH, OWNER shall file "as built" plans with BOROUGH and thereafter shall dedicate any and all roads to BOROUGH by a Deed of Dedication in a form approved by the Borough Solicitor, and OWNER shall also deliver to BOROUGH a Plan of the roadway dedicated. Title to the roadway shall be such as will be insured by a reputable title insurance company of Pennsylvania at regular rates and all costs in connection therewith shall be borne by OWNER. Title to the said roadway shall be free and clear of all liens and encumbrances.

12. OWNER hereby agrees that the aforementioned letter of credit from BANK shall be maintained in favor of BOROUGH in the amount of Dollars to secure or guarantee the structural integrity of said improvements as well as the functioning of said improvements in accordance with the design and specifications as depicted on the Plan and to repair and maintain the same for a term

of eighteen (18) months from the date of acceptance thereof by BOROUGH. The amount of said financial security shall be fifteen (15%) percent of the actual cost of installation of the said improvements. When repair or maintenance work is necessary. OWNER shall commence the same within five (5) days of the date of notice from BOROUGH so to do, legal holidays and Sundays excepted (Except in case of an emergency requiring immediate attention), and upon the failure by OWNER to make the repairs or do maintenance work within the time specified in the letter of notice, BOROUGH, at BOROUGH's sole option, shall be paid all monies being held under said letter of credit by BANK upon written notice from BOROUGH to BANK, and BOROUGH shall thereafter proceed to make such repairs and do such maintenance work and do anything necessary to continue to maintain and repair such construction as BOROUGH in its sole discretion deems necessary. During the aforementioned eighteen (18) month period,

APPENDIX B

NEW HOPE BOROUGH

CONTRACT FOR PROFESSIONAL CONSULTANT SERVICES

THIS AGREEMENT made this _____ day of _____, 199____ by and between NEW HOPE BOROUGH, Bucks County, Pennsylvania with offices located at 41 North Main Street, New Hope, PA, 18938, (hereinafter referred to as the "BOROUGH") and _____ (Hereinafter referred to as the "APPLICANT").

WHEREAS, APPLICANT is the legal or equitable owner of certain real estate bearing COUNTY TAX MAP parcel #27-_____ located or described as follows _____ New Hope Borough, Bucks County, PA, and;

WHEREAS, APPLICANT has presented the BOROUGH certain plans for subdivision or land development review which may require the Borough to provide certain legal, engineering and similar services which will incur expenses and hereby requires timely reimbursement for the actual costs of these expenses.

NOW THEREFORE, the parties agree as follows:

1. That the APPLICANT and the BOROUGH authorize and direct the BOROUGH'S appointed professional consultants (hereinafter referred to as "CONSULTANTS") to review the plans and supporting documents to make such recommendations and specifications as may be necessary with respect to such plans and to make any and all inspections as required in accordance with good engineering practices.

2. The APPLICANT hereby agrees to make an initial deposit with the BOROUGH, the sum of _____ (\$ _____) as security for the payment of all costs and expenses.

3. The APPLICANT shall agree to promptly pay; the Consultant's charges, and reasonable Legal fees for review by the BOROUGH SOLICITOR when a legal review is required.

IN WITNESS WHEREOF, and intending to be legally bound hereby, the parties have caused their signatures to be affixed.

NEW HOPE BOROUGH COUNCIL

APPLICANT

President

Zoning Officer