WEST BRADFORD TOWNSHIP
Ordinance 87-02

AN ORDINANCE AMENDING THE WEST BRADFORD TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE, 76-12, ADOPTED DECEMBER 1976, AS AMENDED; BY DELETING CERTAIN SECTIONS AND ADDING CERTAIN SECTIONS.

BE IT AND IT HEREBY IS ORDAINED, by the Board of Supervisors of West Bradford Township, Chester County, Pennsylvania, that the following shall be an amendment to the Subdivision and Land Development Ordinance of West Bradford Township known as Ordinance 76-12, as amended.

SECTION I.

Within Section 201 - delete the definition of flag lot.

Within Section 201 - Definitions - add the following:

Community Sewage System - Any system, whether publicly, or privately owned, for the collection of sewage or industrial wastes of a liquid nature from two or more lots and for the treatment of disposal of the sewage or industrial waste on one or more of the lots or at any other site.

Flag Lot - A lot that meets the minimum lot width requirement at the street line and expands to, at least, the minimum required lot width at the required minimum building setback lines.

Within the definition of street add Section "e" as follows:

e. Connecting street - A street which traverses a subdivision and connects two or more collector or arterial streets.

SECTION II.

Within Section 302 - Delete the following sections:

a. Scope and Authority.

c. Application Procedure and Requirements.

d. Classification.

e. Study and Sketch Plan.

f. Substance of Planning Commission Review.

g. Approval of Sketch Plan.

Add the following sections:

a. Scope and Authority. The filing of a sketch plan shall be considered a convenience to the applicant in order that he may informally discuss the physical arrangement of the proposed subdivision or land development with the Planning Commission and Board prior to the preparation of detailed engineering plans. As such, no application shall be required for filing a sketch plan, and the filing shall not be considered a formal application under the terms of the Act. Applicants shall have the right to proceed directly to preliminary plans without the filing of a sketch plan in accordance with the provisions hereinafter and file the same subject to the limitations imposed by the Act.

c. Application Procedure and Requirements. The sketch plan may be submitted by the applicant as a basis for informal discussion with the Planning Commission and the Board as to the intended use and arrangement of a proposed subdivision or land development.

1. Data furnished in a sketch plan shall be at the discretion of the applicant; however, to obtain maximum benifit, it is suggested that a sketch plan should include the following information:

   (a) Tract boundaries.

   (b) Location of tract.

   (c) North point.

   (d) Streets on and adjacent to the tract, properly named and indentified.

   (e) Topographical and physical features. United States Geological Survey and Soil Conservation Service information may be used but should be plotted to appropriate scale.

   (f) Proposed general street layout.

   (g) Proposed general lot layout.

   (h) In the case of land development plans, proposed general layout, including building locations, parking lots and open spaces.

   (i) A complete listing of all soil types on the tract as well as the mapping of the soil types on the full-scale drawing.

2. The applicant shall furnish four copies of the sketch plan, to the planning commission, which copies shall include an address and telephone number of an agent who may be contacted regarding the sketch plan.

d. Classification. Tentative classification of the sketch plan shall be made at this time by the planning commission as to whether the subdivision or land development is a major or minor subdivision or land development as defined in these regulations.

SECTION III.

Within Section 402 C. - add the following, as item 11:

11. Traffic Impact Study - In all developments consisting of more than 20 dwelling units, a traffic impact study shall be submitted.

Within Section 403 C. - after the sentence which states, "the final plan shall show the following:', add", in addition to any and all items as required in Section 402:".

Add a new section as follows:

406.1 General Requirements The Traffic Study shall include an identification of the relationship of the transportation and circulation system needs of the proposed subdivision and/or land development to the existing street or highway network. A discussion of this relationship shall be in narrative form and shall indicate factors such as methods to be used for traffic control within the tract and at points of ingress to and egress from it; and, expected traffic volumes on existing streets for both peak-hour and non-peak hour traffic conditions. In addition, there shall be a discussion of the physical condition of existing streets which will service the proposed subdivision and/or land development and what improvements are proposed to remedy any physical deficiencies.

406.2 Peak Hour Traffic Volumes The analysis of the traffic conditions in the Traffic Impact Study shall be based on the analysis of vehicular characteristics in the critical morning and afternoon peak hours. The peak hours shall be determined based upon Manual Turning Movement counts at the respective intersections in the study area. Manual Turning Movement counts shall be provided with the study. Actual Manual Turning Movement counts shall be tabulated by 15 minute periods to establish the respective morning and afternoon peak hour traffic movements within the respective counting periods. Counts shall be placed on a map of

the study area in combination the results of the Automatic Traffic Recorder counts. From this information, an updated estimate of current morning and afternoon peak hour traffic movements at each of the intersections shall be prepared.

406.3 Volume Capacity Analysis Levels of Service in Tables 1 and 2 are volume/capacity standards in accordance with the standard techniques in the "Highway Capacity Manual."(1) By definition, capacity represents the maximum number of vehicles which can be accomodated given the constraints of roadway geometry, environment, traffic characteristics and controls. For an intersection, the relationship of roadway volumes to capacity on the various approach legs is expressed as a ratio for the various lebels of service. The respective ratios are shown in Tables 1 and 2. To be operating within acceptable limits, intersections should operate at level of service "C" or better (i. e., levels of service "A" or "B").

406.4 Evaluation of a Development's Impact on Traffic and Roadway Systems

(a) The traffic impact of a proposed development project is established from an estimation of daily and peak hourly traffic generated by the project, distribution of this traffic to the area roadway network, addition of the generated traffic to existing traffic to produce future traffic forecasts and evaluation of total future traffic volumes. This simplistic approach shall be applied to isolated development projects.

Detailed volume/capacity analysis at intersections will be completed under the traffic forecast conditions. This analysis will establish a matrix of roadway improvements which are necessary to accomodate the various development assumptions in a time-phased manner.

(1) Highway Research Board, Special Report 87, Highway Capacity Manual, 1965, published by Highway Research Board, Washington, D.C., 1965.

TABLE 1

LEVELS OF SERVICE

INDIVIDUAL ISOLATED INTERSECTION APPROACHES[1]

Levels of Service	Traffic Flow Description	Volume/ Capacity
A	Free Flow	0.72
B	Stable Flow	0.78
C	Stable Flow	0.83
D	Approaching Unstable Flow	0.95
E	Unstable Flow	1.00[2]
F	Forced Flow	Not Applicable

TABLE 2

LEVELS OF SERVICE FOR

UNSIGNALIZED INTERSECTIONS[3]

Reserve Capacity	Level of Service	Expected Traffic Delay
400 or more	A	Little or no delay
300 to 399	B	Short traffic delays
200 to 299	C	Average traffic delays
100 to 199	D	Long traffic delays
0 to 99	E	Very long traffic delays
Less than 0	E	Failure - extreme congestion
(Any value)	F	Intersection blocked by external causes

(1) Highway Research Board, Special Report 87, Highway Capacity Manual, 1965, published by Highway Research Board, Washington, D.C., 1965.

(2) Capacity

(3) Interim Materials on Highway Capacity of Unsignalized Intersections, Transportation Research Circular Number 212, January 1980, Transportation Research Board, National Academy of Sciences, Washington, D. C.

HIGHWAY CAPACITY MANUAL

LEVELS OF SERVICE (1)

Level of Service "A"

At level of Service A, no approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turning movements are easily made, and nearly all drivers find freedom of operation, their only concern being the chance that the light will be red, or turn red, when they approach.

Level of Service "B"

Level of Service B represents stable operation, an occasional approach signal phase is fully utilized, and a substanial number are approaching full use. Many drivers begin to feel somewhat restricted within platoons of vehicles. Under typical rural conditions, this frequently will be suitable operation for rural design purposes.

Level of Service "C"

In level of service c, stable operation continues. Loading is still intermittent, but more frequent. Occasionally, drivers may have to wait through more than one red signal indication, and back-ups may develop behind turning vehicles. This is the level typically associated with urban design practice.

Level of Service "D"

Level of service D encompasses a zone of increasing restriction approaching instability. Delays to approaching vehicles may be substantial during short peaks within the peak period, but enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive back-ups.

Level of Service "E"

Capacity occurs at level of service E. It represents the most vehicles that any particular intersection approach can accommodate. At capacity, there may be long queues of vehicles waiting upstream of the intersection and delays may be great (up to several signal cycles).

Level of Service "F"

Level of service F represents jammed conditions. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration; hence, volumes carried are not predictable.

(1) Source: Highway Capacity Manual, Highway Research Board of the National Academy of Sciences, 1965.

406.5 Standards for Evaluation of a Development's Impact on the Road Network

(a) The applicant shall establish by a fair preponderance of credible evidence that the capacity of the road net providing access to the premises in question when the incremental increase in traffic attributable to the proposed use is superimposed upon the existing use of the road net shall not lower the level of service of the roads or any portions thereof below level of service "C".

(b) The applicant shall establish by a fair preponderance of credible evidence that the interior traffic circulation for the proposed use at the proposed location, including but not limited to acceleration and deceleration lanes where required at the proposed entrances to the location, shall be adequate to provide safe and convenient circulation for users of the facility, visitors to the facility, employees of the facility and all emergency vehicles that may require entrance thereon.

(c) The applicant shall establish by a fair preponderance of credible evidence that the facility provides safe and convenient pedestrian access and internal circulation within the grounds of the facility and particularly for points of access from the facility to the parking areas.

SECTION IV.

Within Article 500 make the following changes;

Section 502 item d. after the word "created." add the following sentence:

"Whenever the proposed subdivision is part of contiguous holdings of the applicant and/or the property is held by equitable rights as part of a larger tract, than a sketch plan shall be provided for the entirety. Any computation for open space, sewer, water, and/or traffic requirements, shall be based on the entire parcel as defined above.".

Within Section 503.2 delete part b. and replace it with the following:

b. All cul-de-sacs, whether permanently or temporary designed as such, shall not exceed one thousand (1,000) feet in length, or be less than 250 feet, and shall not service more than 20 lots. Permanent cul-de-sac streets must be provided with a paved turn-around with a minimum diameter of one hundred (100) feet to the outside curb and of one hundred and twenty (120) feet to the street line.

Add a new section 503.4 as follows:

503.4 CONNECTING STREETS

(a) Shall have a minimum cartway width of twenty-eight (28) feet.

(b) Shall have upright curb and no driveways shall be permitted to connect to connecting streets.

(c) All connecting streets shall have a sixty (60) foot wide right-of-way.

(d) All connecting streets shall have a four (4) foot wide sidewalk with a four (4) foot grass area between the curb and sidewalk on both sides of the street.

(e) Maximum centerline grade shall not exceed seven (7) percent.

SECTION V.

Within Article 600 make the following changes and additions as noted:

Within Section 604.1 item "f" - remove the word "excessive". Add after "and fills." the following: "However, in no event shall cuts and fills exceed eight (8) feet."

Within Section 604.2 item "b" change, "ten (10%) percent" to read "seven (7%) percent average grade overall, except that short intervals (not exceeding 150 feet in length) may exceed seven (7%), but not be more than ten (10%) percent."

Within Section 604.2 item "d", change, "seven (7%) percent", to read, "five (5%) percent".

Within Section 604.3 item "c", change the section that reads, "Two hundred and seventy-five (275) feet for collector streets, "to read, "Three hundred (300) feet for collector streets and connecting streets,".

Change the section that reads, "and two hundred (200) feet for local streets. " to read, "and two hundred and seventy-five (275) feet for local streets.".

Within Section 604.4 item "g", change the section that reads, "two hundred (200) feet.", to read, "two hundred and seventy-five (275) feet.".

Within Section 604.5 item "a" add the following:

Street Type	Width of Right-Of-Way	Width of Cartway
Connecting	60 feet	Twenty-four feet

Change the asterick section that reads, "Twenty-four (24) feet" to read, "Twenty-eight (28) feet".

Within Section 605.1 change the following:

Within item "d." where it reads, "3,000 pounds per square inch", change it to read, "4,000 pounds per square inch, with six percent (6%) air entrainment by volume.".

Within item "e." after the words, "arterial streets." add the words, "or connecting streets.".

Within item "h." delete the following sentence:

"Where the subgrade is soft and spongy, a layer of crushed stone not less than four (4) inches thick shall be placed under the curb."

Add the following after the words, "even surface," to read, "to ninety-five percent (95%) of the maximum dry weight density of the soil."

Within Section 605.2 change the following:

Within item "a." where it reads, "ninety-five (95) feet", change it to read, "One hundred and twenty-five (125) feet".

Within item "e." where it reads, "3,000 pounds per square inch", change it to read, "4,000 pounds per square inch after twenty-eight (28) days, with 6% air entrainment by volume."

Within item "d." after the end of the second sentence add, "however, that grass planting strip shall not be less than four (4) feet."

Add item "j." to read: "Whenever sidewalks are to be provided as required by these sections, than a note must be placed on the title page of the plan that states that abutting property owners will be responsible to maintain sidewalks for the width of their property. That note shall be listed as a restriction to be placed on the deed to the property."

Within Section 606 change the following:

Within item "c.", change the words, "asbestos cement sewer pipe (A.C.)" to read, "Poly-vinyl chloride (P.V.C.) minimum S.D.R. 35".

Remove item "e." and replace it with the following:

e. "Force mains shall be of ductile iron, poly-vinyl chloride (P.V.C.) pressure pipe or as approved by the Township Engineer".

Add a new Section as follows:

606.1 Community Sewage System

All community sewage systems shall be designed in accordance with Pennsylvania Department of Environmental Resources "Chapter 73 - Standards for Sewage Disposal Facilities" and/or Chester County Health Department regulations.

606.1 A. General Regulations

(a) Upon receipt of an application for an individual or community sewage system with subsurface discharge to serve an establishment generating more than ten thousand (10,000) gpd flow, the local agency shall forward a copy of the complete application to the Department, and shall consider the Department's comments prior to taking final action on the application.

(b) No structure shall be occupied before the sewage system is finally inspected, approved, and covered. All absorption areas shall be covered by the permittee within five calendar days after final inspection and approval to prevent damage.

(c) All liquid wastes including kitchen and laundry wastes and water softener backwash shall be discharged to a treatment tank. No sewage system shall discharge untreated or partially treated sewage to the surface of the ground or into the waters of the Commonwealth except as specfically approved by the Department under sections 202 and 207 of the Clean Streams Law (35 P.S. Par. 691.202 and 691.207).

(d) Where additional absorption area is installed to increase the total area of an existing system and flows are generated from a common treatment tank, loading per square foot of the new area and the existing area shall be equal.

(e) Discharge from roof gutters, foundation drainage, and surface runoff shall not be discharged to a treatment tank; nor shall such discharges be permitted to flow over the absorption area.

606.1B Site Location Regulations

(a) A proposed absorption area having any of the following characteristics shall be considered unsuitable for the installation of an on-lot system and a permit shall be denied where:

1. the slope of the proposed absorption area is greater than 25%;

2. the area is identified by completed Federal Flood Insurance mapping as a floodway;

3. completed flood mapping is not available, but the soil has been mapped or identified as floodplain soil or a floodprone area;

4. one or more rock outcrops exist within the proposed absorption area; or

5. in areas underlain by limestone, depressions left by earlier sinkholes exist either in whole or in part within the proposed absorption area.

(b) Absorption areas shall not be placed in or on fill unless the fill has remained in place for a minimum of four years to allow restoration of natural permeability. The fill shall be composed of clean mineral soil and meet the provisions of Par. 73.14 (relating to site investigation).

606.1C Minimum Horizontal Isolation Distances

(a) Minimum horizontal isolation distances shown in subsection (b) and (c) shall be maintained between the sewage disposal system and the features itemized. Where conditions warrant, greater isolation distances may be required.

(b) The minimum horizontal isolation distances between the features named and treatment tanks shall comply with the following:

1. Property line, easement or right-of-way - 10 feet.

2. Occupied buildings, swimming pools and driveways - 10 feet.

3. Any individual water supply or water supply system suction line - 50 feet.

4. Water supply line under pressue - 10 feet.

5. Streams, lakes or other surface waters - 25 feet.

(c) The following minimum horizontal isolation distances between the features named and the perimeter of the absorption area shall apply:

1. Property line, easement or right-of-way - 10 feet.

2. Occupied buildings, swimming pools and driveways - 10 feet.

3. Any individual water supply or water supply system suction line - 100 feet.

4. Water supply line under pressure - 10 feet.

5. Streams, lakes or other surface water - 50 feet.

6. Other active on-lot systems - 20 feet.

7. Surface drainageways - 10 feet.

8. Mine subsidence areas, mine bore holes, or sink holes - 100 feet.

9. Rock outcrop or identified shallow pinnacle - 10 feet.

10. Natural or manmade slope greater than 25% - 10 feet.

Add the following section:

607.1 Individual On-Site Water Supply Systems for Three Residential Units or Less

(a) General - These regulations pertain to individual on-site water supply systems servicing a maximum of three (3) residential units. Water supply systems servicing more than three lots shall comply with the provisions of 607 - "Water Supply" of West Bradford Township's Subdivision and Land Development Ordinance.

(b) Study Requirements for On-Site Water Supply Systems - A study shall be performed by a geologist which shall include geology, topography, soils and hydrology features of the land. Faults and/or fractures in rock formations shall be indicated, depth to bed rock, depth of water table, flood hazard potential, and ground water

resources, including features such as aquifers and aquifer recharge areas shall also be included.

(c) Performance and Installation Regulation - Where the subdivider proposes that individual on-site water supply systems shall be utilized within the subdivision, the subdivider shall either install such facilities or shall guarantee (by deed restriction or otherwise), as a condition of the sale of each lot or parcel within the subdivision, that the facilities can be installed by the purchaser of such lot or parcel. Individual water supply systems shall be designed and installed in accordance with all applicable standards of the Pennsylvania Department of Environmental Resources and the Chester County Health Department. If developer can not provide a well system in accordance with the above regulations, he shall install a public water supply system in accordance with the provisions of Section 607 - "Water Supply" of West Bradford Township's Subdivision and Land Development Ordinance.

Within Section 609.3 delete the "e. 4." and replace it with the following:

e. 4. Water storage for permanent stormwater management shall be based on a 100 year, 24 hour storm frequency; which is 7.2 inches of rainfaill within a 24 hour period.

Within Section 609.3, iterm "e. 14." change the following:

Remove the portion that reads, "and shall be continuously offered for dedication to the township."

After the words, "metes and bounds" add the following:

", which area shall be known as an easement for maintenance and access and shall be deed restricted against removal or modification without the express consent of the municipality."

Within Section 609.3 item "3. 15." change the following:

Delete the words, "from a retention basin".

After the word, "Discharge" add the following:

"(or outfall) as well as the emergency spillway, dam breast area, or water storage area of a retention basin."

Within Section 610 item "e" add the following:

"All light fixtures shall be of the shielded type with a maximum refection angle of seventy (70) degrees measured from a plan perpendicular to the ground line."

SECTION VI.

Effective Date: This ordinance shall be effective immediately upon enactment.

ENACTED AND ORDAINED this 27th day of January, 1987.

ATTEST:

BY THE BOARD OF SUPERVISORS
WEST BRADFORD TOWNSHIP: