

**ARTICLE VI
DESIGN STANDARDS AND SPECIFICATIONS**

601 General Standards

601.1 Application

The standards and requirements contained in this Article shall apply to all subdivisions and land developments and are intended as the minimum for the preservation of the environment and promotion of the public health, safety and general welfare and shall be applied as such by the Susquehanna County Planning Commission and by the Susquehanna County Planning Department in reviewing and evaluating plans for all proposed subdivisions and/or land developments.

A. Planning

The development shall conform to the proposals and conditions shown in the County Comprehensive Plan and any local or regional plans adopted by a municipality to which this ordinance applies. The streets, drainage, rights-of-way, school sites, public parks and playgrounds shown on the officially adopted Plan or Official Map shall be considered in the approval of all plans.

B. Zoning

The use of land in any subdivision or land development shall conform to any applicable municipal or County zoning ordinance.

C. Improvements, Specifications

Additional improvements, or improvements of more stringent specifications, may be required in specific cases where, in the opinion of the Planning Commission and/or Planning Department, such specifications are necessary to create conditions essential to the health, safety, and general welfare of the citizens of Susquehanna County and/or to protect the environment of the County.

D. Hazard Areas

Those areas which may present such hazards to life, health or property as may arise from fire, flood or noise, or are considered to be uninhabitable for other reasons, shall not be subdivided for building purposes unless the hazards have been eliminated or the plans show adequate safeguards against the hazards. Sources for determining and evaluating potential hazards may include historical records, soil evaluations, engineering studies, expert opinions, standards used by licensed insurance companies and adopted regional, county or local municipal policies.

E. Development Design, Neighboring Development

All portions of a tract being subdivided shall be taken up in lots, streets, open lands, or other proposed uses, so that remnants and land locked areas shall not be created. The layout of a subdivision shall also be planned with consideration for existing nearby developments or neighborhoods so that they are coordinated in terms of traffic movement, drainage and other reasonable considerations.

F. Natural Features

Care shall be taken to preserve natural features such as trees, water courses, views, and historical features, such as buildings and stone walls, which will add attractiveness and value to the remainder of the land. Damming, filling, relocating or otherwise interfering with the natural flow of surface water along any surface water drainage channel or natural water course shall not be permitted except with the approval of the Planning Commission and, where appropriate, the local municipality, the Pennsylvania Department of Environmental Protection and the US Army Corps of Engineers. The Planning Commission may direct the subdivider to preserve trees, groves, topsoil, waterways, scenic points, historic sites, and other community assets or landmarks which are important to maintaining the integrity of the site.

G. Boundary Lines

Lot lines should follow municipal and county boundary lines, rather than cross them. Reserve strips controlling access to lots, public rights-of-way, public lands or adjacent private lands are prohibited.

H. Water Frontage and Surface Drainage

In the case where a local municipal is more restrictive such ordinance shall apply, otherwise the following shall apply.

1. The damming, filling, relocating, or otherwise interfering with the natural flow of surface water along any surface water drainage channel or natural watercourse shall require all applicable permits to be obtained by the applicant.
2. Buildings shall be located so that the lowest floor (including basement) of any residential or non-residential structure is located at least one and one-half (1.5) feet above the one hundred (100) year flood elevation as established by the National Flood Insurance Program or the structure be designed and constructed so that the space enclosed by such structure shall remain either completely or essentially dry during any flood up to that height.
3. Building shall be located no less than fifty (50) feet from the normal high water line of any lake, pond or waterway.

I. Community Facilities and Comprehensive Plan Requirements

Where a proposed park, playground, school, or other public use is shown in a municipal comprehensive plan and is located in whole or in part in a proposed development, the Planning Commission may require the reservation of such area provided that such reservation is acceptable to the municipality and the developer.

J. Walkways

Pedestrian interior walks may be required where necessary to assist circulation or provide access to community facilities (such as a school).

K. Storm Drainage

Lots and/or parcels shall be laid out and graded to provide positive drainage away from buildings and to prevent damage to neighboring lots, tracts, or parcels. Where applicable, detention basins or other water retention methods may be required by the Planning Commission in accord with this ordinance.

601.2 Planned Improvements

Physical improvements to the property being subdivided and/or developed shall be provided, constructed and installed as shown on the record plan.

601.3 Improvements Specifications

All improvements installed by the Developer shall be constructed in accordance with the design specifications and construction standards of the County and recommendation of the Planning Commission Engineer.

- A. Where there are no applicable County specifications, improvements shall be constructed in accordance with specifications furnished by the Planning Commission Engineer, Planning Department, PA Department of Transportation, Pennsylvania Department of Environmental Protection, Bureau of Forestry, local municipal, or such other County, State or Federal agency as may be applicable.
 - B. If there are no applicable County or State regulations, the Planning Commission and/or the Planning Department may authorize that such specifications be prepared by the Planning Commission Engineer or an Engineering Consultant.
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601.4 Other Ordinances

Whenever other County or local municipal ordinances and/or regulations impose more restrictive standards and requirements than those contained herein, such other ordinances and/or regulations shall be observed, otherwise, the standards and requirements of this Ordinance shall apply.

601.5 Modifications

The standards and requirements of this Ordinance may be modified in accord with §1103.

602 Residential Blocks and Lots (See Article VII for Commercial and Industrial)

602.1 Configuration

The configuration of blocks and lots shall be based upon the lot area requirements, the salient natural features, the existing constructed features, and the proposed type of structure. Lot configurations should provide for flexibility in building locations, while providing safe vehicular and pedestrian circulation.

602.2 Blocks

- A. Blocks shall have a maximum length of one thousand two hundred (1,200) feet. Block length shall not apply to curvilinear street layouts which otherwise provide adequate access and meet the intent of this Ordinance.
- B. Blocks shall be of sufficient width to permit two (2) tiers of lots except where a public street, stream, other natural barrier or unsubdivided land prevents the platting of two (2) tiers of lots.

602.3 Lots and Density

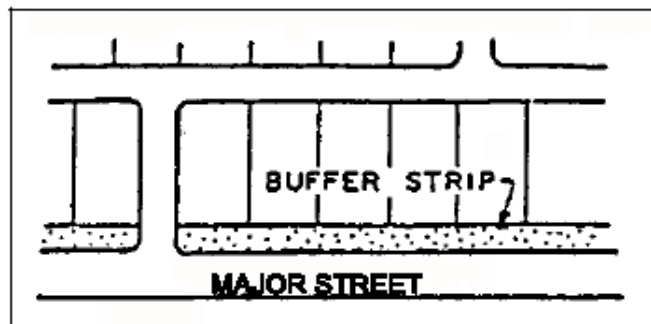
All developments proposed for residential use and certain other developments including, but not limited to, hunting camps, cottages, travel trailer parks, campground or campsite developments where lots are for sale, rent, or lease and other seasonal recreational, or seasonal developments where land is sold, rented, or leased (except mobile home parks and campgrounds and recreational vehicle parks where campers or travelers are licensees), shall conform with the provisions of this section. Standards for mobile home parks and campgrounds and recreational vehicle parks, where campers or travelers are licensees, shall conform with the provisions of Article VIII.

- A. Lot sizes, lot dimensions (minimum average width), residential density and building setbacks shall be governed by any applicable Zoning Ordinance. In cases where no zoning ordinance applies the requirements in Table VI-1 shall apply.
 - B. Lot lines should follow municipal and county boundary lines, rather than cross them.
 - C. If double frontage lots are platted as provided herein, the lot depth shall be increased by twenty (20) feet to provide for a planting strip along the public right-of-way line.
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TABLE VI-1 RESIDENTIAL LOT SIZES, DIMENSIONS AND DENSITY		
Minimum lot size for single-family and two-family dwellings		
Type of Sewage Disposal and Water Supply	Minimum Lot Size (square feet)	
	single-family dwellings	two-family dwellings
On-site sewage and on-site water	43,560	65,340
On-site sewage and community water	43,560	65,340
Community sewage and on-site water	10,890	16,335
Community sewage and community water	7,000	10,500
In the case of shared sewage disposal or shared water supply, the same unit density shall be maintained as for on-site facilities. For example, two single-family dwellings on the same lot with a shared sewage disposal would require twice the minimum lot size as one single-family dwelling.		
Minimum project parcel size and maximum average density for multi-family dwellings --community water and community sewage disposal required.		
Type of Dwelling Structure	Minimum Project Parcel Size (acres)	Maximum Average Density (units/acre)
Townhouses	1	6
Garden apartments	1	8
Apartment buildings	1	10
Minimum project parcel size and maximum average density for mobile home parks --community water and community sewage disposal required		
Minimum parcel size (acres)	4	
Minimum individual site size (square feet)	5,000	
Maximum # units per acre	6	
Building setback distances for single-family and two-family residential lots (see §801 for land conservation standards and §802 for additional two-family dwelling standards)		
Front -- measured from each road right-of-way (feet)	One half of the street right-of-way	
Rear (feet)	15	
Side (feet)	15	

TABLE VI-1 (continued) RESIDENTIAL LOT SIZES, DIMENSIONS AND DENSITY	
Minimum Average Width (Minimum Lot Dimensions)	
Minimum average width equals the gross area of the lot in square feet divided by the distance of the longest side line. Minimum road frontage width shall be fifty (50) feet wide except in the case of flag lots which may be thirty-three (33) feet.	
Size of lot	Minimum Average Width (feet)
7,000 square feet	50
½ acre	65
1 acre	130
2 acres	150
3 acres	170
4 acres	190
5 acres	210
6 acres	230
7 acres	250
8 acres	270
9 acres	290
10 acres or more	300

- D. All side lines of lots shall be as near as possible at right angles to straight street lines and radial to curved street lines.
- E. Double frontage lots shall not be platted except where provided as reverse frontage lots to minimize driveway intersections along a public road; and lot access is restricted to the interior development street.



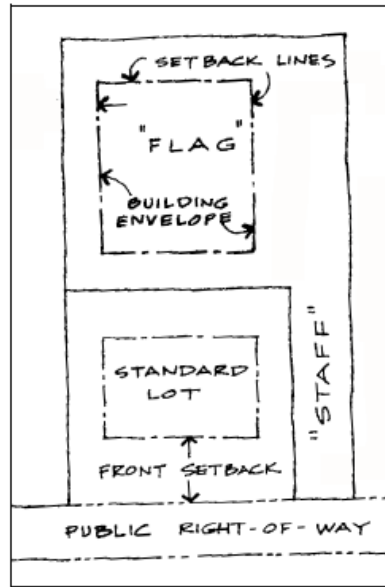
Reverse Frontage Lots

- F. In order to minimize the number of driveways to a public road, interior streets or a common driveway between two (2) lots may be required whenever five (5) lots of an average of less than two hundred (200) feet width at the street line are proposed along one (1) side of any improved primary or secondary road.
- G. All lands in a subdivision shall be included in platted lots, roads, common areas and other improvements; and no remnants of land or reserve strips controlling access to lots, public rights-of-way, public lands or adjacent private lands shall be permitted.
- H. Lots shall be laid out to the edge of any newly proposed road right-of-way, and lot lines along existing public or private roads shall be maintained as they exist.
- I. No corner lot shall have road frontage of less than one hundred (100) feet on the frontage with driveway access.
- J. All corner lots shall have a curve with a minimum radius of ten (10) feet adjoining the intersecting right-of-way lines.

602.4 Flag Lots

Flag lots shall be permitted in accord with the following:

- A. In subdivisions of more than four (4) lots, no more than forty (40) percent of the lots may be approved as flag lots.
 - B. The access corridor portion of the lot is the area of the lot that extends between the street and main portion of the lot, and shall not exceed three hundred (300) feet in length, as measured from the street right-of-way.
 - C. The access corridor shall, at a minimum, meet the right-of-way width requirement for private access drives. (See §603.7.)
 - D. The lot minimum average width measurements shall be made using the main portion of the lot and shall not include the access corridor.
 - E. The lot line where the narrow access corridor widens shall be considered the front lot line for applying setback requirements.
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Flag Lot

603 Streets/Roads

The requirements of this §603 shall apply to all proposed roads and streets. In cases where a local municipality has adopted street specifications which are more stringent than the requirements of this Ordinance such local municipal requirements shall apply.

- A. Every subdivision and land development shall have access to a public right-of-way.
- B. Proposed streets shall be properly related to such street plans or parts thereof as have been officially prepared and adopted by the municipality in which the development is located and shall further conform to such local municipal, County and State road and highway plans and Official maps as have been prepared and adopted as prescribed by law.
- C. In general, all streets shall be continuous and in alignment with existing streets and shall compose a convenient system to insure circulation of vehicular and pedestrian traffic, with the exception that minor streets shall be laid out including the use of loop streets and cul-de-sacs, so that their use by through traffic will be discouraged. The proposed street layout shall provide for the continuation or projection of existing streets in the surrounding area unless the Commission deems such extension undesirable for specific reasons of topography or design.
- D. Roads shall be graded, improved and surfaced to the grades and specifications shown on the plans, profiles and cross sections as approved by the Planning Commission.
- E. Reserved
- F. Dead-end streets shall be prohibited, except when designed as cul-de-sac to serve residential areas.
- G. All provisions for drainage facilities shall be designed so as to provide for carrying of surface water from the surrounding drainage area, buildings, and pavement.
- H. All streets shall meet the construction standards of the municipality, County and the Pennsylvania Department of Transportation, where applicable.

603.1 Topography

Roads shall be logically related to topography to produce reasonable grades, minimize stormwater run-off and provide suitable building sites.

603.2 Existing Access

Existing private roads or rights-of-way proposed to provide access to a subdivision and/or land development shall meet all the requirements of this §603 or shall otherwise be improved to such standards.

603.3 Street Continuation

Residential streets shall be planned to discourage through traffic; however, the arrangement of streets wherever possible shall provide for continuation of existing or platted streets and for adequate access to adjoining undeveloped tracts suitable for future subdivision by reserving rights-of-way to the adjoining undeveloped tracts.

603.4 Subdivision and Street Names

Streets that are extensions of, or obviously in alignment with, existing streets shall bear the names of the existing streets. Street names shall be named in accord with local municipal requirements. Four way street name signs of a design approved by the local municipality shall be installed by the developer at his expense at each street intersection.

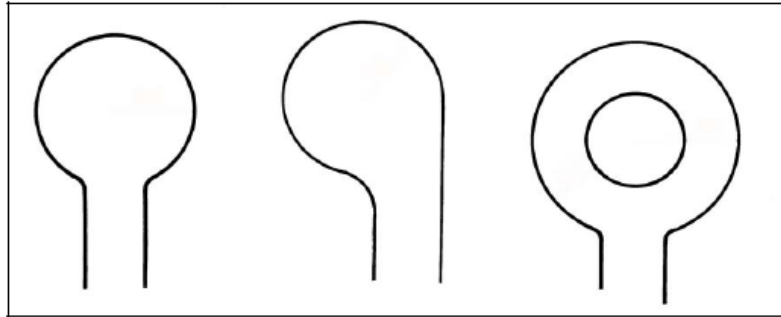
603.5 Further Subdivision

If lots resulting from original subdivision are large enough to permit re-subdivision, or if a portion of the tract is not subdivided, adequate street rights-of-way to permit further subdivision shall be provided as necessary. At least one right-of-way shall be reserved for each one thousand six hundred (1,600) feet of frontage on a public road or on a collector street within the subdivision in order to provide access to undeveloped land.

603.6 Cul-de-Sac Streets

Cul-de-sac streets shall be permitted only in cases where the property configuration does not permit the logical use of continuous streets, and the Planning Commission shall have the right to deny the use of cul-de-sac streets in cases where the Planning Commission determines that the use of continuous streets is practical. Cul-de-sac streets, where permitted, shall meet the following design regulations:

- A. Dead-end streets are prohibited unless otherwise designed as cul-de-sac streets or designed to provide future access to adjoining properties.
 - B. Any temporary dead end street, if no longer than two-hundred (200) feet or fronted by existing lots, shall be provided with a temporary all-weather turn-around within the subdivision with a surfaced area equal in diameter to the right-of-way width at the street, and the use of such turn-around shall be guaranteed to the public until such time as the street is extended.
 - C. Cul-de-sac streets, permanently designed as such, shall not serve more than twenty-five (25) lots.
 - D. All cul-de-sac streets, whether permanently or temporarily designed as such, shall terminate in a circular right-of-way with a minimum outside radius of fifty (50) feet and the outer pavement edge or curb line shall have a minimum radius of forty (40) feet and be improved to the required construction specifications. Intermittent turnarounds shall also meet these requirements.
 - E. The circular right-of-way of the cul-de-sac shall be connected to the approach right-of-way by an arc having a radius of not less than twenty-five (25) feet.
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Cul-de-sac Turnarounds

603.7 Private Access Drives

Private access drives may be used to provide access to not more than three (3) lots that cannot legally be further subdivided or improved with more than one (1) dwelling unit per lot, except in full accord with County requirements.

- A. The private access drive serves no more than three (3) lots, including a lot fronting on the abutting street; and shall not exceed eight hundred (800) feet in length.
 - B. Design standards for Private Access Drives shall conform to Table VI-2.
 - C. If there is a potential for subdivision or development of any of the lots created such that eventually more than three (3) lots and/or dwelling units might result, the subdivider shall provide additional right-of-way width as necessary to serve the maximum potential number of lots/dwelling units. Cartway and travelway widths may remain the same until such time as additional lots are platted or units proposed, at which time all development and street standards applicable to a major subdivision shall apply.
 - D. Private access drive entrances and aprons within the adjoining street right-of-way shall be installed by the Developer as required in this Ordinance. Construction of the remaining length of the private access drive and the turnaround shall be the responsibility of the buyer or buyers of the served lot or lots; and, no building permit shall be issued until the private access drive is constructed or guaranteed in accord with Article V of this Ordinance. The private access drive shall not under any circumstances be offered to the local municipality as a municipal street. The Applicant shall agree to the terms of this §607.7, in writing, and a covenant such as follows shall be placed on the final plan and the deed of conveyance clearly assigning responsibility for construction and maintenance of the private access drive and turnaround, establishing its future private ownership status, and noting the condition of a building permit issuance: *The construction and maintenance of the private access drive and turnaround shall be the responsibility of the owner(s) of the lots served by the drive. No building permit shall be issued for any improvements on lots served by the drive until such time as the drive and turnaround is constructed. The private access drive shall remain private and shall not be offered for dedication as a public street.*
 - E. A leveling area not exceeding four (4) percent in grade and not less than forty (40) feet in length shall be provided where the private access drive intersects with the right-of-way of the adjoining street.
 - F. Storm water management and soil erosion and sedimentation control shall be addressed in accord with §605 of this Ordinance.
 - G. A private access drive shall not be permitted to intersect the through street where the tangent grade
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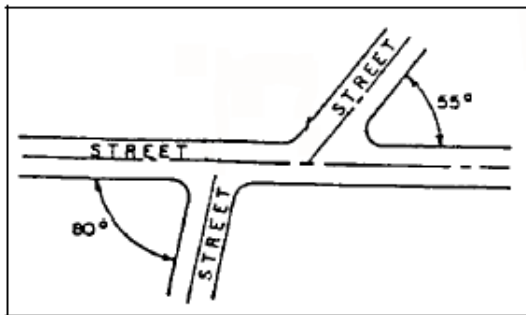
of the through street at the point of intersection of the center-lines of the two streets exceeds eight (8) percent for the private access drive intersection.

H. A private access drive serving more than one (1) lot shall be provided with a *T- or Y-shaped* turnaround, with a length of sixty (60) feet and a width of twenty (20) feet improved to the required construction specifications.

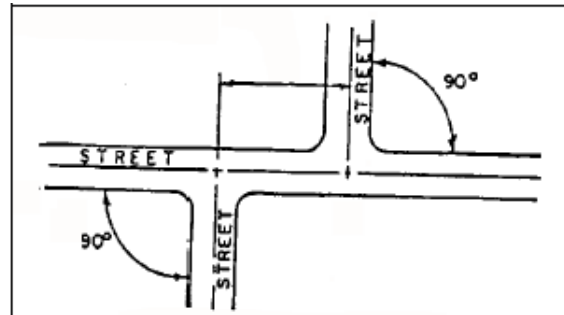
603.8 Intersections

A. Center-lines of streets shall intersect as nearly at right angles as possible or radial to street lines.

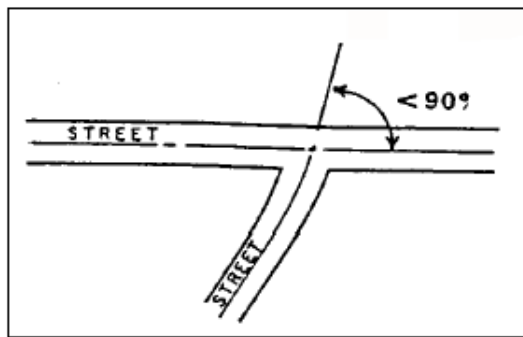
1. Any center-line angle of less than eighty (80) degrees shall be allowed only upon grant of a waiver by the Planning Commission based upon a written request by the Developer.
2. Center-line angles of less than sixty (60) degrees shall not be approved under any condition.



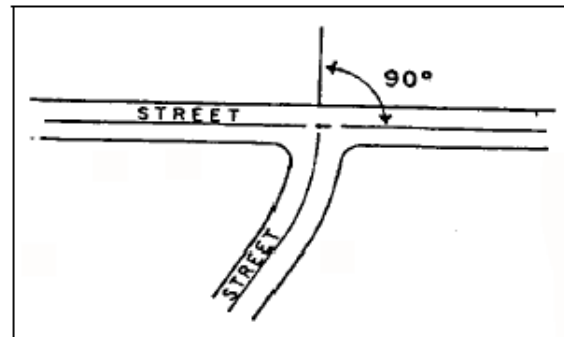
Unacceptable Street Intersection Design



Acceptable Street Intersection Design



Unacceptable Street Intersection Design

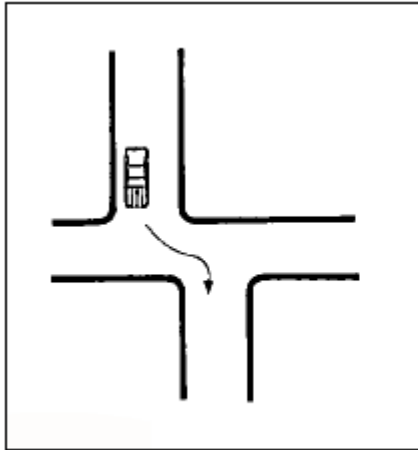


Acceptable Street Intersection Design

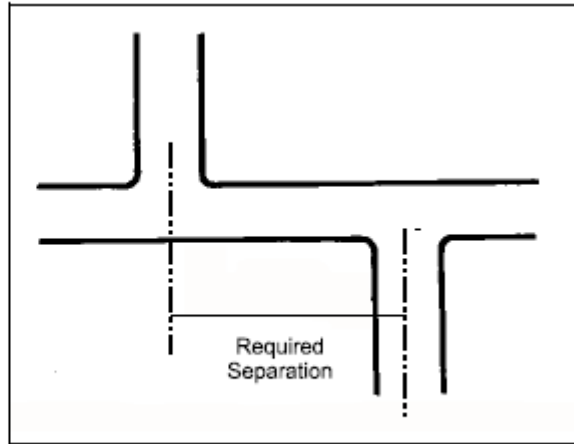
B. Intersections of more than two (2) streets at one (1) point are not permitted.

C. Where streets intersect other streets entering opposite sides of another street the streets shall be laid out directly opposite each other, or the minimum offset or distance between center-lines of parallel or approximately parallel streets intersecting a cross street from opposite directions shall be as follows (as measured from centerline to centerline):

1. One hundred twenty-five (125) feet for minor streets and private access drives.
2. Four hundred (400) feet for all other streets.

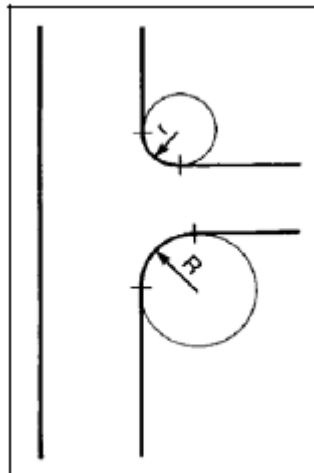


Corner Cutting



Required Centerline Separation

- D. The cartway edge at intersections shall be rounded by a tangential arc with a minimum radius of twenty (20) feet for minor streets or streets of lesser classification and thirty (30) feet for collector streets and major traffic streets.



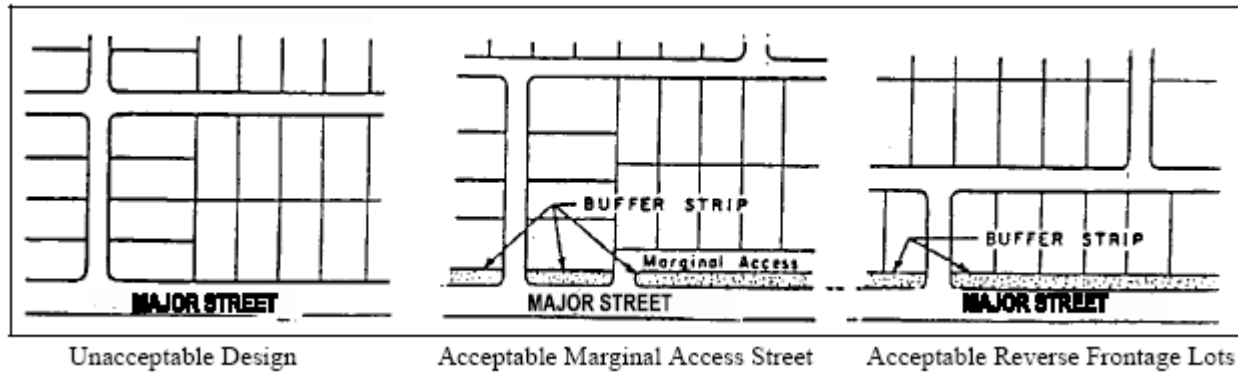
Cartway Edge Arc

- E. In cases where a subdivision road intersects with a local municipal road, the subdivision road, whether proposed for dedication or to remain private, shall be paved in accord with the requirements of the local municipal Road Dedication Ordinance for the applicable class of road for a distance not less than fifty (50) feet from the edge of the municipal road right-of-way.

603.9 Street Frontage

A. Service Streets

Where a subdivision and/or land development abuts or contains an existing or proposed collector street or major traffic street, the Planning Commission may require marginal access streets or reverse frontage lots or such other treatment as will provide protection for abutting properties, reduction in number of intersections with the collector major traffic street and separation of local and through traffic.



B. Controlled Access

Entrances and exits to developments shall be designed as to minimize interference with through traffic.

C. Protection of Grade Separation

Entrance and exit points to proposed developments shall not be located closer than two hundred (200) feet to the end of any interchange ramp.

D. Setback Line

Unless otherwise regulated by appropriate ordinances, all buildings shall be set back not less than fifty (50) feet from the right-of-way line fronting on major highways.

E. Residential Blocks

Residential blocks shall have a maximum length of twelve hundred (1,200) feet. In design of blocks longer than eight hundred (800) feet, special consideration shall be given to the requirements of satisfactory fire protection.

603.10 Street Right-of-Way, Travelway, Shoulder Widths, and Cross Sections

Street right-of-way, travelway and shoulder widths shall be provided to the minimum standards provided in Table VI-2. In cases where a local municipality has adopted street specifications which are more stringent than the requirements of this Ordinance such local municipal requirements shall apply.

- A. Shoulder surfaces shall be graded at a slope one-half (0.5) inch per foot away from the pavement edge.
- B. The finished paved travelway surface of tangent sections and curve sections not required to be superelevated shall be crowned at one-quarter (0.25) inch per foot away from the center-line.
- C. Properly superelevated cross-sections shall be required on collector streets in accord with most current AASHTO requirements. The maximum permissible superelevation shall be 0.08 feet per foot.

TABLE VI-2 DESIGN STANDARDS FOR STREETS				
DESIGN SPECIFICATION	Collector (b)	Minor	Local	Private Access (c) (d)
Number of dwelling units served	>200	26 – 200	25	3
Cross Section Standards				
Street right-of-way (feet) (a)	60	50	50	33
Additional Road Width (a)	as required for drainage, slope and utility easements			
Travelway width, feet	22	20	18	12
Shoulder width, each side, feet (e)	4	3	3	N/A
Cartway width, feet	30	26	24	N/A
Crown, feet/foot	0.02	0.02	0.02	0.02
Superelevation, maximum, feet/foot	0.08	N/A	N/A	N/A
Shoulder slope, feet/foot	0.04 (f)	0.04 (f)	0.04 (f)	N/A
Clear zone width, feet	Per PaDOT Design Manual, Part 2, Chapter 12		10	N/A
Geometric Standards				
Grade, maximum, percent	7	12	12	14
Grade, minimum, percent	1	1	1	1
Center line radius, minimum, feet	750	475	250	75
Stopping sight distance, minimum, feet	425	305	200	100
Tangent between reverse curves, minimum, feet	100	50	N/A	N/A
Vertical curves	See 603.14			
Swale grade, minimum, percent	1.5	1.5	1.5	1.5
<p>Notes:</p> <p>a. Right-of-way width does not include slope, drainage, or utility easements. Additional road width and cartway widths may be required by the County to provide for additional construction requirements such as cuts, fills and embankment areas, or to lessen traffic congestion, to secure safety from fire, panic, or other dangers, to facilitate the adequate provision for transportation and other public requirements and to promote the general welfare. Or, in cases where topography or other physical conditions make a street required width impractical, the County may modify the above requirements</p>	<p>b. Collector standards apply to all commercial and industrial subdivisions and land developments.</p> <p>c. See also 603.7</p> <p>d. Curbs not permitted</p> <p>e. If curbs are provided, shoulders shall not be provided</p> <p>f. 0.06 where warranted</p>			

TABLE VI-2 CONTINUED DESIGN STANDARDS FOR STREETS				
Residential Subdivisions and Land Developments				
TRAVELWAY CROSS SECTION				
MATERIAL*	MINIMUM DEPTHS (INCHES)			
	ROAD CLASSIFICATION			
	Collector	Minor	Local	Private Access ***
Surface Course Options				
Option 1 – Aggregate Surface				
2A Coarse Aggregate**	8	8	8	6
Option 2 – Bituminous Surface / Base				
ID-2 Wearing	1.5	1.5	1.5	N/A
Bituminous Concrete Base Course (BCBC)	4.5	4.5	4.5	N/A
Subbase Course Requirement				
Subbase (No. 2-A)	8	6	6	4
Subgrade Course Requirement				
See §603.20				
Shoulder Requirement				
2A Coarse Aggregate**	6	6	6	N/A
Commercial and Industrial Subdivisions and Land Developments				
TRAVELWAY CROSS SECTION				
COURSE	MATERIAL *	MINIMUM DEPTHS (inches)		
Bituminous Surface	ID-2 Wearing	1.5		
Bituminous Base	Bituminous Concrete Base Course (BCBC)	4.5		
Subbase	Subbase (No. 2A)	8		
Subgrade	See §603.20			
Shoulders	2A Coarse Aggregate **	6		
Notes:				
* All material shall meet PaDOT specifications, Publication 408, latest edition				
** 2A Coarse Aggregate = Coarse aggregate treated with PaDOT approved oil for dust control at the application rate specified by PaDOT				
*** Not eligible for dedication				

603.11 Easements

Easements for utilities shall be provided and shall conform in width and alignment to the recommendations of the appropriate utility company unless this Ordinance requires a greater width. Easements shall also be provided for all storm water drainage ditches, sewers, and watercourses. All easements shall be shown on the Preliminary and Final Plan, and the County or its agents shall have the right to enforce the restrictive easements relative to the water supply and sewage disposal in the event that the developer and/or lot owners fail, or are unable to do so.

A. Access Easements

1. Access easements shall be shown and labeled on the plans to indicate the purpose, easement users and the rights of said users.
2. No access easement shall be a part of any lot, but shall be a separate area designed with the express purpose of access to a particular site or facility.
3. Ownership and maintenance responsibility shall be noted on the plan for each easement.

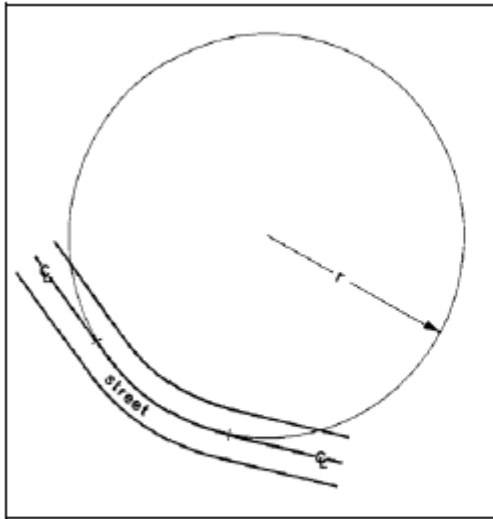
B. Utility Easements

1. Utility easements shall be a minimum of twelve (12) feet in width and shall be provided along all street rights-of-way in addition to the required street right-of-way width.
2. All existing and proposed utility easements shall be shown and labeled on the plan and included in the restrictive covenants as appropriate.
3. Prior to the approval of the final plan, a review by the utility companies serving the development shall be given fifteen (15) days to review the location and width of the proposed utility easements.
4. The Developer shall be responsible for compliance with any applicable regulations of the Pennsylvania Public Utility Commission.

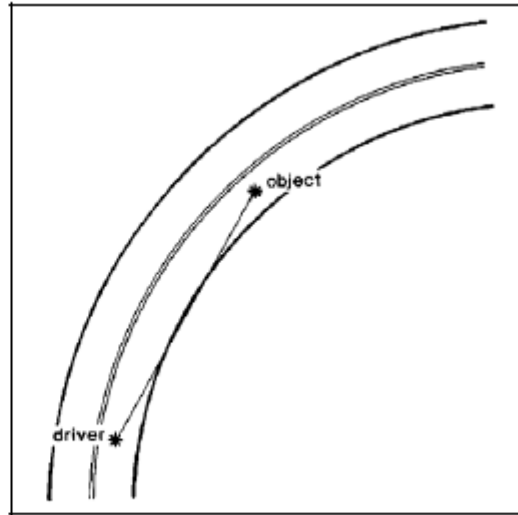
603.12 Street Alignment

Street alignment shall be designed as follows:

- A. Whenever street lines are deflected in excess of seven and one half (7 ½) degrees, connection shall be made by horizontal curves.
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Horizontal Curves - the radius of the circle formed by the centerline of the curve.



Horizontal Curves - sight distance limited by sharpness, or radius, of the curve.

- B. Streets shall be designed so that there will be unobstructed sight distances along the center-line thereof as set forth in Table VI-2.
 - 1. Sight distances shall be measured from the driver's eye at 3.75 feet above the road surface to a point 0.5 feet above the road surface.
 - 2. Sight distances at intersections shall be measured from the driver's eye at 3.75 feet above the road surface to a point fifteen (15) feet from the nearest edge of the travelway of the through road to a point 3.75 feet above the road surface of the through road.
- C. Between curves the following minimum tangents shall be provided:
 - 1. One hundred (100) feet on collector streets.
 - 2. Fifty (50) feet on minor streets.

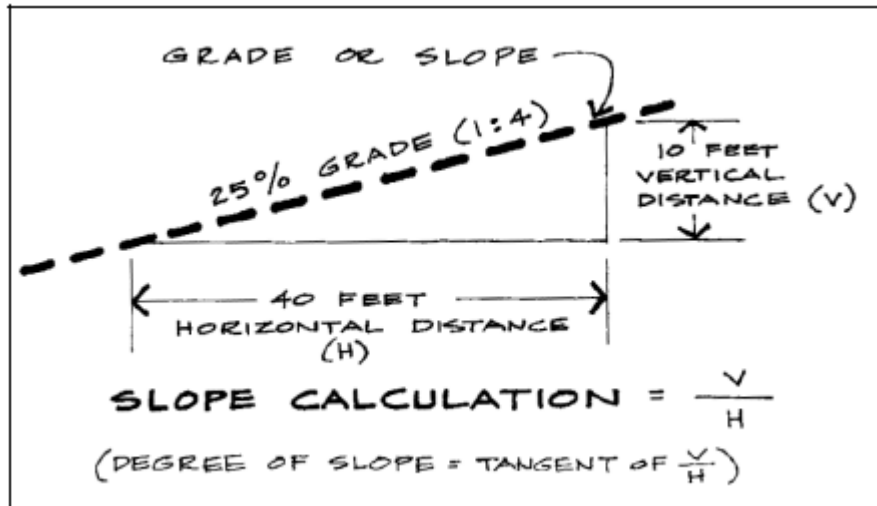
603.13 Street Grades

Street grades shall be designed as follows:

- A. Center-line grades shall not exceed the grades set forth in Table VI-2.
- B. The maximum grade across the turnaround on a dead end street shall not exceed four (4) percent.
- C. To provide for adequate drainage, the minimum grade of any street gutter shall not be less than one (1) percent.
- D. To provide for adequate drainage, the minimum grade of any parallel ditch along a street shall be not less than one (1) percent.
- E. A leveling area for all street intersections shall be provided as follows:
 - 1. The tangent grade of the through street at the point of intersection of the center-lines of the two streets shall not exceed eight (8) percent for minor street or minimum access drive

intersections, and all other intersections shall comply with the grades as required on VI-2. Crest and sag vertical curves shall be provided in accordance with §603.14.

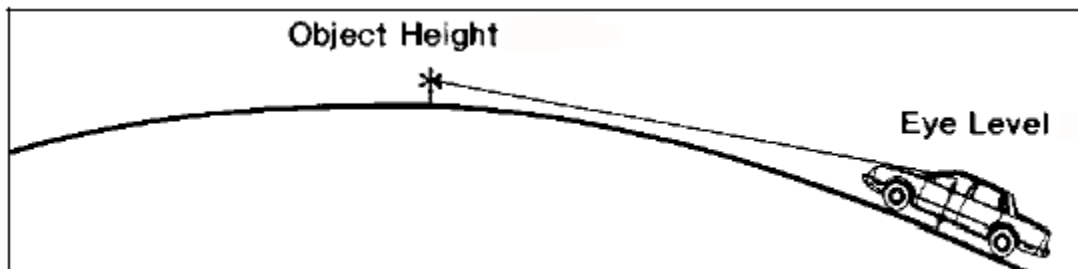
2. The tangent grade of the connecting street(s) shall not exceed four (4) percent within twenty-five (25) feet of the right-of-way lines of the through street. Crest and sag vertical curves shall be provided in accordance with §603.14. The point of vertical curvature or tangency shall not be within the through street right-of-way.



603.14 Vertical Curves

Vertical curves shall be used at changes of grade exceeding one (1) percent and shall be designed as follows:

- A. Crest vertical curves shall be designed in relation to the road classification to provide vertical sight distance consistent with the horizontal sight distances as set forth in Table VI-2.



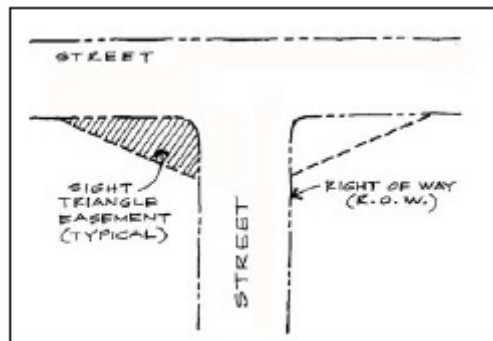
Sight Distance - on crest of hill (vertical curve).

- B. On minor and private access streets, sag vertical curves shall have a minimum length of fifteen (15) feet for each one (1) percent algebraic difference in tangent grade with an absolute minimum length of seventy-five (75) feet. (Example: 5% = 75' v.c.; 5.1% to 6% = 90' v.c.; etc.)
- C. On collector streets, sag vertical curves shall have a minimum length of twenty-five (25) feet for each one (1) percent algebraic difference in tangent grade with an absolute minimum length of one hundred (100) feet. (Example: 4% = 100' v.c.; 4.1% to 5% = 125' v.c.; etc.)
- D. The following vertical curve information shall be shown on the street profiles:
 1. Length of vertical curve.

2. Elevation and stationing of the Vertical Point of Intersection, Vertical Point of Curvature, Vertical Point of Tangency, and Middle Offset.
3. Street grades.
4. Sight distances.

603.15 Clear Sight Triangles

At all intersections, a triangular area shall be graded and/or other sight obstructions removed in such a manner as not to obscure vision between a height of from two (2) to ten (10) feet above the center-line grades of the intersection streets. The clear sight triangle shall be guaranteed either by deed restriction, by lease restriction or by plan reference, whichever method is applicable. Vegetation shall not be planted or allowed to grow in such a manner as to obscure said vision. Such triangular area shall be determined by the triangle formed by the street lot lines of the lot and a line drawn between points along the right-of-way lines fifty (50) feet distant from their points of intersection unless site conditions or the local or state highway occupancy dictates a greater requirement..



Clear Sight Triangle

603.16 Residential Driveways

This §603.16 shall apply to lots in subdivisions approved after the effective date of this Ordinance. Driveways proposed for pre-existing lots and non-residential driveways shall be governed by other applicable municipal and State requirements. Residential driveways shall comply with the following standards:

- A. Driveways shall not be permitted to have direct access to public streets unless authorized by the municipality or the Pennsylvania Department of Transportation, as applicable, via issuance of a highway occupancy permit.
- B. Entrances shall be rounded at a minimum radius of five (5) feet or shall have a flare construction that is equivalent to this radius at the point of intersection with the cartway edge.
- C. Where new roads are proposed, future driveways that are to be constructed adjacent to a street intersection shall be shown on the preliminary and final plans and a note shall be included on the plan restricting the driveways to the locations shown.
- D. The minimum distance between a driveway or point of access and the nearest intersecting street shall be as follows:

Type of Subdivision or Land Development	Distance between center-lines of driveway and nearest intersecting road by type of intersecting road.		
	Major Traffic Street	Collector	Minor & Private Access
Residential	100 ft.	75 ft.	40 ft.

The nearest intersecting street shall be construed as being on the same or the opposite side of the street on which the lot is located.

- E. A leveling area not exceeding four (4) percent in grade and not less than twenty-five (25) feet in length shall be provided where a driveway intersects with the right-of-way of the adjoining road.
- F. Adequate provision shall be made for parallel drainage facilities

603.17 Bridges and Stream Crossings

Bridges and other stream crossing structures, which are part of the proposed street system, shall be designed and constructed in accordance with the current Pennsylvania Department of Transportation Standards and Specifications for an H-20 loading. Evidence of compliance with any state or federal requirements shall be provided. At a minimum, the width of the bridge or stream crossing shall be equal to the cartway width of the roadway carried by the bridge or stream crossing.

603.18 Clearing and Grubbing

The right-of-way for all collector, minor and minimum access roads shall be cleared and grubbed only to the extent necessary to provide the required road cartway, cuts and fills, and associated drainage facilities.

- A. All trees, stumps, roots and other material deemed unsuitable by the Planning Commission shall be removed from the grading area.
- B. Voids created by the removal of stumps or roots shall be backfilled and compacted to the satisfaction of the Planning Commission.
- C. Rocks greater than twelve (12) inches in diameter shall be removed to a minimum depth of six (6) inches below the finish subgrade.
- D. All cleared and grubbed areas shall be inspected and approved by the Planning Commission prior to the cut and fill operations.

603.19 Cuts and Fills

All cuts and fills shall be constructed as follows:

- A. The maximum slope of any earth embankment or excavation shall not exceed one (1) foot vertical to two (2) feet horizontal unless stabilized by a retaining wall or cribbing, except as approved by the Planning Commission for special conditions.
- B. The maximum slope of any rock excavation shall not exceed four (4) feet vertical to one (1) foot horizontal.
- C. All excavations and embankments shall have a slope to the point of intersection with the natural grade with a rounding of the top of the slope of excavations to prevent erosion.

- D. All embankments shall be compacted to the satisfaction of the Planning Commission.
- E. Adequate provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surfaces of fills.
- F. Cuts and fills shall not endanger adjoining property.
- G. Fills shall be placed in lifts and compacted in accord with specifications of PA DOT Publication 408, latest edition, to minimize sliding or erosion of the soil.
- H. Fills shall not encroach on natural watercourses or constructed channels, and fills placed adjacent to such natural watercourses or constructed channels shall have suitable protection against erosion during periods of flooding.
- I. Grading shall be done in a manner so as not to divert water onto the property of another landowner without the written consent of the landowner provided it complies with all other requirements of this Ordinance and is approved by the Planning Commission.
- J. During grading operations, necessary measures for dust control shall be exercised.
- K. Grading equipment shall not be allowed to cross streams without proper permits and adequate provisions shall be made for the installation of culverts and bridges.

603.20 Sub Grade, Base and Surface**A. Subgrade**

- 1. The design and construction of the road bed shall take into consideration the supporting capacities of the subgrade, with particular attention to those soils which are subject to frost heave.
- 2. Subgrade, parallel and cross drainage facilities shall be provided when necessary and shall be located, designed and installed to maintain proper drainage.
- 3. Unsuitable soils, as identified by the Project Engineer and confirmed by the Planning Commission Engineer, shall be removed and replaced, drained or otherwise stabilized to provide adequate support for the road bed and anticipated loads. If construction of a road bed in such locations and particularly on soils identified in the Susquehanna County Soil Survey as subject to frost heave is proposed, the Planning Commission shall require such drainage facilities and/or underdrains and subgrade drains as necessary to stabilize the subgrade. The design of such facilities shall be approved by the Planning Commission.

B. Subbase and Base Course - Subbase and base course aggregate material shall conform in type and be compacted to the depths shown in Table VI-2 of this Ordinance in accordance with the latest specifications of the Pennsylvania Department of Transportation (Form 408) and the requirements of the County and/or municipality.

C. Surface Course - The bituminous surface course shall conform in type and be compacted to the depths shown in Table VI-2 of this Ordinance in accordance with the latest specifications of the Pennsylvania Department of Transportation (Form 408) and the requirements of the County and/or municipality.

D. Shoulders - Shoulders shall be constructed of the material and compacted to the width and depth shown in Table VI-2 of this Ordinance.

603.21 Walls, Slopes, and Guiderails

- A. Where the grade of the street is above or below the grade of the adjacent land, walls or slopes shall be constructed in a manner satisfactory to the Planning Commission to support the street or the adjacent land, as the case may be.
- B. Guiderails shall be installed in accord with most current PA DOT specifications.

603.22 Curbs, Gutters, and Swales

- A. Minimum curb or pavement edge radii at street intersections shall equal that required for the cartway edge.
- B. Where curbs exist on abutting properties, their extension shall ordinarily be required throughout the proposed subdivision.
- C. Where curbs are not required, adequate gutters shall be graded and protected by seeding, or appropriate surfacing.
- D. Curbs shall be constructed in accord with the most current Pennsylvania Uniform Construction Code and Americans With Disabilities Act standards.
- E. If gutters are provided, they shall be in conformance with good engineering practice and subject to the approval of the Planning Commission's Engineer. Gutters and/or drainage swales shall be designed to prohibit erosive velocities and paving may be required if runoff velocities exceed 5.0 fps when calculated in accordance with PA DOT Manual, Part 2. Swales shall be triangular or parabolic in design to facilitate maintenance and the invert of the swale shall be below the subbase course to prevent saturation of the roadway. Swales shall be deep enough to accommodate driveway and other culverts.
- F. Velocity calculation shall be placed on the centerline profile drawings, or shall be submitted separately with the profiles.

603.23 Sidewalks; Crosswalks

Sidewalks and street cross walks may be required where necessary to provide proper pedestrian circulation or to provide access to community facilities and common areas. Sidewalks, where required or provided, shall be located within the street right-of-way immediately adjacent to the curbs, except as may be approved by the Planning Commission to accommodate street trees or other landscaping. Sidewalks and street cross shall be constructed in accord with the most current Pennsylvania Uniform Construction Code and Americans With Disabilities Act standards.

603.24 Parking On Streets

Off-street parking for all uses shall be provided in accord with any applicable Zoning Ordinance, and streets shall not be designed to accommodate on-street parking.

603.25 Driveway and Cross Drainage

At each point where a street is intersected by a driveway that requires surface drainage water to be carried under the driveway at the intersection, the driveway shall be graded or a culvert pipe shall be installed across the width of the driveway to meet the drainage requirements determined in accord with §605 of this Ordinance. Such cross drains as may be necessary shall also be installed under the street in accord with the drainage plan. Pipes shall be installed at such depth and in such manner as dictated by the site; and, no pipe shall be installed that is less than fifteen (15) inches in diameter. (See §605 for additional requirements.)

603.26 Street, Parking Area and Building Lighting

Street lights may be required when considered necessary by the Planning Commission and shall be of such design and spacing as required by the Planning Commission in accord with current Planning Commission specifications. A lighting plan shall be provided by the Developer for all subdivisions and land development and shall include details for lighting of streets, parking areas and buildings. Street lights shall be required for all major subdivisions unless the Developer documents that such lighting is not necessary and a modification is granted by the Planning Commission. All lighting shall comply with the standards of this ordinance and the Illuminating Engineering Society (IES) of North America.

603.27 Traffic Signs and Signals

Traffic signs and traffic signals shall be required when considered necessary by the Planning Commission to ensure safe traffic or pedestrian circulation. All traffic signs and signals shall meet the most current requirements of PA DOT. In the case of traffic signals, the Developer, any subsequent owner, or any subsequent Property Owners Association or similar entity shall be responsible for the long term operation, maintenance, and replacement of the traffic signal and all associated facilities, signs, and pavement markings.

603.28 Road Striping

All roads constructed or improved as part of any subdivision or land development shall be striped in accord with the most current PennDOT requirements.

604 Markers

Markers shall be placed so that the center or scored or marked point shall coincide exactly with the intersection of the lines being marked and shall conform to the following:

604.1 Markers

- A. All markers shall be placed under the direction of a Registered Professional Land Surveyor who will take full responsibility for their accuracy and placement.
 - B. Lot markers shall consist of:
 - 1. Solid steel rods not less than one-half (1/2) inch in diameter and not less than twenty-four (24) inches in length.
 - 2. Steel pipes not less than three-quarters (3/4) inch in diameter and not less than twenty-four (24) inches in length.
 - 3. Such markers as are currently accepted and used by Registered Professional Land Surveyors.
 - 4. Such other markers as the Planning Commission may approve.
 - C. Markers shall be set flush to the ground or set to extend at least six (6) inches above the finish grade of the surrounding ground.
 - D. Markers shall not be placed until road grading has been completed.
 - E. Lot markers shall be placed as follows:
 - 1. At all points where lot lines intersect street right-of-way lines.
 - 2. At all points where lot lines intersect exterior property lines.
 - 3. At all interior lot corners.
 - 4. At such other lot corners and locations as the Planning Commission may direct.
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605 Stormwater and Drainage Control**605.1 Purpose and Stormwater Management Ordinance****A. Generally**

The purpose of this section is to provide for the management of the quantity, velocity and direction of stormwater flow to provide protection to downstream property owners, to control soil erosion and sedimentation and to protect the public general health, safety and welfare.

B. Local Municipal Requirements

In cases where the local municipality has adopted more stringent stormwater control requirements such requirements shall apply; otherwise the requirements of this §605 shall apply.

C. Storm Water Management Plans

In cases where the local municipality or the County has adopted a special purpose ordinance governing stormwater management in accord with a watershed management plan approved by the PA Department of Environmental Protection under the terms of the Stormwater Management Act, the requirements of such ordinance shall apply to developments in that watershed in addition to the requirements of this Ordinance. In cases where two standards conflict, the more restrictive shall apply.

605.2 Plan

A stormwater drainage and management plan shall be required for all major subdivisions and all land developments (except Minor Residential Land Developments) and shall be subject to the approval of the Planning Commission and Planning Commission Engineer. The Plan shall show all existing surface drainage features and shall include all appropriate designs, details and dimensions necessary to clearly explain proposed construction materials, grades and elevations. The Developer shall submit the plan and all associated engineering calculations to the Planning Committee at the time of subdivision or land development plan submission. Construction materials shall comply with the latest PennDOT Publication 408 standards and the applicable PennDOT RC standards for construction.

605.3 Compliance with State Regulations

The Plan shall meet the intent of §13 of the Pennsylvania Stormwater Management Act and other applicable regulations to assure that the maximum rate of storm water runoff is no greater after development than prior to development activities; or, the quality, velocity and direction of stormwater is managed in a manner which otherwise adequately protects health and property from possible injury. Said Plan shall comply with all Pennsylvania Department of Transportation requirements.

605.4 Design Criteria

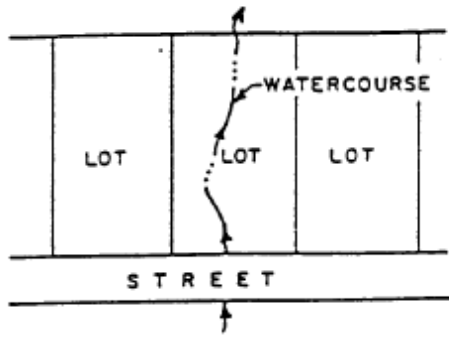
- A. The basic goal of the stormwater management plan shall be to maximize the on-site infiltration of stormwater and minimize the overall volume of stormwater leaving the property after development, and the plan shall incorporate best management practices to achieve this goal.
 - B. Stormwater management facilities shall be designed for a storm frequency of two (2), five (5) and ten (10) years, using generally accepted engineering principles appropriate for the proposed site and development. In addition to being designed for a ten year storm, detention facilities shall be designed to pass a 100 year storm without facility failure. In general, the soil cover complex method (Soil Conservation Service method) or the rational method shall be used to determine peak discharge and estimated runoff.
 - C. In cases where detention of stormwater is proposed, the post-development, peak rate of stormwater discharge from the parcel being developed shall not exceed the pre-development, peak rate of stormwater discharge from the parcel being developed. The calculation of post development discharge shall, in addition to areas disturbed during development, include the estimated effect of all
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run-off expected from driveways, buildings, walkways, parking areas and other impervious areas associated with the ultimate build-out of the subdivision or land development.

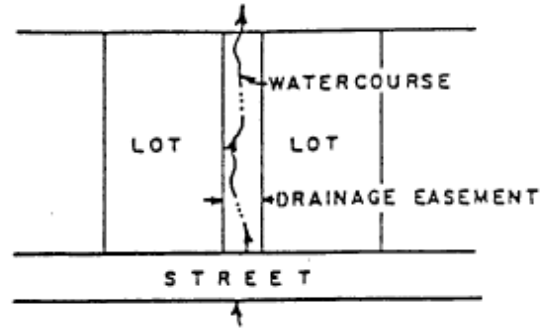
- D. The Planning Commission shall in cases where existing drainage problems, flooding or other factors relating to the public health, safety and welfare and upon the recommendation of the Planning Commission Engineer, require that the proposed stormwater control facilities be designed to a twenty-five (25) year storm frequency and/or other more stringent criteria; or, require the provision of stormwater control facilities in areas where no such facilities are proposed by the developer.

605.5 Additional Requirements

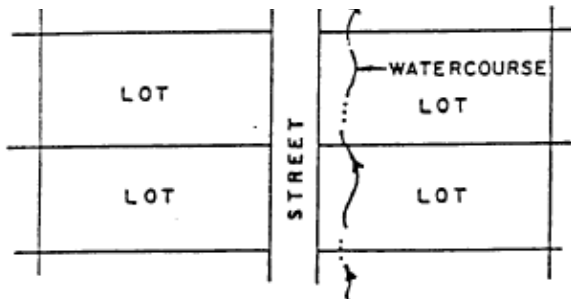
- A. All proposed surface drainage structures shall be indicated on the drainage plan submitted with the subdivision or land development plan and shall be considered "improvements" for the purposes of final subdivision approval. Construction materials shall comply with the latest PennDOT Publication 408 standards.
- B. Natural drainage courses and points of natural drainage discharge shall not be altered unless all necessary permits have been obtained.
- C. Stormwater or natural drainage water shall not be diverted to overload existing drainage systems, or create flooding or the need for additional stormwater management or drainage facilities on other properties without the written consent of the owners of such properties and the provision by the developer of facilities to control the stormwater or drainage.
- D. Where a subdivision is traversed by a natural drainage way or channel there shall be reserved by the developer a drainage easement conforming substantially with the line of such drainage way or channel, and of such width as determined by the Planning Commission adequate to preserve the unimpeded flow of natural drainage, or for the purpose of widening, deepening, relocating, maintaining, improving or protecting such drainage facilities. A drainage easement shall also be so provided for all proposed stormwater control facilities.
- E. Where a subdivision is traversed by a watercourse, there shall be provided a drainage easement of not less than twenty-five (25) feet on each side of the stream from each stream bank, or such additional width as will be adequate to preserve the unimpeded flow of the watercourse.
- F. All streets shall be so designed as to provide for discharge of surface water from their right-of-ways.
- G. In no case shall any pipe system of less than fifteen (15) inches be installed underneath a street or driveway, and all pipes shall be of a plastic, PVC, concrete or other material of an equal or greater useful life, meeting the requirements of PennDOT Publication 408, latest edition.
- H. Drainage structures that are located on State Highway right-of-ways shall be approved by the Pennsylvania Department of Transportation and a letter from that agency indicating such approval shall be directed to the Planning Commission prior to final plan approval.
- I. Lots shall be laid out and graded to prevent cross lot drainage and to encourage drainage away from proposed building areas.
- J. Drainage easements of a minimum of ten (10) feet in width shall be provided along all side and rear lot lines; (a total of twenty (20) feet for abutting lots) and adjacent to street rights-of-way as required by the stormwater drainage and management plan.
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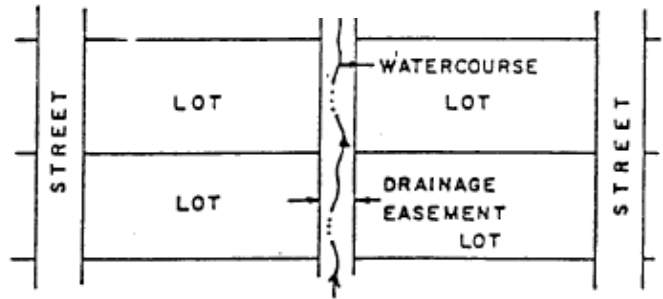
Undesirable Design



Desirable Design



Undesirable Design



Desirable Design

- K. Paved street shoulders, gutters and/or drainage swales and rip/rap of drainage swales may be required to provide for adequate stormwater management.

605.6 Maintenance of Stormwater Control Facilities

- A. Maintenance of stormwater control facilities, including easements between lots, shall be the responsibility of the owner of said facilities. A legally binding agreement may be required between the owner and the Planning Commission to provide for such maintenance and providing for inspections by the Planning Commission.
- B. In cases where a property owners association is created for the ownership, operation and maintenance of common facilities such property owners association shall be responsible for the maintenance of stormwater control facilities and such maintenance shall be established in the deed covenants and restrictions.
- C. When stormwater management control facilities are located on an individual lot, and when such facilities are the responsibility of that landowner to maintain, a description of the facility or system and the terms of the required maintenance shall be incorporated as part of the deed to the property.
- D. If the Planning Commission determines at any time that any permanent stormwater management control facility has been eliminated, altered or improperly maintained, the owner of the stormwater control facility shall be advised of corrective measures required and given a reasonable period of time to take necessary action. If such action is not taken by the property owner, the Planning Commission may cause the work to be done and lien all costs against the property.

606 Soil Erosion and Sedimentation Controls

All soil erosion and sedimentation control plans shall meet the specifications of and shall be approved

by the Susquehanna County Conservation District and PA DEP, as required. Said Plan shall comply with Commonwealth of Pennsylvania, Title 25, Chapter 102 Department of Environmental Protection regulations for soil erosion and sedimentation control. Erosion and sedimentation controls shall be installed according to the approved Plan and shall be maintained by the developer in proper functioning condition until stabilization of the area is completed as determined by the Susquehanna County Conservation District. The Applicant shall submit the Plan to the Planning Commission at the time of preliminary plan application. Preliminary Plan approval shall not be granted by the Planning Commission until all required approvals are obtained from the Susquehanna County Conservation District.

607 Water Supply and Sewage Disposal

607.1 General Standards

- A. All subdivisions and land developments shall be served by an adequate water supply and sewage disposal system; and the developer shall provide evidence documenting said adequacy.
- B. In the case where a community water supply or community sewage disposal system is proposed, the applicant shall present evidence to the Planning Commission that the subdivision or development is to be supplied by a certificated public utility, a bona fide cooperative association of lot owners, or by a municipal corporation, authority or utility. A copy of a Certificate of Public Convenience from the Pennsylvania Public Utility Commission or an application for such certificate, a cooperative agreement or a commitment or agreement to serve the area in question, whichever is appropriate, shall be acceptable evidence.
- C. In the case where a community water supply or community sewage disposal system is proposed, one (1) copy of all correspondence, supporting documentation, applications for permits and certificates for operation submitted to the Pennsylvania Department of Environmental Protection and/or the Pennsylvania Public Utilities Commission (PA PUC) for the right to provide such services shall be forwarded to the Planning Commission as a part of the public record. One (1) copy of the permit and/or certificate of convenience issued by the Pennsylvania Department of Environmental Protection and/or the Pennsylvania Public Utilities Commission authorizing such services shall be forwarded upon receipt to the Planning Commission as a part of the public record.
- D. In the case of utilization of a publicly owned or other existing community water supply and/or sewage disposal system the developer shall submit at the preliminary stage a letter from the operator of such utility indicating the utility owner's willingness to supply service to the development and including a verification of the adequacy of the utility system to serve the proposed development. At the final approval stage an executed agreement with the service supplier shall be submitted.
- E. All required Certificates of Convenience, approvals and permits shall be obtained by the developer and/or the utility owner as a condition of preliminary approval and shall be submitted with the final plan application.
- F. All water supply and sewage disposal systems shall be designed and certified by a Registered Professional Engineer or other individual otherwise certified for such design work; and all systems shall be designed in accord with all applicable federal, state and local standards.
- G. All sewage disposal systems shall be consistent with the local municipal Sewage Facilities Plan.

607.2 On-Site Water Supply

All on-site water supply systems shall comply with the requirements of Pennsylvania Department of Environmental Protection and/or applicable local municipal or County Ordinances. The requirement for the installation of on-lot wells shall be noted on the development plan.

607.3 Shared Water Supply

Shared water supply systems shall only be permitted to serve a minor (residential) land development or a non-residential land development and the standards in this §607.3 shall apply. In the case of non-residential land developments, the Planning Commission may, based on the nature and scale of development, apply any or all of the standards contained in §607.4 of this Ordinance.

607.3.1 Well Capacity - The capacity of the well shall be certified by a licensed well driller to be adequate for the use proposed.

607.3.2 Water Distribution System

- A. The system design shall follow good engineering practices and the requirements of the Pennsylvania Department of Environmental Protection. The distribution system shall be designed and sized to provide the design flows at a minimum pressure of fifty (50) pounds per square inch at curb stops.
- B. Pipe classes shall be consistent with design pressures.
- C. Before being placed into service the system must be tested and disinfected by procedures established by Department of Environmental Protection.
- D. Service connections shall be a minimum of three-fourths (3/4) inch diameter.

607.3.3 Other Standards - All shared water supply systems shall comply with the requirements of Pennsylvania Department of Environmental Protection and/or applicable local municipal or County Ordinances.

607.4 Community Water Supply

607.4.1 Public Supply - If a community water system is proposed and an existing public or private community water supply exists within one-thousand (1,000) feet of the proposed development, said development shall connect to such system in accord with the requirements of the system owner, the PA PUC and the PA DEP; provided, the owner of the existing system agrees to such connection.

607.4.2 Project Supply - If an approved public water supply is not accessible and water is to be furnished on a project basis, the subdivider shall, upon submission of the subdivision or land development plan, submit written evidence that he has complied with all municipal, County and State regulations, and that the proposed system to be installed meets the requirements of the PA PUC, PA DEP, and any other applicable regulations.

607.4.3 Deep Well Source

- A. Wells shall be sited, drilled and tested under the direct supervision of a Registered Professional Engineer and/or a Professional Ground Water Geologist.
 - B. Wells shall be located away from potential source of pollution on a reserved parcel of not less than five thousand (5,000) square feet in size.
 - C. The capacity of the well(s), as certified by a professional engineer or ground water geologist in accord with 607.4.3,A shall be sufficient to produce at least one hundred ten (110) gallons per capita per day and/or four hundred (400) gallons per day for each residential dwelling unit to be served. Adequate capacity of any well(s) to service industrial or commercial establishments shall be documented by the Applicant to the satisfaction of the Planning Commission and the Planning Commission Engineer.
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- D. Wells shall be pump tested utilizing a controlled step-draw down test to establish the specific capacity of each well and to establish a long term pumping rate. The well shall be pumped at the above determined long term pumping rate for a sufficient period of time for stabilization to occur and the recovery noted. In no case will a pumping rate greater than the recharge rate be allowed.
- E. Well construction shall be consistent with generally accepted practice and the guidelines of the PA Department of Environmental Protection.
- F. Documentation of the effect of the projected area-wide draw down of the water table may be required by the Planning Commission if the anticipated pumping of ground water warrants such documentation.

607.4.4 Water Distribution System

- A. The system design shall follow good engineering practice and the requirements of the PA DEP and/or the Public Utilities Commission. The distribution system shall be designed and sized to provide the design flows at a minimum pressure of twenty-five (25) pounds per square inch at curb stops.
- B. Pipe classes shall be consistent with design pressures.
- C. Before being placed into service, the system must be tested and disinfected by procedures established by Department of Environmental Protection.
- D. The proposed utility shall provide for adequate flow of water for the subdivision supplied, by interconnecting two or more wells or by providing storage for a minimum or one (1) day's demand.
- E. Service connections shall be a minimum of three-fourths (3/4) inch diameter.

607.4.5 Flow Rates

- A. Distribution systems serving residential developments shall provide for a minimum flow rate of at least one and one-fourth (1.25) gallons per minute for each lot or proposed dwelling unit for domestic purposes only.
- B. Distribution systems serving commercial or industrial developments shall provide for a minimum flow rate of at least twenty-five (25) times the projected average daily flow rate.
- C. Distribution systems intended to provide for fire flow shall provide for minimum flow rates in accordance with the standards of the National Fire Underwriters.

607.5 On-Lot Sewage Disposal

- A. Standards - All on-site sewage disposal systems shall comply with the applicable PA DEP standards, the local municipal Sewage Facilities Ordinance and all other applicable standards.
- B. Site Suitability - All residential lots in developments proposing the use of on-site sewage disposal shall contain an area suitable for such a disposal system, with such areas indicated on the plan.

607.6 Community Sewage Disposal System

In addition to the following standards, the local municipal Sewage Facilities Ordinance shall govern all community sewage disposal facilities, as defined by the said Ordinance.

607.6.1 Public Sewage Disposal - If a community sewage disposal system is proposed and an existing public sewage disposal system or an existing private sewage disposal system identified as a "regional system" by the local municipal Sewage Facilities Plan" is within one-thousand (1,000) feet of the proposed development, said development shall connect to such system in accord with the requirements of the local municipal Sewage Facilities Plan, the system owner, the PA PUC and the PA DEP.

607.6.2 Project System - If an approved sewage disposal system is not accessible and sewage disposal is to be furnished on a project basis, the subdivider shall, upon submission of the subdivision or land development plan, submit written evidence that he has complied with all local municipal, County, and State regulations, and that the proposed system to be installed meets the requirements of the Pennsylvania Department of Environmental Protection and any other applicable regulations.

- A. All community sewage disposal systems shall be consistent with the sewage feasibility studies and plans of the local municipality and the County.
- B. All sewage collection and treatment facilities shall be designed and constructed in accordance with regulations and requirements of PA DEP and applicable local municipal and County Ordinances.
- C. All community sewage disposal systems shall be designed and constructed to provide adequate capacity for the ultimate flow of the subject development. The Planning Commission may also require that any community sewage disposal system be designed and constructed to provide for service to adjacent or nearby properties. In such instances, developers shall be financially responsible solely for those costs associated with their individual development.
- D. All community sewage disposal systems using subsurface or land application of sewage effluent shall be designed and constructed in accord with applicable PA DEP standards; and, a suitable replacement area for the effluent disposal area shall be provided.

608 Utilities

All utility lines required to service any major subdivision shall be installed underground within the street right-of-way or easements as shown on the approved plan, and shall be planned in cooperation with the respective utility companies and shall comply with all Pennsylvania Public Utility Commission requirements. A letter shall accompany the subdivision or land development plan stating that the utility plan has been reviewed by the applicable utility company and that such plan is approved and that service will be available. Underground installation shall be completed prior to street paving and gutter, curbing, and sidewalk installation.

609 Reserved

610 Reserved

611 Reserved

612 Wetlands

The intent of this §612 is not to supersede state or federal wetlands regulations, or to overrule any determination made by state or federal agencies. Instead, it is the intent of this §612 to further facilitate the actual identification and delineation of wetlands where such identification and delineation is warranted for particular development projects. In general, wetlands shall be shown on the plan as shown on USGS topographic maps and the Wetlands Inventory Maps published by the US Fish and Wildlife Service. A detailed, site-specific wetland delineation made by an individual or firm deemed

qualified by the Planning Commission may be required. A certification of the delineation by the US Fish and Wildlife Service, US Army Corps of Engineers and/or PA DEP may also be required.

Said delineation shall be conducted by a person and/or firm meeting the approval of the Planning Commission, as the case may be; or a certification from the appropriate state and/or federal agency may be required by the Planning Commission. If any state or federal permit is required as part of the development process, said permit shall be submitted to the Planning Commission along with the subdivision or land development application.

613 Seasonal Development

All cottages and hunting camp developments and campsites, campgrounds, and recreational vehicle park developments where lots are sold, leased or rented, or other such seasonal-recreational, recreational, or seasonal developments shall be considered residential subdivisions and shall be subject to standards as specified in Article VI applicable to residential subdivisions including those standards for minimum lot sizes. Campground and recreational vehicle park developments where campers are licensees shall be subject to the regulations set forth in Article X.