

ARTICLE V - STANDARDS FOR DESIGN AND REQUIRED IMPROVEMENTS

Section 5.1 PURPOSES AND GENERAL PROVISIONS

- 5.1.1 Contents of article.** This article includes specific standards for the design of subdivisions and land developments and requirements for improvements. Minimum standards and requirements are specified for each element of design or improvement. General goals or statements of desired outcomes are listed in Section 5.2. The Township will consider alternatives to specific standards and requirements specified in Section 5.3 and following sections if the applicant demonstrates that an alternative will achieve the desired outcome to a higher degree or will produce more desirable results than application of the specified standard.
- 5.1.2 Site analysis.** The design of a subdivision or land development shall be based upon an analysis of existing conditions of the site, which includes consideration of the site's natural and man-made features and of the opportunities and constraints for development that are associated with these features. The site analysis shall also consider the relationship of the site to surrounding developed and undeveloped areas and to applicable municipal, county, and regional plans. The required project narrative should summarize how the analysis of existing conditions has influenced the design of the subdivision or land development.
- 5.1.3 Alternative development plan.** Before considering requests for waivers or modifications of standards or requirements contained in this article that will reduce the attainment of the goals listed in Section 5.2, the Township may require the applicant to prepare alternative development plans which more nearly meet the requirements of this ordinance. Such alternatives may be required to include the clustering of development on portions of the site which are not constrained by the environmental protection provisions of this ordinance and may include a reduction in the otherwise allowable density or intensity of development on the total site. The original plan shall be approved only if the applicant demonstrates to the satisfaction of the Township that an alternative plan is not practical or feasible.
- 5.1.4 Regulations of other jurisdictions.** It shall be the responsibility of the applicant for approval of a subdivision or land development to obtain all required permits and approvals from other jurisdictions or agencies. No application shall be finally approved by the Township or recorded until all required permits and approvals have been obtained, unless the plan for recording includes a notation that specified permits will be required prior to issuance of construction permits.

Section 5.2 GENERAL GOALS FOR DESIGN AND DEVELOPMENT

Subdivisions and land developments shall be designed to achieve the major goals or outcomes that are listed in this section.

5.2.1

Minimize damage to the environment. All subdivisions and land developments shall be designed to minimize environmental damage by carefully fitting the subdivision or development to the natural environment of the site.

- A. **Minimize grading.** The layout of roads and building sites or lots shall be accomplished with as little disturbance of the land as possible. Roads should generally follow contours and minimize both cutting and filling. Building sites should utilize naturally level areas. Clustering of development in more level areas is recommended as an alternative to mass grading of sites.
- B. **Protect steep slopes.** Wooded hillsides are important environmental and aesthetic resources of Allegheny County. Development shall be located to avoid disturbance of steeply sloped areas and to preserve the visual character of wooded hillsides.
- C. **Protect watercourses and wetlands.** Watercourses are the county's natural drainage ways for the conveyance of surface waters, including runoff. Streams, land bordering streams, and wetlands provide habitat for aquatic and terrestrial plants and animals and may function as wildlife corridors. The County's larger streams and rivers are primary elements of the visual character of the county and are also important resources for recreation and commerce. Development shall be designed to preserve the county's watercourses and wetlands so that they can continue to serve all of these functions.
- D. **Preserve mature trees and woodland.** The excessive cutting of trees and clearance of woodlands in conjunction with the subdivision and development of land causes soil erosion, increased runoff, loss of habitat, and diminution of one of the County's most significant visual resources: the wooded hillsides which are so prominent throughout the area. Except for regulated commercial timbering operations, the cutting of mature trees and clearance of woodland should be allowed only after final approval of a plan for subdivision or land development and then only to the extent required for the construction of roads, utilities, and buildings. Total clearance of vegetation and mass grading of development sites shall be prohibited.
- E. **Protect other identified natural resources.** Special care must be taken in the design and construction of subdivisions and land developments to protect habitats in which rare or endangered plants or animals are found and other ecologically important sites.
- F. **Protect historic, architectural, and archeological resources.** Sites containing structures of historic or architectural significance should be designed to preserve and reuse such structures. Archeological resources must be protected in accordance with applicable state regulations.

- G. Protect the quality of the county's air and water. All land development shall comply fully with federal, state and county laws and regulations concerning air and water pollution.

5.2.2

Avoid hazardous development. Where hazardous or potentially hazardous features are present on proposed development sites, the design of subdivisions and land developments shall consider such features. Extra precautions shall be required to ensure that development will be safe and that the public health and welfare will be protected. Development shall not be approved unless safety is ensured.

- A. Landslide-prone areas. In areas where soils or underlying geology may be unstable, geotechnical investigation shall be required to ensure the safety of any proposed disturbance.
- B. Undermined areas. In areas where mining has occurred in the past, subsidence risk assessments may be required to establish that proposed development will be safe.
- C. Flood-prone areas. In undeveloped areas of the county, construction in flood-prone areas should be avoided entirely. In areas, where flood plains have been developed in the past, new development shall be in accordance with municipal flood plain regulations, enacted in accordance with the Pennsylvania Flood Plain Management Act.
- D. Contaminated sites. In order to protect the public health, no subdivision or development of land in areas which may have been contaminated by former industrial or other uses shall be approved unless the site has been made safe for development. Development of contaminated sites shall be limited to uses which will not pose health risks for site occupants.
- E. Areas exposed to aircraft noise or hazards. Subdivisions and land developments in areas of the county where airport-related noise is high or where aircraft landings and takeoffs can be endangered by vertical obstructions or other hazards shall ensure that development does not reduce the ability of the airport to function safely and efficiently. Conversely, the safety of development and health and welfare of occupants should not be compromised because of proximity to airports.

5.2.3

The general layout of subdivisions and land development should respect the natural resources of the site, the character of the surrounding area, and be suitable for the intended uses. The design of blocks and lots shall comply with the zoning requirements of the municipality and shall provide suitable sites for buildings. The design of subdivisions and land development shall consider the topography and other natural features of the site, requirements for safe and convenient pedestrian and vehicular circulation, and the character of surrounding development. Subdivisions and land developments should be compatible with municipal, county, and regional comprehensive plans and components thereof.

5.2.4 Land development shall include landscaping which is designed to improve community appearance, to contribute to the environmental quality and livability of new development areas, and to mitigate the negative impacts of development upon other areas of the community. Uses and structures shall be sited to minimize adverse impacts from or upon adjoining uses. Landscaping and bufferyards shall be designed to reduce unavoidable impacts and to augment the natural features of the site.

5.2.5 Provide a full range of improvements in subdivisions and land developments as required to ensure the public health, safety, and welfare and the creation of desirable communities for living, working, and recreation.

- A. Water. A safe and sufficient supply of potable water shall be provided for every subdivision and land development. New development shall not degrade the quality of potable water supplies.
- B. Sanitary sewage facilities shall be provided in accordance with applicable regulations of the commonwealth and county.
- C. Storm water management. Every subdivision and land development shall manage storm water flows in accordance with the Pennsylvania Storm Water Management Act. All development located in watersheds for which watershed storm water management plans have been adopted shall comply with all requirements of the watershed plan.
- D. Other public utilities shall be provided or available to every subdivision and land development, including electricity, natural gas, telephone, and, where accessible, cable TV.
- E. Public and community services. All new development shall be provided with a full range of community services and facilities, such as public safety and emergency services, schools, libraries, and recreation.
- F. Transportation facilities. The design and construction of subdivisions and land developments shall include transportation facilities that will provide access to all lots, buildings, and to open spaces intended for use by people. Transportation facilities that are developed in subdivisions and land developments shall be designed as parts of the larger system of transportation facilities which serve the community. Transportation facilities shall include streets, public transportation, sidewalks, bikeways, and multi-purpose trails for non-motorized transportation.

Section 5.3 GRADING

5.3.1 **Purpose.** The purpose of these standards is to ensure public health, safety, and welfare and to protect property by preventing rock and soil slippage, loss and degradation of natural drainageways, increased soil erosion and sedimentation, and other soil and water management related problems.

5.3.2 Application. If the municipality in which a subdivision or land development is located has enacted a grading ordinance, the municipal standards shall apply. If a more stringent standard is contained in another section of this ordinance, e.g., Section 5.4, 5.5, or 5.10, the stricter standard shall govern.

5.3.3 General standards for grading

- A. No grading, stripping of topsoil, excavation, or any other land disturbance activity which changes the existing contours of the land; and no clearing, grubbing, or any other activity which results in the removal of existing vegetation (other than the removal of dead or diseased plant material) shall be permitted before the final land development plan has been approved.
- B. Grading shall be limited to the minimum area necessary to provide for buildings, roads, parking areas, utilities, and other facilities shown on the approved land development plan.
- C. Grading in areas susceptible to landslides, subsidence, or flooding, on steep slopes, or in wetlands shall comply with the additional provisions of Sections 5.4, 5.5, and 5.10 hereunder.
- D. A soil erosion and sedimentation pollution control plan shall be prepared in accordance with the provisions of Title 25, Environmental Protection, Chapter 102, Erosion Control; and, where required, a finding of adequacy shall be issued by the Allegheny County Conservation District (ACCD) prior to the commencement of any grading or other regulated earth-disturbance activity. Where submission of the plan to the ACCD is not required by state or federal regulations (generally for sites less than 5 acres), the Township may require that the plan be submitted to the ACCD for review.
- E. Where required by the National Pollution Discharge Elimination System (NPDES) and/or state regulations, a permit shall be obtained prior to commencement of grading:
 - 1. For development sites between 5 and 25 acres in size, which are not located in a special protection watershed and which are not ineligible for other reasons specified in DEP regulations, DEP General Permit PAG-2 may be used. Issuance of this permit has been delegated to the ACCD.
 - 2. For development sites exceeding 25 acres of disturbance, that are not divided into parcels pursuant to Title 25, PA Code, SS 102.31(a)(4), individual NPDES permits shall be obtained. Individual NPDES permits are also required for smaller sites that are located in special protection watersheds or are otherwise ineligible for the general permit, including sites within the Turtle Creek Watershed exceeding 12 acres of disturbance. Processing

of individual NPDES permits has been delegated to the ACCD. Permits are issued by the DEP Southwest Regional Office.

- F. The applicant shall be responsible for protecting adjacent and downstream properties from any damage which occurs as a result of earth disturbance on the development site. Such protection shall include cleaning up and restoring to their original condition any adjacent and downstream properties adversely affected by silt, debris, flooding, or other damage resulting from the earth disturbance activity.
- G. The top and bottom edges of cut or fill slopes shall be kept back from property or right-of-way lines three feet plus one-fifth the height of the cut or fill, which total distance need not exceed ten feet.
- H. Topsoil stripped from the site in preparation for earth-moving activities shall be stock piled and replaced on the site over all regraded, non-developed areas, at a minimum depth of four inches.
- I. Fill areas shall be prepared by removing organic material such as vegetation and rubbish, and any other material determined by the engineer to prevent proper compaction and stability.
- J. Proposed grading shall be accomplished so that post-development storm water runoff flows cause no harm to abutting properties.
- K. Maximum steepness of graded slopes shall be no greater than two horizontal to one vertical (2:1) except under the following conditions:
 - 1. Where the height of a proposed slope will not exceed ten feet, then a maximum slope steepness of 1:1 may be allowed where soil conditions permit and doing so will help to preserve existing vegetation or other significant natural features. The cut or fill shall be located so that a line having a slope of two horizontal to one vertical and passing through any portion of the slope face will be entirely inside the property lines of the proposed development.
 - 2. Where a retaining wall, designed and sealed by a registered professional engineer, is constructed to support the face of the slope.
- L. Excavation adjacent to any building foundation walls, footings, or structures shall not extend beyond the angle of repose or natural slope of the soil under the nearest point of same unless the footings, foundations, or structures have been sufficiently underpinned or otherwise protected against settlement.
- M. Graded slopes of 20 or more feet in height shall be benched every 12 feet. Benches shall have a minimum width of six feet and a maximum slope of five percent. Benches shall be planted with trees at a rate of one tree per

30 lineal feet of bench. Trees shall have a minimum caliper of 1.5 inches DBH. Species of trees may be mixed, but shall consist of hardy native species. New plantings shall be inspected yearly; and all dead, diseased, or damaged trees shall be replaced.

Section 5.4 PROTECTION OF STEEP SLOPES

5.4.1 Limitations on disturbance. The following standards shall apply to all grading and disturbance of land with slopes of 25 percent or greater. If any of the delineated steep slope areas include soils or geologic features which indicate possible instability, the additional standards contained in Section 5.10.1 shall apply.

- A. Slopes between 40 and 60 percent. No more than 40 percent of slope areas with existing grades between 40 and 60 percent shall be stripped of vegetation or disturbed through grading. Grading and clearing for roads on these slopes shall be limited to the area of land necessary to accommodate the cartway and to provide a berm on the downhill side of the road. Wherever possible, roads should follow the contours of the land.
- B. Slopes exceeding 40 percent. No development or disturbance shall be allowed on slopes exceeding 40 percent. Very limited disturbance for utilities may be allowed if the applicant demonstrates that no feasible alternative location exists.

Section 5.5 PROTECTION OF WATERCOURSES AND WETLANDS

5.5.1 Purpose. The regulations contained in this section are intended to promote the public health, safety, and welfare by ensuring that watercourses and wetlands will be preserved in their natural condition so that they may continue to convey and store water, provide habitat for flora and fauna, and serve as recreational and aesthetic resources.

5.5.2 Setback or open space easement required. No grading, cutting, filling, removal of vegetation, or other disturbance of land shall be permitted within 50 feet from the top of the bank of any watercourse or from the edge of a wetland. In addition, land development involving the construction of buildings shall not be permitted within 100 feet of the top of the bank of the Ohio river.

- A. Minor earth disturbance and construction within the area of the required setback or easement, required for development in other areas of the site, may be allowed in accordance with all regulations of the Department of Environmental Protection and municipal flood plain regulations, where applicable.
- B. Construction may also be allowed within the required setback area of rivers to enable the development of uses that require proximity or access to the river, in accordance with applicable federal, DEP, and municipal regulations.

- C. In larger subdivisions and land developments, the required setback area should be integrated into a system of public or common open space. In smaller subdivisions and land developments the preservation of these open space areas shall be ensured through recorded easements, deed restrictions, or other means acceptable to the Township.
- D. Where the required setback or easement would render a site unusable under the municipality's zoning regulations because of the limited size or dimensions of a parcel of land prior to its subdivision, the Township may reduce the depth of the setback to not less than 50 feet along a river and to not less than 25 feet along other watercourses or wetland edges. Any reduction in depth of setback which may be allowed by the Township does not supersede any requirement for a greater setback imposed by federal or state regulations.

5.5.3 Alteration of drainage. When a proposed subdivision or land development encompasses or adjoins a watercourse or wetland, the design of the proposed development shall ensure that site drainage is not altered in ways that will reduce the ability of any watercourse or wetland to support the vegetation and animal life that characterized the area before development.

Section 5.6 PROTECTION OF TREES AND WOODLANDS

5.6.1 Woodland preservation. Not more than 75 percent (75%) of the total area of mature or maturing woodlands on a development site shall be removed in conjunction with a subdivision or land development. The remaining woodlands shall be protected as open space. No area of any existing woodland shall be removed prior to the granting of final approval of the proposed subdivision or land development.

- A. Priority in woodland preservation shall be given to woodlands in 100-year flood plains, wetlands, stream valley corridors, steep slopes and landslide-prone areas.
- B. Trees to be preserved shall be protected during construction. The critical root zone shall be protected by securely staked fencing with a minimum height of 36 inches. No storage or placement of any soil or construction materials, including construction wastes, shall occur within the fenced area. Cables, ropes, signs, and fencing shall not be placed on protected trees.

Section 5.7 PROTECTION OF SIGNIFICANT NATURAL AREAS

5.7.1 Allegheny County Natural Heritage Inventory. Every subdivision and land development site plan shall consider, protect, and, to the maximum extent feasible, ensure the preservation of the natural areas and resources that are identified in the

- 5.7.2 **Protected resources.** Where a proposed subdivision or land development includes an identified natural feature, such as a rare or endangered species, which is regulated by municipal, state, or federal law, the applicant shall provide evidence of compliance with any applicable regulation.

Section 5.8 PRESERVATION OF HISTORIC, ARCHITECTURAL, AND ARCHEOLOGICAL RESOURCES

- 5.8.1 **Identification of resources.** Structures and site features which have known historic or architectural significance and locations of known or probable archeological sites shall be identified on the existing conditions map and described in the preliminary application materials.

- 5.8.2 **Notification to PHMC.** Where the presence of such features is known or suspected, or where required by DEP or another permitting agency, the applicant shall notify the Pennsylvania and Historical Museum Commission of the proposed subdivision or land development and request a determination concerning the presence of significant resources from the PHMC.

- A. A copy of the notification to the PHMC shall be submitted with the application for preliminary approval.
- B. The Township shall condition preliminary approval upon the applicant's receipt from the PHMC of a determination that:
 - 1. No significant resources are present on the site or that the proposed subdivision or land development will not adversely impact resources that may be present; or
 - 2. Significant resources are present or likely to be present on the site; together with an approved plan or program for the mitigation of any adverse impacts of the proposed subdivision or land development upon the historic or archeological resource.
- C. A copy of the required determination by the PHMC shall be submitted with an application for final approval, and no subdivision or land development requiring such a determination shall be finally approved without it.

Section 5.9 PROTECTION OF AIR AND WATER QUALITY

- 5.9.1 **Air quality.** An application for preliminary approval of a nonresidential land development shall include a written certification from the Allegheny County Health Department that the Health Department has been notified of the proposed development and that the applicant has been apprised in writing of the county air .

pollution control requirements. If a preliminary plan is not required, the certification shall be submitted with the application for final approval.

5.9.2 Water quality. All subdivisions and land developments shall comply with all laws and regulations of the federal government, commonwealth of Pennsylvania, and county of Allegheny concerning water quality.

- A. All earth disturbance activity shall be carried out in accordance with a soil erosion and sedimentation pollution control plan prepared in accordance with regulations of the Department of Environmental Protection, which has been submitted to and determined to be adequate by the Allegheny County Conservation District.
- B. Every subdivision and land development shall be supplied with sanitary sewage facilities in accordance with all requirements of the Department of Environmental Protection and the Allegheny County Health Department. (See Section 5.14.)

Section 5.10 AVOIDANCE OF HAZARDOUS DEVELOPMENT

5.10.1 Landslide-prone areas. No grading, removal of vegetation, construction, or other disturbance shall be permitted on soils that are classified as slide-prone or unstable in the Soil Survey of Allegheny County, on any land that is delineated as unstable on the Landslide Susceptibility Map of Allegheny County, or on any other areas of a proposed development site that exhibit signs of instability, except in accordance with the provisions of this subsection.

- A. Unstable areas of a site may be set aside as common or private open space.
- B. Limited disturbance of unstable areas may be allowed if the applicant demonstrates to the satisfaction of the Township that the proposed disturbance will not cause sliding or movement or any unsafe condition either on the development site or on any property adjacent to it.
- C. Evidence of the safety of any proposed disturbance shall require site investigation and certification in writing by a registered soils engineer, engineering geologist, or professional engineer with experience in soils engineering that the proposed activity will not create or exacerbate unsafe conditions.

5.10.2 Undermined areas. No land development involving construction of buildings and no subdivision of land intended to create lots for building construction shall be approved on a site which has been undermined at shallow depths or in an area where there is evidence of past subsidence unless the applicant demonstrates that the proposed subdivision or land development will be safe and will not create hazards for adjacent properties. Evidence of safety shall be one of the following:

- A. If the site or any area of the site has been undermined and has 100 feet or less of overburden, evidence of the safety of the proposed subdivision or land development shall require site investigation and certification in writing by a professional engineer, experienced in subsidence risk assessment, that the proposed development will be safe.
- B. If the site has been undermined at a depth exceeding 100 feet of overburden, a subsidence risk assessment by a professional engineer and written certification that the proposed subdivision or land development will be safe may be required if the Department, municipality, or applicant has knowledge of any past occurrences of subsidence in the general vicinity of the site.

5.10.3 Flood-prone areas. To the maximum extent feasible, land development should not be undertaken in flood-prone areas.

- A. Portions of proposed development sites that are susceptible to flooding should be preserved as open space and for uses that will not be harmed or cause hazards if exposed to inundation by flood waters.
- B. Construction in the floodway portion of a flood-prone area shall comply with DER regulations.
- C. Where development is necessary in an area delineated as within the 100-year flood plain on a FEMA map, all construction shall comply with municipal flood plain regulations and with the minimum requirements of the PA Department of Community Affairs.

5.10.4 Contaminated sites. The Township shall not approve the subdivision or development of land which is known to contain substances which are classified as hazardous unless the site has been made safe for the proposed development.

- A. A contaminated site shall be considered safe for subdivision or development when a remediation plan has been completed and approved by DEP, subject to the provisions of subsection B hereunder.
- B. If a remediation plan includes limitations on uses or other site restrictions that would not apply to other property in the same zoning district, the Township shall require that the proposed subdivision or land development, including any restrictions on uses or other limitations imposed by the remediation plan, be approved by the municipal governing body.
- C. The subdivision of contaminated land, not including any development or earth disturbance, may be approved prior to remediation if a notation approved by the Township is placed on the recorded plan, which indicates that the site or specified lots within the site contain or may contain hazardous substances.

5.10.5 Areas exposed to aircraft noise or airport-related hazards

- A. Noise-impacted areas. Subdivisions and land developments located in areas which are impacted or projected to be impacted by high levels of aircraft-related noise, as delineated in the most recent airport noise contour maps, shall comply with one of the following two options:
1. Land shall be subdivided or developed only for uses that are compatible with existing and projected noise levels; or
 2. Structures shall be sound-proofed in accordance with standards promulgated by the Allegheny County Department of Aviation.
 3. In addition, a notation shall be placed on a plan of subdivision in a noise-impacted area that lots may be exposed to high levels of airport-related noise.
- B. Airport Hazard Areas. Subdivisions and land developments located in areas where development may create hazards to aircraft because of height, illumination, or other features that may interfere with aircraft takeoffs and landings shall be designed and constructed so as not to create hazards to aircraft.
1. Land development shall comply with applicable municipal airport zoning regulations and with federal and state regulations requiring submission of notice of proposed construction or alteration.
 2. If notice of proposed construction or alteration is required, the applicant shall provide copies of permits or approvals of the proposed land development from the PennDot Bureau of Aviation and the Federal Aviation Administration or a copy of a notification from those agencies that a permit is not required.
 3. Subdivisions and land developments shall comply with any conditions of the PennDot and FAA permits and municipal zoning regulations, including notation of restrictions on the plan for recording where applicable.

Section 5.11 GENERAL LAYOUT OF SUBDIVISIONS AND LAND DEVELOPMENTS

5.11.1 Blocks

- A. Blocks in a residential subdivision shall have a minimum length of 300 feet and a maximum length of 1200 feet.
- B. Blocks along arterial streets shall not be less than 800 feet in length.

- C. Blocks in a residential subdivision shall generally be of sufficient depth to accommodate two tiers of lots, except double or reverse frontage lots are permitted to border an arterial or collector road or where a barrier such as a watercourse or railroad is present.
- D. In blocks exceeding 1000 feet in length, crosswalks and/or interior pedestrian walks may be required to provide for safe and convenient pedestrian access. Such walks shall be located in an easement, close to the center of the block.
- E. Blocks in nonresidential areas may vary from the requirements of this section, according to the nature of the use. The depth and width of such blocks shall be adequate to provide for safe and convenient traffic circulation, off-street parking and loading areas, setbacks, and landscaping, as required by this ordinance and any applicable municipal zoning regulations.

5.11.2 Lots

A. General standards.

- 1. Lots shall be laid out so as to provide buildable areas, accessible driveways, and usable yards and open space areas with the minimum possible disturbance to the site.
- 2. Lots and building sites shall be laid out and buildings shall be sited with consideration given to solar access and to the circulation of air. The arrangement and design of lots, buildable areas, and buildings shall not create or contribute to excessive winds.
- 3. Lots and building sites shall be laid out and buildings sited with consideration given to views and privacy.

B. Specific standards

- 1. Lots shall meet the minimum dimensional and area requirements specified by the municipal zoning ordinance.
- 2. Lots shall be laid out and graded to provide positive drainage away from buildings and water wells.
- 3. In general lots shall abut on public streets. The Township may waive this requirement and permit private streets in commercial or industrial subdivisions or developments or in planned residential developments, with the approval of the municipal governing body.
- 4. Lots which require access to an arterial or collector street shall be avoided. Where lots adjoin arterial or collector streets, access to such lots shall be from service or minor access roads.

5. Lots that have frontage along two or more streets shall provide along each street the minimum front setback required by the municipal zoning regulations.
6. Side lot lines shall be at right angles or radial to street right-of-way lines.
7. Remnant land areas which are not buildable under the municipal zoning regulations shall not be permitted. Such remnants shall be incorporated into existing or proposed lots, or dedicated to public use if acceptable to the municipality.

5.11.3 Other design considerations

- A. Views. The design of a land development shall consider views of the development site, as well as views from the site and through the site.

1. Views of the development site. Uses and structures shall be arranged so that rooftop mechanical equipment, service, loading, and parking areas are not visible from adjacent public areas, streets, or residential areas. The placement of buildings, screening, landscaping, and buffering shall be planned to achieve this objective.
2. Views from the development site. If a development site has scenic qualities, either internally or because scenic features are visible from the site, development shall be planned to preserve those scenic site features and views.
3. Views through the development site. If a development site is located between a public road or other viewing place, such as a park, and a scenic view such as a river or wooded hillside, the design of the development shall preserve visual access through some portion of the site so that people can continue to see the scenic area.

- B. Land development adjacent to rivers. The design of a land development which has river frontage or is across a road or railroad from a river shall, where possible, provide physical and visual access to the riverfront or to the top of the riverbank for residents, occupants, and users of the proposed development.

1. Streets shall be located and designed so that public access to the riverfront is not impeded or blocked.
2. Pedestrian walkways shall be located and designed to enhance public access to the riverfront.

3. Where allowed by zoning, land uses in developments along a river shall be arranged so that uses which are public or open to the public are nearest the river.

Section 5.12 LANDSCAPING

- 5.12.1 **Purpose.** The standards contained in this section are intended to promote public health, safety, and welfare by filtering noise, softening or diverting light and glare, modifying climatic conditions such as wind and heat, reducing storm water run-off and air pollution, and controlling traffic hazards. The standards contained in this section are also intended to increase the value to the community from new developments by recognizing the role that landscaping plays in overall community appearance and livability.
- 5.12.2 **General Requirements.** In general, all areas of a site proposed for development shall be landscaped with trees, shrubs, groundcovers, grasses, and other herbaceous plants, except for those areas which are occupied by buildings and other structures and facilities, or are paved.
- 5.12.3 **Landscaping Defined.** Landscaping shall be understood to include the provision of street trees, bufferyards, replacement woodlands, and other new planted areas as well as the provision of undisturbed ground, where such is fully integrated into the design and layout of the subdivision or land development and preserves existing natural features of the site.
- 5.12.4 **Street Trees.** All new residential and nonresidential developments shall provide street trees, in accordance with the following standards:
 - A. Street trees shall be provided along the entire length of the street right-of-way and on both sides of the street if the street lies within the development.
 - B. Street trees in residential subdivisions shall be located within five feet of the right-of-way and in nonresidential developments between the right-of-way and the building line.
 - C. Street trees shall be located to enable the maintenance of utilities, required sight distances, and visibility of street and traffic signs.
 - D. The species chosen shall be appropriate to the location. Factors such as microclimate, soils, habit of growth, salt and disease tolerance, proximity of sidewalks, overhead utility lines, and social conditions (likelihood of soil compaction, damage from air pollution, dogs, deer, etc.) shall be considered.

E. Street trees shall have the following minimum calipers at the time of planting:

1. Large trees, defined as those trees whose ultimate height will exceed 40 feet, shall have a minimum caliper of 2.5 to 3.0 inches DBH.
2. Medium trees, defined as those trees with an ultimate height of 25 to 40 feet, shall have a minimum caliper of 2.0 to 2.5 inches DBH.
3. Small trees, defined as those trees whose ultimate height will not exceed 25 feet, shall have a minimum caliper of 1.5 to 2.0 inches DBH.

F. Street trees shall be spaced with regard to the ultimate spread of the fully developed canopy. Spacing requirements are as follows:

1. Large and medium trees shall be spaced at a maximum distance not to exceed the average spread of the fully developed canopy plus five feet.
2. Small trees shall be spaced a maximum distance of 25 feet on-center.

G. New street trees in urban areas shall be protected as necessary by tree grates and/or permanent fencing.

H. Mature trees, woodlands, or other high-quality existing vegetation which remains undisturbed adjacent to the street right-of-way may be used in place of or in conjunction with the requirements of this section. Where existing vegetation is to be used in place of new street trees, the existing vegetation shall be protected by an easement or other form of legal agreement.

5.12.5 **Landscaping of parking lots.** All new parking areas that have five or more parking spaces, or any existing parking area that will be expanded by five or more parking spaces, shall be landscaped in accordance with the following provisions:

A. Perimeter landscaping. Where the parking area is adjacent to any public street, walk, right-of-way, or neighboring properties, the perimeter of the parking lot shall be landscaped. Such landscaping shall be in addition to any required bufferyard or street trees and shall be provided in accordance with the following criteria:

1. The landscaped area shall be at least ten feet wide.
2. The landscaped area shall be planted with at least one large or medium tree, or two small trees, per five adjacent parking spaces, and sufficient shrubs to form a hedge or screen. The height of hedges and screens at the time of planting shall not be less than 2.5 feet.

3. The caliper and spacing of all new trees shall be as in Section 512.4.E and F above.
4. Masonry walls, fencing, berms, or a combination thereof may also be used. Walls, fences, and berms adjacent to neighboring properties shall have a minimum height of 3.5 feet. The height of walls, fences, berms, and hedges adjacent to public streets, walks, and right-of-ways may be reduced in areas where public safety is a concern. All berms shall have a maximum slope of 33 percent, and shall be completely covered with shrubs, grasses, or other plant material. Walls or solid fencing shall be planted with at least one shrub or vine per ten lineal feet of wall. Non-solid fencing shall be planted with at least three shrubs or vines per 12 lineal feet.
5. Mature trees, woodlands, or other high-quality existing vegetation which remains undisturbed between the parking area and the right-of-way or adjoining properties may be used to satisfy the requirements of this section. New shrubs or trees may be added as needed to help provide an effective screen.

B. Landscaping in interior areas. Landscaping in the interior of parking areas shall be designed to provide visual and climatic relief from large expanses of paving, and to channelize and define areas for safe pedestrian and vehicular circulation.

1. At least five percent of the total area of any parking lot containing thirty spaces or less shall be landscaped, and at least seven percent of any parking lot containing more than 30 parking spaces shall be landscaped.
2. At least one large tree and three shrubs, or one medium tree, one small tree, and three shrubs shall be planted per ten parking spaces.
3. The caliper of all new trees shall be as in Section 5.12.4 E. above.
4. Trees required in this section shall be planted in protected areas such as along walkways, or within curbed islands located between rows of parking spaces, at the ends of bays, or between parking stalls.
5. Curbed landscaped islands shall have a minimum width of nine feet, exclusive of curbing.

5.12.6 Bufferyards

- A. Purpose. In addition to the yards which municipal zoning ordinances require on all or most lots, additional landscaped open space, or bufferyards, may be needed to provide greater separation where disparate or incompatible land uses are located on adjacent sites. Careful site planning can minimize the need for constructed bufferyards: uses should be arranged to avoid locating incompatible uses in close proximity; natural topographic and vegetative features of a development site should be used to separate uses which would otherwise impact negatively on each other.

This subsection includes requirements for bufferyards that apply where land uses with differing visual, functional, and operational characteristics are located in close proximity. These situations are most likely to arise within multi-use land developments, on development sites that are located at the edges of zoning districts, and on development sites bordering major highways, railroads, and public transit lines.

- B. Application. If the zoning ordinance of the municipality in which a proposed subdivision or land development is located contains standards for bufferyards, the municipal standards shall apply. If the municipality has no applicable regulations, the standards contained in this subsection shall apply.
- C. Calculation of bufferyard requirement. The type of bufferyard and the extent of planting or other screening that must be provided within it shall be a function of the difference or incompatibility between adjacent land uses.
1. Land Use Compatibility classes. The magnitude of incompatibility shall be determined in accordance with Table V-1, which categorizes land uses into six compatibility classes. Uses within each class are assumed to be similar in visual, functional, and operational characteristics and require no separation beyond yards required by zoning and landscaping required by other subsections of this section. Requirements for bufferyards, planting, and screening increase as the numerical difference between compatibility classes increases.

**Table V-1
LAND USE COMPATIBILITY CLASSES**

<u>Compatibility Class</u>	<u>Land Uses</u>
1	Single family residential, passive recreation
2	Multi-family residential, townhouses, mobile home parks, primary schools, cultural facilities, public recreation
3	Business, professional, and government offices; small-scale neighborhood commercial
4	Hotel, motel, conference center; commercial recreation; general commercial; office park, secondary schools, government public safety facilities
5	Wholesale, warehousing, construction-related, light industrial, community shopping center, major free-standing retail, government public works
6	Heavy industrial, regional shopping centers, stadiums, expressways and major arterial highways, railroads, transit corridors, transportation terminals

2. Bufferyard types. Table V-2 defines five types of bufferyards, ranging from 10 feet to 70 feet in width, which shall be required to separate land uses in different compatibility classes. The planting and screening component of each bufferyard type is described qualitatively in terms of the result to be achieved, rather than quantitatively.

**Table V-2
BUFFERYARD TYPES**

<u>Bufferyard Type</u>	<u>Description of bufferyard objective</u>	<u>Width (feet)</u>
A	Minor separation, partial visual screening; trees, hedge, 3 - 4 foot fence appropriate	10
B	Moderate separation required; total visual screening; varied landscape materials; hedge, fence as above	20
C	Substantial separation; total visual screening; varied landscape materials; solid fence or berm appropriate	40
D	Major spatial separation, total visual screening plus mitigation of noise, lights, traffic through heavy landscaping, solid fence or berm appropriate	55
E	Maximum spatial separation; total visual screening plus mitigation of traffic, noise, lights, emissions	70

3. Required bufferyard. Table V-3 specifies the bufferyard type which must be provided to separate land uses in different compatibility classes.

Table V-3
REQUIRED BUFFERYARD TYPE

Proposed Use Class	Existing Class of Adjacent Use or Zoning District					
	1	2	3	4	5	6
1	•	A	B	C	D	E
2	A	•	A	B	C	D
3	B	A	•	A	B	C
4	C	B	A	•	A	B
5	D	C	B	A	•	A
6	E	D	C	B	A	•

• Bufferyard not required in same use class

4. Options for flexibility

- a. The Township may permit the provision of a narrower bufferyard in combination with denser planting and/or screening devices if the applicant demonstrates that a narrower bufferyard will provide acceptable mitigation of the effects of heavy traffic, noise, glare, fumes, and other potential impacts and that the proposed plant materials will still be able to thrive if spaced more closely.
 - b. The Township will also consider alternatives to densely planted linear strips if the applicant demonstrates that another design will function as effectively to mitigate the negative impacts of adjoining uses upon each other.
- D. Required plantings. Bufferyards shall be planted with a mix of hardy native trees, shrubs, grasses, and perennials. Minimum sizes of trees shall be as specified in Section 5.12.4.E. Quantities and spacing of plant material shall be determined by the density of screening needed. Existing natural features, woodlands, or other high-quality existing vegetation preserved within the bufferyard may be used to satisfy planting requirements.

E. General standards for bufferyards

1. Bufferyards shall be provided by the applicant along the perimeter of the site or lot and shall extend to the property or right-of-way line. Different bufferyards may be required along various portions of the site perimeter if more than one category of land use adjoins the site.
2. Bufferyards shall be maintained by the owner of the property. Bufferyards shall be kept free of trash, debris, and graffiti at all times. Plant materials shall be inspected yearly, and all dead, diseased, and damaged plant materials shall be replaced.
3. No structure or vehicular use areas, buildings, accessory uses, utilities, light standards, etc., shall be permitted in a bufferyard. Access drives are permitted only in bufferyards which separate a proposed development from a street.
4. Bufferyards may be used for passive recreation uses such as pedestrian and bicycle trails, provided that the required separation and screening is maintained.

Section 5.13 WATER SUPPLY

5.13.1 Water supply required. An adequate supply of potable water shall be provided for every building to be used for human occupancy or habitation in a subdivision or land development.

5.13.2 Public water systems

- A. Where an existing public water system is accessible to or can be extended to the proposed development site, the applicant shall provide a complete on-site system with connections to such public water system in conformance with the standards and requirements of DEP and the water supplier whose facilities will serve the development.
- B. Where an existing public water system is not accessible to the proposed development, water may be supplied by a new public water system, subject to the approval of DEP and the Allegheny County Health Department.
- C. In the case of A or B, the applicant shall present evidence to the Township that the subdivision or development is to be supplied with water 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, whichever is appropriate, shall be acceptable evidence.

- D. Hydrants. Subdivisions and land developments to be served by public water systems shall be provided with fire hydrants which meet all specifications of Westview Water Authority and fire company which will serve the development.

5.13.3 Individual water systems

- A. Where public water supply systems, as defined in the Allegheny County Health Department Rules & Regulations, Article XV, "Plumbing and Building Drainage", Chapter 17, are inaccessible and cannot be extended to the proposed development site, the applicant may provide potable water through individual water supplies, designed and constructed in conformance with the standards and requirements of the Health Department.
- B. The use of private water systems, especially where on-lot sewage facilities are present or proposed, must be discouraged for public health reasons and shall not be permitted in any subdivision or land development with more than ten lots unless the applicant provides hydrogeologic data, acceptable to the Health Department, assuring that adequate quantity and quality of water are available.

Section 5.14 SANITARY SEWAGE FACILITIES

- 5.14.1 **Sanitary sewage facilities required.** All subdivisions and land developments, unless excepted in Section 5.14.2 below, shall be provided with sanitary sewage facilities which are in accordance with the municipal sewage facilities plan and which have been approved by the Allegheny County Health Department, the Pennsylvania Department of Environmental Protection, and the municipality, authority, or other public agency responsible for the collection, conveyance, and treatment of sanitary sewage in the municipality in which the development is located.

- A. No application for preliminary approval of a plan of subdivision or land development shall be approved unless a complete Sewage Facilities Planning Module, as required for the proposed development, has been approved by the Pennsylvania Department of Environmental Protection together with a resolution adopting the revision to its sewage facilities plan, if required.
- B. No plat shall be finally approved or recorded until the plans and specifications for sanitary sewage facilities have been approved and permits issued, as required, by the Health Department and/or DEP.
- C. All sanitary sewers and related facilities shall be constructed in accordance with requirements of DEP, the construction standards of the municipality, and the Allegheny County Health Department, Rules and Regulations, Article XV, Plumbing and Building Drainage. See the Kennedy Township Specifications for Sanitary Sewer Pipe Lines and Appurtenances (Appendix 7).

5.14.2 Exceptions

1. Minor plat adjustments. Sewage facilities shall not be required for subdivisions that are classified as plat adjustments in this ordinance, that is, where no new lots are created.
2. Plans with no new development. Subdivisions and land developments in which no development of buildings or improvement of land for purposes requiring sewage facilities is proposed need not provide sanitary sewage facilities, provided a properly executed Form B - Request for Non-Building Waiver (PA DEP Bureau of Water Quality Management form ER-BWQ-349:6/92) has been submitted to and approved by DEP. Where a waiver is approved by DEP, the final plan for recording shall include the notation specified in Appendix 2.7.A.

Section 5.15 STORM WATER MANAGEMENT

5.15.1 Management of runoff required. Every subdivision or land development which will affect storm water runoff characteristics shall include provision for the management of runoff to comply with the Kennedy Township Stormwater Ordinance 293.

5.15.2 Implementation and enforcement of storm water management plans

- A. Where governed by municipal regulations. Implementation of storm water management plans including construction of facilities and provision for inspection, operation, and maintenance of facilities for developments in areas subject to municipal regulations shall comply with the municipal regulations and Appendix 4 of this Ordinance.

5.15.3 Non-structural management techniques preferred. All storm water management plans shall utilize non-structural techniques, where feasible, to reduce the volume and rate of flow of storm water runoff and to minimize the need for detention facilities.

A. These techniques may include:

1. Limitation of land disturbance areas and restriction of development on steep slopes;
2. Maintenance of site vegetation and minimization of impervious surfaces;
3. Measures to increase infiltration of runoff on the site;
4. Flow attenuation measures such as open vegetation swales and natural depressions.

Section 5.16 OTHER UTILITIES AND EASEMENTS

5.16.1 General requirement. Subdivisions and land developments shall be served by gas, electric, cable television, and telephone service distribution systems, where these systems are accessible to the development.

5.16.2 Easements. Easements for public and private utilities shall comply with the requirements of the utility providers and with the following standards.

- A.** Easements shall be adjacent to property lines where possible.
- B.** Minimum widths for utility easements shall be 20 feet for public utilities and 10 feet for private utilities. Utility companies shall use common easements wherever possible.
- C.** The Property Owner may use the surface areas in the various easements for farming, parking and similar purposes; however, no structure of any kind may be erected thereon.

5.16.3 Underground wiring

- A.** Electric, telephone, television, and other communication service lines shall be provided by wiring placed underground within easements or dedicated rights-of-way, installed in accordance with the prevailing standards and practices of the utility or other companies providing such services unless the applicant demonstrates to the Township that physical conditions render such underground installation infeasible.
- B.** If a lot abuts an easements or right-of-way with existing overhead electrical, telephone, television, or other service lines, the lot may utilize the overhead lines, but service connections shall be installed underground. Where a subdivision or land development requires a road widening or service extension which necessitates the replacement or relocation of overhead lines, replacement or relocation shall be underground.
- C.** Where overhead lines are permitted, the placement and alignment of poles shall be designed to lessen the visual impact of overhead lines as follows:
 - 1.** Alignments and pole locations shall be routed to avoid locations along horizons.
 - 2.** Staggered alignments shall be utilized to avoid the need to clear swaths through tree areas.
 - 3.** Trees shall be planted in open areas and at key locations to minimize the view of the poles and lines.
 - 4.** Alignments shall follow rear lot lines.

Section 5.17 TRANSPORTATION FACILITIES

5.17.1 Purpose. The purpose of this section is to ensure that in new subdivisions and land developments streets, paths, and sidewalks provide safe and convenient access and accommodate the safe and efficient movement of pedestrian, bicycle, and automobile traffic.

5.17.2 General Provisions

- A. Every subdivision shall have access to a public street.
- B. All streets shall be named. No new street name shall be permitted which duplicates or which may be confused with an existing street name.
- C. All proposed connections to existing streets shall be approved by the jurisdiction owning the existing streets.
- D. Where traffic or drainage problems are created by the proposed development, it shall be the responsibility of the applicant to improve both sides of the existing affected road or street, or to provide sufficient funds escrowed for use by the municipality for the execution of such public improvements.
- E. Where appropriate, land shall be reserved for the development of future streets or to connect with adjacent undeveloped land. No subdivision or land development shall be approved that will landlock any adjacent parcel.
- F. Where streets continue into abutting municipalities the applicant shall coordinate the design of the street with both municipalities in order to ensure uniform cartway widths, pavement cross-sections, and other public improvements.

5.17.3 General design and arrangement

- A. The arrangement of streets shall conform to the municipal comprehensive plan, official maps, and to municipal, county, and state transportation plans.
- B. Streets shall provide convenient connections to existing streets and shall not adversely affect circulation patterns or the flow of traffic.
- C. Streets shall be designed to preserve the natural features and topography of the development site to the maximum extent feasible.
- D. Local access streets shall be arranged to minimize through traffic, discourage excessive speeds, and provide privacy in residential areas.
- E. Only residential, outdoor recreation, or public service uses may directly access a residential street.

- F. Streets in a proposed development shall connect with existing or reserved streets along the boundary of an adjacent tract unless topography or other existing feature prevents a connection.
- G. Where a proposed development abuts or encompasses an existing or proposed collector or arterial street, marginal access streets, reverse frontage lots with bufferyards, or deep lots with rear service alleys may be required in order to protect properties and provide separation of through and local traffic.

5.17.4 Functional classification of streets

- A. The design of a street system shall include the classification of streets based on their functions and projected traffic as shown in Table A.
 - 1. Each street shall be designed for its entire length to meet the standards for its classification.
 - 2. The classification of each street shall be based upon the projection of traffic volumes ten years after its completion. Traffic volumes shall be calculated in accordance with trip generation rates published in the most recent edition of the Institute of Traffic Engineers (ITE) Trip Generation Manual or alternate source acceptable to the Township, and shall consider all traffic likely to use each street.

5.17.5 Minimum level of service

- A. All proposed streets and intersections in a subdivision or land development shall be designed to function at Level of Service A or B.
- B. The existing level of service on any adjacent street and intersection that will be affected by a proposed subdivision or land development shall not fall below level C if it is currently A, B, or C, and shall not be further reduced if it is at level D, E, or F.

Table A

FUNCTIONAL CLASSIFICATION OF STREETS

Classification	Average Description	Daily Traffic
Arterial	A public street intended to carry a large volume of local and through traffic, to or from collector streets and expressways. Controlled access.	7000+
Collector	Channels traffic from local to arterial or other collector streets; includes main streets within a development.	
Residential:	No direct access to residential lots.	3000 - 7000
Nonresidential:	Number of access drives limited; may require marginal access drives.	800+
Subcollector		
Residential:	Provides direct access to lots and conveys traffic from local to collector streets. Not more than 1000 ADT from direct frontage lots permitted.	1000 - 3000
Local	Serves primarily to provide direct access to abutting property. Should be designed to prevent through traffic.	
Residential:	Provides direct access to residential lots and to other residential streets.	
High volume:	Not more than 500 ADT per loop permitted	500 - 1000
Medium volume:	Not more than 250 ADT per loop permitted	101 - 500
Low volume:		0 - 100

5.17.6 Traffic impact study

- A. When required. A traffic impact study shall be required for a subdivision or land development which will generate 100 or more peak hour trips when fully developed. A traffic impact study may also be required by the Township to assess the impacts of smaller projects if traffic congestion or safety problems already exist.
- B. Methodology. The study shall be conducted in accordance with the recommended practice Traffic Access and Impact Studies for Site

Development, published by the Institute of Transportation Engineers, 1988, or in accordance with an equivalent methodology endorsed by transportation engineers.

1. The scope of the study, study area, and methodology shall be approved by the Township before the study is initiated. (A pre-application conference should be scheduled for this purpose.)
2. The study shall be performed by a professional engineer with training and experience in the performance of traffic studies, whose credentials are acceptable to the Township.

C. Required findings

1. The traffic impact study must demonstrate that the levels of service specified in Section 5.17.5 will be met by the proposed development and that the circulation plan for the development will function safely and efficiently.
2. The study shall describe any measures which have been incorporated into the development plan in order to achieve the required conditions. Such measures may include, but are not limited to:
 - a. A reduction in the density or intensity of the proposed development;
 - b. Measures to reduce traffic impacts, such as clustering of buildings for easy access by transit or ridesharing vehicles, or the inclusion of transit-related improvements;
 - c. The phasing of construction to coincide with the completion of transportation improvements which have been programmed by the municipality, county, or state;
 - d. The construction of onsite transportation improvements;
 - e. The construction of off-site transportation improvements or payment of impact fees, when authorized by a municipal impact fee ordinance;
 - f. The extension of transit, bicycle, or pedestrian services to the site or the sponsorship of a ridesharing program or transit subsidies for employees;
 - g. Any combination of the above or additional measures.
3. Any traffic impact mitigation measures which are not physical site improvements shall be incorporated into the development

agreement executed between the municipality and the applicant and shall be recorded with the land development plan.

5.17.7 Special purpose streets

- A. Private streets. Private streets may be permitted by the concurrence of the municipality.
1. Private streets shall comply with the design and construction standards for public streets of the same functional class.
 2. An agreement for maintenance of private streets shall be recorded with the final plan and shall include, in case of failure to maintain in accordance with the agreement, an offer of dedication to the municipality together with provisions for funds sufficient to restore the private street to the standards required for public streets prior to acceptance of dedication.
- B. Cul-de-sac streets shall comply with the following standards:
1. A cul-de-sac street serving residential development shall not comprise the sole access for more than 24 dwellings, or a maximum of 250 vehicle- trips per day.
 2. A cul-de-sac street serving nonresidential development shall not exceed the lesser of 600 feet in length or 500 vehicle trips per day.
 3. A cul-de-sac street shall end in a turnaround which has a paved cartway not less than 22 feet in width surrounding a landscaped island with a minimum radius of 18 feet except in the following circumstances (see Appendix 5-1):
 - a. Hammerhead turnarounds may be provided if the cul-de-sac street does not provide access for more than 8 dwelling units.
 - b. A temporary turnaround shall be provided at the end of dead- end streets which are intended to be extended as through streets in the future. If the length of a dead-end street exceeds the depth of one lot, the temporary turnaround shall be constructed with an all-weather surface, a minimum cartway radius of 25 feet, and its use shall be guaranteed to the public.
 4. A "no outlet" sign shall be erected at the entrance to every cul-de-sac or dead-end street, which shall comply with the standards and specifications of the jurisdiction owning the intersecting street.
- C. Half or partial streets shall not be permitted.

- D. Alleys may be permitted, with the concurrence of the municipality and shall comply with the following standards.

1. Alleys may not be used as the only means of access to a lot.
2. Alleys in residential developments shall have a minimum right-of-way of 18 feet and a minimum cartway of 12 feet.
3. Alleys in non-residential developments shall have a minimum right-of-way of 15 feet and a minimum cartway of 18 feet. Where necessary, corners shall have a radius adequate to accommodate any large vehicles that may be expected to use the alley.
4. Dead-end alleys shall not be permitted without a turnaround subject to the approval of the Township.

5.17.8 Driveways and Access Drives

- A. Driveways and access drives shall enter public streets at safe locations. No driveway or access drive shall enter a public street closer to an existing intersection than 50', and a reasonable safe sight distance shall be provided.
- B. The maximum permitted grade on residential driveways and openings shall be as specified in Appendix 5-2 and 5-3.
- C. Conditions for sight distance shall be as follows:
1. Access driveways shall be located at a point within the property frontage limits which provides at least the minimum sight distance listed in the appropriate following table:

Sight Distance for passenger cars and single unit trucks exiting from driveways onto two-lane roads.

Posted Speed (mph)	Safe Sight Distance - Left ¹ (feet)	Safe Sight Distance - Right ¹ (feet)
25	250	195
25	250	195
35	440	350
45	635	570
55	845	875

¹Measured from a vehicle ten feet back of the pavement edge

5.17.9 Design Speeds. Design speeds shall be as follows:

	<u>Posted Speed</u>	<u>Design Speed</u>
A. Arterial roads	50 MPH	60 MPH
B. Collector streets	40 MPH	50 MPH
C. Minor collector streets	30 MPH	40 MPH
D. Local streets	20 MPH	30 MPH

5.17.10 Street Grades

- A. The entire width of the right-of-way of each street in a proposed subdivision shall be graded, except as specified in Sect. 5.4.1.A.
- B. Minimum permitted street grade for all streets shall be 1%.
- C. Maximum street grades, other than due allowance for vertical curves, shall be as follows:
 - 1. Arterial roads 6%
 - 2. Collector streets 8%
 - 3. Local nonresidential streets 10%
 - 4. Local residential streets 12%
- D. Street grades shall be measured along the centerline of the street.
- E. Centerline grade on the head of a cul-de-sac or hammerhead shall not exceed 5%.
- F. Vertical curves shall be provided for all changes in grade exceeding 1%. For each 1% of algebraic difference between tangent grades over 3%, at least 15' of vertical curve length shall be provided. Minimum vertical curve lengths shall be as follows:
 - 1. Arterial roads 150'
 - 2. Collector streets 100'
 - 3. Local streets, non-residential 75'
 - 4. Local streets, residential 50'
- G. Where the grade of the street is six feet or more above the grade of the abutting land, guardrail shall be provided.

5.17.11 Street Alignment

- A. Minimum centerline radii for horizontal curves shall be as follows:
- | | |
|----------------------------|------|
| 1. Arterial roads | 700' |
| 2. Collector streets | 350' |
| 3. Minor collector streets | 200' |
| 4. Local streets | 75' |
- B. For other than local streets, a minimum tangent of 100 feet between reverse curves shall be provided. For local streets a tangent of not less than 50 feet may be acceptable, subject to the approval of the municipal engineer. Broken-back curves shall be avoided; however, when they must be used, a minimum tangent of 150 feet shall be provided.

5.17.12 Intersections

- A. The angle of intersecting streets shall be as close to ninety degrees as possible. No streets shall intersect at an angle less than 60 degrees.
- B. Distance between intersections shall be as follows:
- | | |
|----------------------|------|
| 1. Arterial roads | 800' |
| 2. Collector streets | 300' |
| 3. Local streets | 200' |
- C. Intersections between more than two streets shall be avoided.
- D. Where the grade of any street at the approach to an intersection exceeds 5%, a leveling area shall be provided. The transition grade shall not exceed 3% for a minimum distance of 50 feet measured from the right-of-way line of the intersection.
- E. An area of unobstructed vision shall be provided at every intersection. The minimum clear sight triangle shall be measured at 3.5 feet above the ground, from the main street to the side street, and shall be as follows:
- | | |
|----------------------|----------|
| 1. Arterial roads | 500'/30' |
| 2. Collector streets | 250'/25' |
| 3. Local Streets | 200'/25' |

- F. No plantings or structures exceeding 30 inches in height shall be permitted in the clear sight triangle. A public right-of-entry shall be reserved for the purpose of removing any object that obstructs the clear sight triangle.
- G. Deceleration, turning, or merging lanes may be required by the municipality along existing and proposed collector or arterial roads.
- H. Clearly marked crosswalks and handicapped-accessible curb ramps shall be provided at intersections where there are sidewalks or pedestrian walkways. The Township may require crosswalks in other locations to ensure pedestrian safety and convenience.
- I. Curb radii shall be as follows:

1. Arterial roads	50'
2. Collector streets	35'
3. Minor collector streets	30'
4. Local streets	25'

Where two roads of different right-of-way widths intersect, the radii of curvature for the higher classification road shall apply.
- J. The right-of-way line for corner curbs shall be an arc concentric with the curb line and having a minimum radius of 25 feet.

5.17.13 Rights-of-Way

- A. The right-of-way shall be measured from lot line to lot line and shall be wide enough to contain the cartway, curbs, shoulders, sidewalks, and street trees and bike lanes when required.
- B. The right-of-way width of a new street that is a continuation of an existing street shall in no case be at a lesser width than that of the existing street.
- C. The right-of-way width shall consider future development in accordance with the comprehensive plan as well as the plan for the proposed development.
- D. Minimum standards for rights-of-way:

1. Arterial roads	70'
2. Collector streets	60'
3. Minor collectors	50'
4. Local Streets	50'

E. Additional right-of-way widths may be required for the following reasons:

1. To promote public safety and convenience
2. To provide parking areas in urban districts and in areas of high density residential development.
3. To provide slopes rights whenever the topography is such that additional right-of-way is need to provide adequate earth slopes.
4. To provide for bicycle or pedestrian facilities.

5.17.14 Street Paving and Curbing

A. All new streets shall conform to the following Specifications and Typical Pavement Design.

1. Description:
 - a. Flexible paving will consist of 2 inches compacted wearing course of ID-2 asphaltic installed on a 4 inch bituminous concrete base course and 6 inch subbase as noted in the Specifications, Pennsylvania Department of Transportation Publication 408 (latest) and also the Standards for Roadway Construction, Series: RC-0 to 100. Shape and width to conform with the attached Typical Pavement Design Cross-sections (Appendix 5-4).
 - b. Rigid paving consists of 6 inches of Portland cement concrete/reinforced cement concrete installed on 6 inches of subbase material.
2. Subbase and Base:
 - a. Subbase: A 6-inch compacted aggregate on a prepared subgrade area in accordance with the Pennsylvania Department of Transportation Specifications, Publication 408 (latest), Section 350, Subbase Preparation of subgrade, as specified in Section 210.
 - b. Base: A 4-inch plant-mixed bituminous concrete base course, placed on subbase, as specified in Section 305 of Pennsylvania Department of Transportation Specifications, Publication 408 "BCBC."
3. Curbing: Flexible paving curb to be a wedge-type to conform with the attached Typical Pavement Design Cross-sections. Rigid pavement

APPENDICES

APPENDIX 1 - DRAFTING STANDARDS FOR PLANS FOR RECORDING

..... Appendix 1-1

APPENDIX 2 - REQUIRED CERTIFICATIONS Appendix 2-1 to 2-11

APPENDIX 3 - STANDARDS FOR SURVEYS Appendix 3-1

APPENDIX 4 - STORM WATER MANAGEMENT PROVISIONS FOR SUBDIVISIONS AND LAND DEVELOPMENTS Appendix 4-1 to 4-7

APPENDIX 5 - DETAILS Appendix 5-1 to 5-6

APPENDIX 6 - KENNEDY TOWNSHIP STORMWATER MANAGEMENT ORDINANCE NO. 293 1 to 23 + Appendix

APPENDIX 7 - SPECIFICATIONS FOR SANITARY SEWER PIPE LINES AND APPURTENANCES 1 to 12 SD1 - SD10

ARTICLE I - AUTHORITY

Section 1.1 ADOPTION

- 1.1.1 **Enabling authority/adoption.** The Board of Commissioners of Kennedy Township, in accordance with the Pennsylvania Municipalities Planning Code, Act 247 of 1968, as reenacted and amended by Act 170 of 1988, and as subsequently amended, 53 P.S. 10101 et seq. (MPC), enacts the following ordinance to regulate the subdivision and development of land in the Township of Kennedy, Allegheny County, Pennsylvania.
- 1.1.2 **Grant of Power.** The Township will regulate subdivisions and land development within the municipality by enacting a subdivision and land development ordinance. The ordinance shall require that all subdivision and land development plats of land situated within the Township shall be submitted for approval to the Township or in lieu thereof to the Planning Commission designated in the ordinance for this purpose. All powers granted herein to the Township or the Planning Commission shall be exercised in accordance with the provisions of the subdivision and land development ordinance. In the case of any development governed by the Planned Residential Development provisions, adopted by the Township, however, the applicable provisions of the subdivision and land development ordinance shall be as modified by such provisions and the procedures which shall be followed in the approval of any plat, and the rights and duties of the parties thereto shall be governed by said Planned Residential Development provisions.
- 1.1.3 **Title.** This ordinance shall be known and may be cited as the "Kennedy Township Subdivision and Land Development Ordinance of 1996."
- 1.1.4 **Separability.** Any section, subsection, or provision of this ordinance that is declared to be invalid by a court of competent jurisdiction shall not affect the validity of any other part of this ordinance or the ordinance as a whole.
- 1.1.5 **Amendments.** This ordinance may be amended by the Board of Commissioners in accordance with the procedures specified in the MPC.
- 1.1.6 **Effective date.** This ordinance shall be effective 10 days after the date of adoption by the Board of Commissioners of Kennedy Township.

Section 1.2 PURPOSES

- 1.2.1 **General purpose.** It is the purpose of this ordinance to protect and promote the public health, safety, and welfare through the establishment of standards and procedures for the review and approval of subdivisions and land development in Kennedy Township.
- 1.2.2 **Specific purposes.** The provisions of this ordinance are intended to achieve the

to be plain cement concrete curb to conform to PennDOT's RC-64 and Section 630 of Publication 408.

4. Bituminous Course ID-2:

- a. Flexible pavement wearing course of plant-mixed bituminous concrete on a prepared surface, as specified in Section 420 of PennDOT's Publication 408. This surface course is to consist of a compacted 1-inch ID-2 wearing course over the entire base course (BCBC) and the curb area.
- b. A second 1-inch ID-2 wearing course must be applied after the Developer's Plan of Lots has been at least 50% occupied with buildings and no heavy equipment will be traveling over the streets and never later than two years after the approval of said base construction.

5. Concrete Streets and Concrete Curb Constructed Roads:

- a. If this type of construction is desired because of heavy or industrial use of streets or roads, the plans, materials, specifications and construction shall conform to PennDOT's Specification, Publication 408, and also the Standards for Roadway Construction Series: RC-0 to 100. Shape width to conform with the Typical Pavement Design Cross-section (see Appendix 5.4).
- b. Rigid paving consists of 6 inches of Portland cement concrete or reinforced cement concrete installed on a prepared surface of 6 inches of subbase material.

- 6. **Special Requirements:** The contractor or builder will be required to give the Township a two (2) year maintenance bond commencing on the date of acceptance of the road by the Township.

5.17.15 Public Transportation

- A. Where a proposed development is adjacent to or within a reasonable distance of collector or arterial roads where transit service is currently provided or may be provided in the future, the applicant shall consult with the transit authority regarding street design requirements for bus passenger waiting areas and shelters.
- B. Where a development site is adjacent to or includes a rail transit facility or other exclusive transit right-of-way, the applicant shall consult with the transit authority to determine whether any special design features concerning the rail transit facilities will be required.

5.17.16 Sidewalks

- A.** Where a proposed development is adjacent to or within a reasonable distance of an existing or future rails-to-trails (or other public trail system) system, access from the proposed development to the rails-to-trails system shall be considered in the design and layout of the plan.
- B.** Pedestrian improved sidewalks shall be included in developments which meet the following conditions:
 - 1.** Where sidewalks exist in the same block on the same side of the street;
 - 2.** Within residential districts, including planned developments, where the density exceeds three dwelling units per acre;
 - 3.** Within planned business, commercial, or industrial developments;
 - 4.** Along roads that are served by public transit or may be served by public transit within three years of the expected date of completion of the proposed development;
 - 5.** Where blocks exceed 1000 feet in length, as per Section 5.11.1.D.
 - 6.** Within or along the perimeter of any other pedestrian generator, including
 - a.** Schools, libraries, community centers, and places of worship;
 - b.** Parks and other recreation centers;
 - c.** Shopping or commercial centers of 25,000 square feet of floor area or more.
- C.** Public sidewalks shall in general be parallel to the street and within the right-of-way. However, alternative locations will be considered, provided that safe and convenient pedestrian circulation is maintained.
- D.** Sidewalks shall have a minimum width of four feet or, if abutting a street curb, shall have a minimum width of five feet. Wider widths may be required near major pedestrian generators. (See Appendix 5-5 for sidewalk detail.)
- E.** Sidewalks within street or public rights-of-way shall be concrete, the design and construction of which shall be subject to approval by the municipal engineer.
- F.** Curb ramps shall be provided at all intersections as per Section 5.19.12.H.

- G. Public sidewalks shall be constructed in accordance with federal specifications for handicapped accessibility.

5.17.17 Street lights

- A. Street lighting shall be provided for all non-residential developments, multi-family residential developments, and single family residential developments requiring either the construction of new streets or the extension of existing streets.
- B. Street lights shall be provided at all intersections of streets and at the access drives of all non-residential developments.
- C. Lights shall be provided in parking areas, along sidewalks, and between buildings as needed for public safety and convenience.
- D. The placement, height, and shielding of lighting standards shall provide adequate lighting without hazard to drivers or nuisance to nearby residents. No spillover of light onto adjoining properties from required light standards shall be permitted.
- E. The style, type, and shielding of light standards shall be appropriate to the use, the development, and the municipality, and shall be approved by the Township, subject to the recommendation of the municipal engineer.

5.17.18 Street signs

- A. Street name signs shall be provided at all new street intersections.
- B. Street name signs shall be installed under street lights and shall be free of all visual obstructions.
- C. The design of street name signs shall be consistent, uniform, and appropriate to the municipality and to the development, and shall be acceptable to the municipal engineer.
- D. Traffic control signs shall be provided by the applicant as needed. The design and placement of traffic control signs shall be as specified in the Manual on Uniform Traffic Control Devices for Streets and Highways, and shall meet all state and local requirements.

Section 5.18 PARKING FACILITIES

- 5.18.1 **Application.** All land developments shall include parking facilities for the planned uses. Refer to the Kennedy Township Zoning Ordinance No. 171.

Section 5.19 MONUMENTATION

5.19.1 Requirement. Permanent monuments and markers shall be placed in all subdivisions in order to provide survey and property line control.

- A.** The location and installation of monuments and markers shall be planned to ensure that they will be permanent, accessible, and recoverable.
- B.** All monumentation shall conform to recommended practices of the surveying profession, as contained in the most recent edition of the Manual of Practice for Professional Land Surveyors in the Commonwealth of Pennsylvania, or equivalent standard of professional practice acceptable to the Township.

5.19.2 Placement

- A.** Intervisible monuments shall be placed sufficiently far apart to ensure accuracy control within survey procedures. They shall be placed with priority consideration for permanence and accessibility. This will require consideration of the ultimate use of the land where the monuments are to be placed, exposure to future roadway maintenance, and lot landscape development. To that end, monuments should be located in the following order of priority:
 - 1.** On a five foot or appropriate survey line only where sidewalks are to be installed.
 - 2.** Other locations along or on the right-of-way line, giving due consideration to the lot owner's use of the land and the likelihood of future changes in elevation or landscape, which would affect the monument's location or its intervisibility.
- B.** Monuments shall be placed in a sufficient number of locations to define the boundary of a subdivision and the location of all streets. Sufficient monuments shall be placed to locate intersections, cul de sacs, and curves in horizontal street alignments. Monuments shall be intervisible.
- C.** Markers shall be placed at the corners of all lots or at such other locations as may be required to locate all lot lines.
- D.** The location of all monuments and markers shall be shown on the plan for recording, with the distance between them and curve data shown.
 - 1.** A notation indicating whether the monuments and markers were found or set and a description of their type, size, material, condition, and position shall be included.
 - 2.** Monuments shall be identified on the Pennsylvania Plane Coordinate System - NAD 83 or 27, where it is feasible to do so. This requirement may be waived for small projects where the control

locations are so distant that the cost of complying would be burdensome in relation to the total survey cost.

- E. All monuments and markers shall be placed by a registered surveyor prior to approval of the final plan, or financial security sufficient to cover their cost and placement shall be provided in accordance with the provisions of Section 3.2.6.

5.19.3 Materials

- A. Monuments shall be of durable materials of sufficient length and cross-sectional area to be reliably permanent and shall clearly indicate the survey point. Concrete or stone monuments with a minimum width of four inches and a minimum length of 30 inches shall be acceptable. Other materials may be acceptable, with the approval of the municipal engineer.
- B. Markers shall be iron pins or pipes, 30 inches in length, or other material acceptable to the municipal engineer.
- C. Monuments and markers shall be detectable with conventional ferrous metal or magnetic locators.

Enacted and ordained into an Ordinance by the Board of Commissioners this 10th day of July, 1996.

Township of Kennedy
Board of Commissioners



[Signature]

President

ATTEST:

[Signature]

Secretary

APPROVED AS TO FORM:

Township Solicitor