

ARTICLE 4

REQUIREMENTS FOR IMPROVEMENTS, RESERVATIONS, AND DESIGN

These standards for the design and construction of streets and utilities are established to ensure that all proposed subdivisions are provided with adequate, safe, and sufficient services.

General Requirements

4-1 Conformance to Applicable Rules and Regulations

In addition to the requirements established herein, all subdivision plats shall comply with all applicable laws, ordinances, resolutions, rules, or regulations, including, but not limited to:

- 4-1.1 all applicable provisions of Tennessee Law, regulations, or policy;
- 4-1.2 any zoning ordinance, any building and housing codes, and all other applicable laws or policies of the governing body;
- 4-1.3 the adopted general plan and major road or street (public way) plan;
- 4-1.4 the rules of the county health department and the Tennessee Department of Environment and Conservation, including the requirements for Tennessee Construction General Permits;
- 4-1.5 the applicable rules of the Federal Highway Administration or Tennessee Department of Transportation, if the subdivision or any lot contained therein abuts a non-local highway; and
- 4-1.6 The standards and regulations adopted by all other boards, commissions, and agencies of the governing body, where applicable.

Plat approval may be withheld if a subdivision is not in conformity with the above rules or with the provisions set forth in Section 1-4 of these regulations. The purpose of this section is to assure that sound subdivision development will take place within the jurisdiction of the Springfield Municipal/Regional Planning Commission by establishing minimum standards for use in the design of subdivisions.

4-2 Self-imposed Restrictions

If the owner places restrictions on any of the land contained in the subdivision greater than those required by any zoning ordinance or these regulations, such restrictions or reference thereto shall be recorded with the county register on a separate form, along with the final subdivision plat.

4-3 Monuments

The subdivider shall place permanent reference monuments on the subdivision as required herein and as approved by a licensed surveyor. Monuments shall be located and set as follows.

4-3.1 Permanent Reference Monuments

All new subdivisions which include improvements to the infrastructure (i.e. roads, water lines, sewer lines, etc.) shall have a minimum of two (2) permanent reference monuments. These monuments shall be referenced to the Tennessee State Grid Coordinate System and the USGS Datum Plane by either of the methods defined in Article 2, of these Regulations, utilizing either Global Positioning System (GPS) or the minimum surveying standards of practice in the State of Tennessee. These monuments shall be accessible from public streets, and preferably in sight of one another. If possible, the monuments should be placed at least two hundred (200) feet apart. This data shall be provided on the construction plan as-built drawings for the development.

4-3.2 Monuments and Pins Shall Be In Place

All required permanent reference monuments and required pins shall be in place after final grading is completed and/or prior to release of any Performance Bond established by the Springfield Municipal/Regional Planning Commission.

4-3.3 Boundary Monuments

4-3.3 A Concrete Monuments

Concrete boundary monuments shall be located on public right-of-way lines, at public way intersections, and at the beginning and ending points on all curves. All corners in the subdivision shall be identified with iron pins, which comply with the Minimum Standards of Practice of the Tennessee State Board of Examiners for Land Surveyors.

4-3.3 B Iron bar Monuments

Iron bar monuments may be used in lieu of concrete monuments in the following circumstances: Iron bars shall be at least 5/8 inches in diameter and no less than 18 inches in length. Each bar shall have a permanent metal cap measuring at least 2 ½ inches in diameter, bearing the surveyor's name, license number, or company name and bearing a permanent mark for the exact survey point.

4-3.3 C External Boundaries

The external boundaries of a subdivision, including all corners, breaks at each end

of curves and at distances of not more than one thousand (1,000) feet apart in any straight line, or at shorter intervals, if topography requires. Monuments shall also be installed at all angle points and at points not less than twenty (20) feet from any stream, except that when such corners or points fall within a public way or proposed future public way, the monuments shall be placed on the side line of the public way.

4-3.3 D Required Boundary Monuments

The proposed locations of the required boundary monuments shall be shown on the preliminary plat.

4-3.3 E Lot Lines That Extend into Rivers or Streams

The lines of lots that extend to rivers or streams shall be monumented in the field by iron pins at least eighteen (18) inches long and one-half (1/2) inch in diameter or by round or square iron bars at least eighteen (18) inches long. Such pins shall be placed at the point of intersection of the river or stream and lot line, with a meander line established not less than twenty (20) feet back from the bank of the river or stream.

4-3.3 F All Monuments and Pins

All monuments and pins shall be properly set in the ground and approved by a licensed surveyor prior to the time the Planning Commission recommends approval of the final plat or release of the performance bond where bond is made in lieu of improvements.

4-4 Character of the Land

Land for subdivision purposes shall be so selected as to provide sound building sites on suitable lots. Land which the Planning Commission finds to be unsuitable for subdivision or development due to flooding, improper drainage, steep slopes, rock formations, adverse earth formations or topography, utility easements, or other features which would be harmful to the safety, health, and general welfare of inhabitants of the land and surrounding areas shall not be subdivided or developed unless adequate methods are formulated by the developer and approved by the Planning Commission, upon recommendation of any staff assistant serving the Planning Commission and/or other governmental representative, if any, to solve the problems created by the unsuitable land conditions. Such land shall be set aside for such uses as will not involve such a danger.

Where protection against flood damage is necessary, in the opinion of the Planning Commission, flood-damage protection techniques may include, as deemed appropriate by

the Planning Commission:

- 4-4.1 the imposition of any surety and deed restrictions enforceable by the Planning Commission to regulate the future type and design of uses within flood-prone areas;
- 4-4.2 flood-protection measures designed so as not to increase, either individually or collectively, flood flows, height, duration, or damages, and so as not to infringe upon the regulatory floodway;
- 4-4.3 installation of flood warning systems;
- 4-4.4 the use of fill, dikes, levees and other protective measures; and
- 4-4.5 the use of flood-proofing measures, which may include:
 - 4-4.5 A anchorage to resist flotation and lateral movement;
 - 4-4.5 B installation of watertight doors, bulkheads, shutters, or other similar methods of closure;
 - 4-4.5 C reinforcement of walls to resist water pressures;
 - 4-4.5 D use of paints, membranes, or mortars to reduce seepage through walls;
 - 4-4.5 E addition of mass or weight to structures to resist flotation;
 - 4-4.5 F installation of pumps to lower water levels in structures;
 - 4-4.5 G construction of water supply and waste treatment systems so as to prevent the entrance of or contamination of flood waters;
 - 4-4.5 H installation of pumps or comparable facilities for subsurface drainage systems to relieve external foundation wall and basement flood pressures.
 - 4-4.5 I building design and construction to resist rupture or collapse caused by water pressure or floating debris;
 - 4-4.5 J installation of valves or controls on sanitary and storm drains which permit the drains to be closed by preventing backup of sewage and stormwater into building structures;
 - 4-4.5 K location and installation of all electrical equipment, circuits, and appliances so that they are protected from inundation by the regulatory flood;
 - 4-4.5 L location of storage facilities for chemicals, explosives, buoyant material, flammable liquids, or other toxic materials which would be hazardous to the public health,

safety, and welfare at or above the regulatory flood protection elevation, or design of such facilities to prevent flotation of storage containers or damage to storage containers which could result in the escape of toxic materials.

The acceptability of any flood-protection methods formulated by the subdivider or his agent shall be determined by the Planning Commission, which shall be guided by the policies set forth in Sections 1-4 and 4-4.1 through 4-4.5L, of these regulations.

4-5 Subdivision Name

The proposed name of the subdivision shall not duplicate or too closely approximate phonetically the name of any other subdivision in the planning region covered by these regulations. The Planning Commission shall have authority to designate the name of the subdivision, which shall be determined at sketch or preliminary plat approval.

4-6 Lot Requirements

4-6.1 Lot Arrangement

The lot arrangement shall be such that there will be no foreseeable difficulties, for reasons of topography, flood hazards, or other conditions in securing building permits to build on all lots in compliance with any zoning ordinance and state and county public health department regulations and in providing driveway access to buildings on such lots from an approved public way.

Insofar as practical, side lot lines shall be at right angles to straight street lines or radial to curved street lines. The shape and orientation of lots shall be such as the Planning Commission deems appropriate for the type of development and use contemplated. Excessive lot depth, in relation to lot width, overly irregularly-shaped lots are discouraged and shall only be permitted in unusual circumstances allowed by the Planning Commission.

4-6.1 A Where reasonably feasible lot arrangement shall be such that building sites will afford maximum utilization of energy conservation measures, such as providing for solar access purposes.

4-6.1 B A lot in any flood-prone area must be improved to provide a building site free from flooding. Such improvements shall be made outside the floodway by fill to at least the regulatory flood protection elevation (one-hundred year flood) for a distance extending at least twenty-five (25) feet beyond the limits of intended structures and, additionally, when approved by the County Environmentalist, extended a

sufficient distance to include areas for subsurface sewage disposal if the lot is not to be connected to a public sanitary sewer system. Any fill shall be protected against erosion by rip-rap, vegetative cover, or other method(s) deemed acceptable by the Planning Commission. Building sites and sites for drain fields shall not be traversed by water and /or drainage courses and ditches.

- 4-6.1 C In nonresidential building sites outside a floodway but subject to flooding, the use of structural flood-proofing methods specified in Section 4-4 of these regulations, as an alternative to landfill, may be approved by the Planning Commission, as provided in Section 2-2.2, of these regulations.

4-7 Lot Dimensions

4-7.1 Compliance with Zoning Ordinance

Lot dimensions shall comply with the minimum standards of the zoning ordinance, where applicable. Where lots are more than double the minimum area required by the zoning ordinance, the Planning Commission may require that such lots be arranged so as to allow further subdivision and the opening of future public ways where they would be necessary to serve such potential lots, all in compliance with the zoning ordinance and these regulations. Where solar access is a primary consideration, side lot lines shall generally run from due north to due south, regardless of the resulting angle of incidence with a public way. A variation of up to twenty-five degrees (25°) east or west of this axis is permitted; further variations may be allowed, but only to provide a better way or lot plan. Minimum requirements for lot size and setback requirements shall conform to those established under any zoning ordinance in effect. In no instance shall lot frontage be less than 50 feet along a public street, road or permanent easement except as provided for forty (40) feet on cul-de-sac streets in the Springfield Zoning Ordinance.

4-7.2 Corner Lots

Dimensions of the corner lots shall be large enough to allow for erection of buildings, observing the minimum front-yard setback requirements from both public and private rights-of-way. Corner lots shall consist of two (2) fronts, one (1) side and one (1) rear yard setbacks. The side shall be determined by the narrowest width of the structure.

4-7.3 Commercial and Industrial Lots

Depth and width of properties reserved or laid out for business, commercial, or industrial purposes shall be adequate to provide for the off-street parking and loading facilities required for the type of use and development contemplated, and as established in the zoning ordinance.

4-8 Building Setback Lines

4-8.1 Redevelopment Circumstances

In redevelopment circumstances in minor residential subdivisions, as set forth in 4-7.4, side building setback lines on corner lots may be altered to conform to the setbacks in the existing neighborhood. In this circumstance, the side setback on a corner lot may be lowered to ten (10') feet on one corner, and must be shown on the subdivision plat and referencing section 4.8.1. This provision shall only apply to local streets, and shall not apply on streets classified by the City of Springfield Major Thoroughfare Plan as a collector or arterial street. The additional 5' for multiple stories may also be waived if they are similar to homes within the block or across the street.

4-8.2 Easement for Electric Transmission Lines

In the case of electric transmission lines where easement widths are not definitely established, a minimum building setback line from the center of the transmission line shall be established as indicated in Table VI-1:

Table VI-1 Building Setback/Easement for Electric Transmission Lines

<u>Voltage of line</u>	<u>Building Setback/Easement</u>
13kV	20 feet
46kV	37.5 feet
69kV	50 feet
161kV	75 feet

4-9 Double Frontage Lots and Access to Lots

4-9.1 Double Frontage Lots

Double frontage lots may be employed to prevent excessive vehicular driveway access to streets, or to separate residential areas from other areas of conflicting land use or traffic. Double frontage and reversed lots shall be avoided except where necessary to provide separation of residential development from traffic arterials, or to overcome specific disadvantages of topography and orientation.

4-9.2 Access from Arterial or Collector Public Ways

The Planning Commission may require that lots shall not derive access exclusively from arterial or collector public ways. Where driveway access from such public ways may be

necessary for several adjoining lots, the Planning Commission may require that the lots be served by a combined access drive in order to limit possible traffic hazards.

Driveways shall be designed and arranged so as to prevent vehicles from backing onto arterial or collector public ways.

4-10 Soil Preservation, Grading, and Seeding

4-10.1 Final Grading

No certificate of occupancy shall be issued until final grading has been completed in accordance with the approved construction plan.

4-10.2 Soil Preservation

Topsoil shall not be removed from residential lots or used as spoil, but shall be redistributed so as to provide cover on the lots, cover between any sidewalks and curbs, and be stabilized by seeding or planting.

4-10.3 Lot Drainage

Lots shall be laid out so as to provide positive drainage away from all buildings; individual lot drainage shall be coordinated with the general storm drainage pattern for the area.

4-11 Debris and Waste

Cut trees, timber, debris, or other waste materials organic in nature that are to be buried in any land or on any lot, shall be identified on the subdivision plat and approved in advance of depositing by the Planning Commission.

4-12 Fencing

Each subdivider or developer shall be required to furnish and install all fences wherever the Planning Commission determines that a hazardous condition exists. Such fences shall be constructed according to standards established by the Planning Commission, as appropriate, and shall be noted on the final plat as to height and required materials. No certificate of occupancy shall be issued for any affected lot until such fence improvements have been installed.

4-13 Water Bodies and Watercourse

4-13.1 Water Bodies

If a tract being subdivided contains a water body, or portion thereof, lot lines shall be so drawn as to distribute the entire ownership of the water body among the fees of adjacent lots. The Planning Commission may approve an alternative plan whereby the ownership of and responsibility for safe maintenance of the water body is so placed that it will not

become a governing body or governmental agency responsibility.

4-13.2 Watercourse

No more than ten-percent (10%) of the minimum area of a lot required under any zoning ordinance may be satisfied by land which is underwater. Where a watercourse separates a buildable area of a lot from the public way by which it has access, provisions shall be made for installation of culvert or other structure approved by the Planning Commission and no certificate of occupancy shall be issued for a structure on such a lot until the installation is completed and approved by the Planning Commission and/or the appropriate governmental representative.

4-14 Public Ways

4-14.1 General Requirements

4-14.1 A Frontage on Improved Public Ways

No subdivision shall be approved unless the area to be subdivided shall have frontage on and access from either an existing public way except as provided in Section 1-16 of these regulations, or, if any new street construction or improvement is involved, a street approved and dedicated as provided in Articles II and III of these regulations. Any such public way must be suitably improved to the standards required by this Article or the major street or road plan.

4-14.1 B Grading and Improvement Plan

Public ways shall be graded and improved to conform to the standards required by this Section and shall be approved as to design and specification by the appropriate governmental representative in accordance with the specifications required herein. No surface shall be applied to the base of any proposed public way prior to the approval of the final plat of the subdivision or of the final approval of any section of the subdivision in question.

4-14.1 C Improvements in Flood Prone Areas

The finished elevation of proposed public ways subject to flood shall be no less than the regulatory flood protection elevation (100-year flood). The Planning Commission may require profiles and elevations of public ways to determine compliance with this requirement. All drainage structures shall be sufficient to discharge flood flows without increasing flood height as proven by a hydrologic study performed by a professional engineer licensed to practice in the state of Tennessee. Where fill is used to bring the finished elevation of any public way to the required elevation, such fill shall not encroach upon a floodway, and the fill

shall be protected against erosion by rip-rap, vegetative cover, or other methods deemed acceptable by the Planning Commission.

4-14.1 D Topography and Arrangements

- (1) All public ways shall be arranged so as to obtain as many of the building sites as possible at or above the grades of the public ways. Grades of public ways shall conform as closely as possible to the original topography. A combination of steep grades and curves shall not be permitted. Specific design standards are contained in Section 4-16, 4-17 and Appendix A of these regulations.
- (2) The use of public ways shall be properly integrated with the existing and proposed system of public ways running in an east-west direction, and lots on a north-south axis are encouraged for energy efficient developments.
- (3) All public ways shall be properly integrated with the existing and proposed system of public ways and dedicated rights-of way as established on the major street or road plan or the land development plan.
- (4) All public ways shall be properly related to special traffic generators, such as industries, business districts, schools, churches, and shopping areas or centers; to population densities; and to the pattern of existing and proposed land use.
- (5) Minor public ways shall be laid out to conform as much as possible to the topography; to discourage use by through traffic; to permit efficient drainage and utility systems; and to require the minimum ways necessary to provide convenient and safe access to property.
- (6) The use of curvilinear streets, or "U"-shaped streets shall be encouraged where such use will result in a more desirable layout.
- (7) Proposed public ways shall be extended to the boundary lines of the tract to be subdivided, unless prevented by topography or other physical conditions or unless, in the opinion of the Planning Commission, such extension is not necessary or desirable for the coordination of the subdivision design with the existing layout or the most advantageous future development of adjacent tracts.
- (8) In business and industrial developments, public ways and other access routes shall be planned in connection with the grouping of buildings, location of rail facilities, and the provisions of alleys, truck loading and maneuvering areas, and walks and parking areas, so as to minimize conflict of movement between

the various types of traffic, including pedestrian traffic.

4-14.1 E Blocks

The design of blocks in regard to length, width, and shape should reflect adequate provision for building sites, needs to access and circulation, and limitations created by topographic features.

- (1) Blocks shall have sufficient width to provide for two (2) tiers of lots of appropriate depth. Exceptions to this prescribed block width may be permitted in blocks adjacent to major public ways, railroads, waterways, or areas prevented by topographical conditions or size of the property.
- (2) The lengths, widths, and shapes of blocks shall be determined with due regard to:
 - a. provision of adequate building sites suitable to the special needs of the type of use contemplated;
 - b. any zoning requirements as to lot sizes and dimensions;
 - c. needs for convenient access, circulation, control, and safety of vehicular and pedestrian traffic; and
 - d. limitations and opportunities of topography.
- (3) Block lengths in residential areas shall not exceed one thousand two hundred (1,200) feet nor be no less than three hundred (300) feet in length, except as the Planning Commission considers necessary to secure efficient use of land, or desired features of street pattern. Wherever practicable, blocks along arterial or collector routes shall not be less than one thousand (1,000) feet in length.
- (4) Blocks designed for industrial or commercial uses shall be of such length and width as may be deemed suitable by the Planning Commission.
- (5) In any long block, the Planning Commission may require the reservation of an easement through the block to accommodate utilities, drainage, facilities, and/or pedestrian traffic.
- (6) A pedestrian walkway, not less than ten (10) feet wide, may be required by the Planning Commission through the approximate center of any block more than eight hundred (800) feet long, where deemed essential to provide circulation or access to a school, playground, shopping center, transportation facility, or other community facility.

4-14.1 F Access to Arterials and Collectors

Where a subdivision borders on or contains an existing or proposed arterial or collector route, the Planning Commission may require that access to such public way be limited by:

- (1) the subdivision of lots so as to back on the arterial or collector route and front on a parallel minor route;
- (2) a series of cul-de-sac(s), "U" shaped public ways, or short loops entered from and designed generally at right angles to such a parallel public way, with the rear lines of their terminal lots backing onto the arterial or collector route; or
- (3) a marginal access or service public way, separated from the arterial or collector route by a planting or grass strip and having access thereto at suitable points.

The number of residential or local public ways entering on arterial or collector routes shall be kept to a minimum.

4-14.1 G Reserve Strips

The creation of reserve strips adjacent to a proposed public way in such a manner as to deny access from adjacent property to such public way shall not be permitted.

4-14.1 H Arrangement of Continuing and Dead-end Public Ways

(1) Arrangement of Continuing Public Ways

The arrangement of public ways shall provide for the continuation of major public ways between adjacent properties when such continuation is necessary for convenient movement of traffic, effective fire protection, efficient provision of utilities, and when such continuation is in accordance with the major street or road plan. If the adjacent property is undeveloped and the public way must be a dead-end public way temporarily, the right-of-way shall be extended to the property line. A temporary cul-de-sac, temporary "T" or "L" shaped turnabout shall be provided on all temporary dead-end public way as required in the following turnabout standards, with a notation on the subdivision plat that land outside the normal public way right-of-way shall revert to abutting property owners whenever the public way is continued. The Planning Commission may limit the length of temporary dead-end public ways in accordance with the design standards of these regulations.

(2) Arrangement of Dead-end Public Ways

Where a public way does not extend beyond the boundary of the subdivision and its continuation is not required by the Planning Commission for access to adjoining property, its terminus shall normally not be nearer to such boundary than fifty (50) feet. However, the Planning Commission may require the reservation of an appropriate easement to accommodate drainage facilities, pedestrian traffic, or utilities. A cul-de-sac turnabout shall be provided at the end of a dead-end public way in accordance with the design standards of these regulations.

4-14.2 Railroads and Limited Access Highways

Railroad rights-of-way and limited access highways, where so located as to affect the subdivision of adjoining lands, shall be treated as follows:

4-14.2 A In residential areas, a buffer strip at least twenty-five (25) feet in depth in addition to the normally required depth of the lot may be required adjacent to the railroad right-of-way or limited access highway. This strip shall be part of the platted lots and shall be designated on the plat: "This strip is reserved for screening; the placement of structures hereon is prohibited."

4-14.2 B In commercial or industrial areas, the nearest public way extending parallel or approximately parallel to the railroad shall, wherever practicable, be at a sufficient distance therefrom to ensure suitable depth for commercial or industrial sites.

4-14.2 C Public ways parallel to a railroad, when intersecting a public way, which crosses the railroad at grade, shall to the extent practicable, be at a distance of at least one hundred fifty (150) feet from the railroad right-of-way. Such distance shall be determined with due consideration of the minimum distance required for future separation of grades by means of appropriate approach gradients.

4-14.3 Bridges

Bridges of primary benefit to the subdivider, as determined by the Planning Commission, shall be constructed at the full expense of the subdivider without reimbursement from the governing body. The sharing of expenses for the construction of bridges not of primary benefit to the subdivider, as determined by the Planning Commission, shall be fixed by special agreement between the governing body and the subdivider. The cost shall be charged to the subdivider *pro rata* as to the percentage of his development so served.

4-14.4 Right-Of-Way Width Dedication on Existing Public Ways

Where a subdivision adjoins an existing narrow public way or where the major street or

road plan or any zoning setback provisions indicate plans for realignment or widening of a public way that would require use of some of the land in the subdivision, the subdivider shall be required to dedicate, at his expense, areas for widening or realigning such public way as set forth below:

4-14.4 A The entire right-of-way shall be provided where any part of the subdivision is on both sides of the existing public way; or

4-14.4 B When the subdivision is located on only one side of an existing public way, one-half of the required right-of-way, measured from the center line of the existing pavement, shall be provided.

4-15 Design Standards - Purpose

In order to provide public ways of suitable location, width, and improvement to accommodate prospective traffic and afford satisfactory access to police, fire-fighting, sanitation, and road-maintenance equipment, and to coordinate public ways so as to compose a convenient and safe system and avoid undue hardships to adjoining properties, the public way design standards set forth in this section are hereby required. Public way classification shall be as indicated on the land development plan or major street or road plan; otherwise, the public way shall be classified by the Planning Commission according to the definitions in Article 5 of these regulations.

4-16 General Design

The general design of all public ways shall conform to the standards contained in the following pages.

4-17 Streets and Roads

4-17.1 Intersections

4-17.1 A Public ways shall be laid out so as to intersect as nearly as possible at right angles. A proposed intersection of two (2) new public ways at an angle of less than seventy-five degrees (75°) shall not be permitted. An oblique public way should be curved approaching an intersection and should be approximately at right angles for at least one hundred (100) feet therefrom. Not more than two (2) public ways shall intersect at any one point unless specifically approved by the Planning Commission.

4-17.1 B Proposed new intersections along one side of an existing public way shall coincide, wherever practicable, with any existing intersections on the opposite side of such public way. The centerline offset between two public ways shall be a

minimum of one hundred and fifty (150) feet for local roads and collectors shall be a minimum of two hundred (200) feet between their centerlines.

4-17.1 C Radii of property lines at road intersection shall not be less than twenty-five feet (25') for residential and local streets and thirty feet (30') for collectors and non-residential streets. Where an acute angle of less than seventy-five (75) degrees occurs between roads at their intersection, the radii of property lines may be required to be increased. Property line radii at intersections for expressways and arterial as specified by the Tennessee Department of Transportation.

4-17.1 D Where a public way intersection will involve earth banks or existing vegetation inside any lot corner that would create a traffic hazard by limiting visibility, the subdivider shall cut such ground or vegetation (including trees) in connection with the grading of the public right-of-way to the extent necessary to provide adequate site distance.

4-17.1 E The maximum grade of any street at the approach to an intersection shall not exceed three (3) percent for fifty (50) feet. This distance shall be measured from the nearest edge of pavement of the adjacent street. A vertical curve must be used to connect the three (3) percent or less grade at the approach with subsequent changes in grade, and shall begin at fifty (50) feet from the nearest edge of pavement of the intersecting street. The grade on the through street should remain constant.

4-17.1 F The cross-slope on all public ways, including intersections, shall be three percent (3%) or less.

4-17.1 G Traffic control signs and devices shall be designed in accordance with the Manual Uniform Traffic Control Devices (MUTCD) code. Subdivisions that increase traffic flow into existing or proposed street intersections and warrant traffic control devices shall be installed at the expense of the developer.

4-17.2 Conformity to the Major Street and Road Plan:

The subdivision of land and the design of roads servicing such land shall be undertaken in conformity with the Major Street and Road Plan adopted by the Springfield Municipal/Regional Planning Commission.

4-17.3 Relation to Adjoining Road Systems:

The proposed road systems of subdivisions shall provide for the continuation of existing or platted streets in adjoining or nearby tracts. Where in the opinion of the Planning Commission, it is desirable to provide for street access to adjoining property, streets shall

be extended to the boundary of such property. Multiple access points for subdivisions shall be provided whenever possible.

4-17.4 Streets

A general term used to describe a right-of-way which provides a channel for vehicular or pedestrian movement between certain points in the community, which may provide for vehicular and pedestrian access to properties adjacent to it, and which may also provide space for the location of underground and aboveground utilities. STREETS are classified by their function as follows:

4-17.4 A Freeways and Expressways

As specified by the Tennessee Department of Transportation. A limited access roadway designed for traffic requiring high operating speeds and having relatively long operating distances.

4-17.4 B Arterial Streets

As specified by the Tennessee Department of Transportation. Are streets used primarily for the movement of vehicles, but may provide for vehicular access to adjacent property. When access to adjacent property is permitted, it should be by means of a marginal access type street to serve several properties rather than permitting each property owner to have his own private driveway access point. Limited access should be encouraged on arterial streets to maintain the function that the street provides the traveling public. The number of household units served by arterial streets is unlimited; however, access onto these streets should be limited. Arterial Streets may be classified as either Major Arterials or Minor Arterials according to the average daily traffic (ADT) and their function in the overall regional scheme of the transportation plan.

- (1) Major Arterial streets have an ADT of 5001 or greater. Right-of-way widths shall be at least one hundred (100) feet and pavement widths shall be as determined by the Tennessee Department of Transportation (TDOT).
- (2) Minor Arterial streets shall have an ADT between 2,501 and 5,000. Right-of-way widths shall be at least eighty (80) feet and pavement widths shall be as determined by TDOT.

4-17.4 C Limited Access Streets

An expressway, arterial or collector street serving a primary function of efficient and expedient traffic flow. Access by driveways onto limited access highways

shall be prohibited. Public streets or frontage roads onto streets classified by the Planning Commission, as "Limited Access" shall be restricted to distances of a minimum of five hundred (500) feet apart.

4-17.4 D Collector Streets

Collector streets are used more for movement of vehicles than for providing access to adjoining properties. Access to adjacent property should be planned and controlled so that minimum disturbance is made to the traffic-moving efficiency of the Collector Street. This classification of street has an average daily traffic projection of 500 to 2,500. Right-of-way widths shall be at least sixty (60) feet.

4-17.4 E Non-Residential Streets

Non-residential streets are to be constructed in areas appropriately zoned and proposed to be developed for uses other than residential. Non-residential streets serve primarily commercial and industrial uses. Right-of-way widths shall be at least sixty (60) feet.

4-17.4 F Local Streets

This class of street is primarily a residential street that serves the internal traffic movement within an area of the City, such as subdivision, and connects this area with a higher classification of the street system. Minor Streets are designed to service and to provide access to abutting properties. Minimum right of way of fifty (50) feet is required.

<u>Residential</u>	ADT of 250 - 500
<u>Minor Residential</u>	ADT of 0 - 249

4-17.4 G Marginal Access Streets

Marginal access streets are local or residential streets, which are parallel to and adjacent to arterial streets and expressways. These streets provide access to abutting properties and protection from through traffic. When a tract fronts on an arterial street, collector street or expressway, the Planning Commission may require such lots to be provided with frontage on a marginal access street or may require reverse frontage lots.

4-17.4 H Traffic Projections

For the purpose of these regulations average daily traffic (ADT) projections shall be ten (10) trips for each single-family residential lot and six (6) trips for each multi-family residential unit (including duplexes, triplexes, garden apartments, townhouses, condominiums, apartments, group homes, etc.)

The formula for calculating ADT for the purposes of these regulations shall be:

(Number of Proposed Dwelling Units) X (ADT Factor Per Type of Dwelling Unit)

4-17.4 I Alleys

Alleys are minor rights-of-way, dedicated to public use, which afford a secondary means of vehicular access to the back or side of properties otherwise abutting a street, and which may be used for public utility purposes. Alleys shall have a minimum right-of-way width of twenty feet (20) and a minimum pavement width of twenty feet (20).

- (1) Alleys shall not be provided in residential areas except where the developer produces evidence satisfactory to the Planning Commission of the need for alleys.
- (2) Alleys shall be provided in commercial and industrial subdivisions. The Planning Commission may waive these requirements provided that definite and assured provisions are made for service access, such as off-street loading, unloading, and parking consistent with and adequate for the uses proposed.
- (3) Dead-end alleys shall be prohibited unless a turn-around capable of allowing the projected traffic is provided.

4-17.4 J Dead End Streets

Dead end streets are streets having only one opening and providing no access to another street. The closed end provides a turn-around for vehicles. Permanent dead-end streets shall be no longer than one thousand two hundred feet (1200') measured along the centerline from the entrance street right-of-way to the center of the cul-de-sac and serve not more than 30 proposed dwelling units. For local streets a cul-de-sac shall have a right-of-way radius of not less than sixty feet (60'), the radius of the paved area forty-eight feet (48'). A transition curve radius of not less than seventy-five feet (75') for connecting the turnaround with the end of the

street is required, and the maximum grade of the turnaround shall not exceed eight percent (8%). When unusual topographic or other conditions exist, the length of the cul-de-sac or type of turnaround may be varied by the Planning Commission. The Planning Commission may require additional rights-of-ways and roadway improvements if variances are granted.

(Amended February 2, 2023)

4-17.4 K Temporary Dead End Streets

Temporary dead end streets shall be no longer than one thousand two hundred feet (1,200') measured along the centerline from the entrance street right-of-way to the center of the cul-de-sac and serve not more than 30 proposed dwelling units. Where a street is provided to give access to adjoining property, the street shall be constructed to the property line. Such streets shall be provided with a paved, temporary turn-around that will be dedicated as public. The turn-around shall have a roadway diameter of sixty feet (60'). When the adjoining property is subdivided and the streets extended, that adjacent property owner shall be required to eliminate the temporary turn-around and install curbing to join the streets together. Where a street is provided to give access to adjoining property, and does not have any lots with frontage on said street, the street shall be constructed to the property line. Such streets shall not be required to provide a turn-around.

- (1) All temporary turn-arounds shall not be approved for a period of more than twenty-four (24) months by the Planning Commission;
- (2) A bond sufficient to complete the permanent construction of a cul-de-sac in accordance with these regulations and a maintenance bond for the temporary turn-arounds, shall be posted by the developer and approved by the Planning Commission and Board of Mayor and Aldermen for each temporary turn-around.
- (3) At the expiration of the twenty-four month period, the Board of Mayor and Aldermen may opt to declare the bond in default and proceed with the construction of the permanent turn-around or, in cases of extreme hardship of the developer beyond his control, may extend the period of the bond for an additional six (6) to twelve (12) months.

4-17.4 L Additional Width on Existing Streets

Subdivisions that adjoin existing streets shall dedicate additional right-of-way to meet minimum street or width requirements or requirements specified in the Major

Street and Road Plan. The entire right-of-way shall be provided where any part of the subdivision is located on both sides of the existing street. When the subdivision is located on only one side of an existing street, one-half (1/2) of the required right-of-way, measured from the centerline of the existing roadway, shall be provided.

4-17.5 General Design Standards for Roadways

Per Classification	<u>Residential</u>	<u>Non-Residential</u>
		(Industrial, Commercial, Other)
<u>Minimum Right-of-Way (feet)</u>		
Principal/Minor Arterials	*	*
Collector	60	**
Local		
Residential	50	60
Minor Residential	50	60
<u>Minimum Width of Roadway ****</u>		
Principal/Minor Arterials	*	*
Collector	26	26
Local		
Residential	26	
Minor Residential	26	
Non-Residential		26
<u>Maximum Percentage of Grade (feet)</u>		
Principal/Minor Arterials	*	*
Collector	7 %	6 %
Local		
Residential	10 %	6 %
Minor Residential	10 %	6 %

Minimum grade for collectors and locals shall be 0.5%. Grades of an additional 2% above standards may be allowed for collectors and locals, if approved by the Planning Commission.

*	As determined based upon the Tennessee Department of Transportation design guidelines and the American Association of State Highway and Transportation Officials, Policy on Geometric Design of Highways and Streets.
**	As determined by appropriate governmental representative.
***	Applies where a deflection angle of 5 degrees or more in the alignment of pavement occurs.
****	Dimension does not include parking shoulders or turn lanes.

Per Classification	Residential	Non-Residential
<u>Minimum Radius of Horizontal Curve (feet) ***</u>		
Principal/Minor Arterials	*	*
Collector	250	300
<u>Local</u>		
Residential	150	250
Minor Residential	100	200
<u>Minimum Length of Crest Vertical Curves (feet)</u>		
Principal/Minor Arterials	*	*
Collector	30 times the Algebraic Difference in Grades	
Local	20 times the Algebraic Difference in Grades	
<u>Minimum Length of Sag Vertical Curves (feet)</u>		
Principal/Minor Arterials	*	*
Collector	40 times the Algebraic Difference in Grades	
Local	30 times the Algebraic Difference in Grades	
<u>Minimum Sight Distance (feet)</u>		
Principal/Minor Arterials	*	*
Collector	250	300
Local	200	250

Intersections	Across Corners 75 feet back	Across Corners 75 feet back
The sight distance is measured from a point 3.5 feet above the centerline of a local road (4.25 feet above the pavement surface for collector) surface to a point 0.5 feet above the centerline of the roadway surface.		
*	As determined based upon the Tennessee Department of Transportation design guidelines and the American Association of State Highway and Transportation Officials, Policy on Geometric Design of Highways and Streets.	
**	As determined by appropriate governmental representative.	
***	Applies where a deflection angle of 5 degrees or more in the alignment of pavement occurs.	
****	Dimension does not include parking shoulders or turn lanes.	
Per Classification	<u>Residential</u>	<u>Non-Residential</u>
<u>Minimum Diameter of Turnaround on Cul-de-sacs (feet)</u>		
Pavement Diameter	96	150
Right-of-way Diameter	120	175
<u>Pavement Crown</u>		
The paved surface shall slope downward from the centerline of the roadway outward to the edge of the paved surface on each side at a rate of <u>0.033 feet per foot</u> on a tangent roadway. On curved roads, the crown cross slope will vary and the Tennessee Department of Transportation design guidelines standards should be used.		
<u>Length of Cul-de-sac Streets</u>		
Temporary	Serving no more than 30 dwelling units and not exceeding 1,200 feet in length.	
Permanent	Serving no more than 30 dwelling units and not exceeding 1,200 feet in length.	
Per Classification	<u>Residential</u>	<u>Non-Residential</u>
<u>Minimum Radius of Return at Intersections (feet)</u>		
Pavement Radius	30	50
Right-of-Way Radius	25	30
<u>Minimum Length of Tangents Between Reverse Horizontal Curves (feet)</u>		
Principal/Minor Arterials	*	*
Collector	200	250
Local	100	200

*	As determined based upon the Tennessee Department of Transportation design guidelines and the American Association of State Highway and Transportation Officials, Policy on Geometric Design of Highways and Streets.
**	As determined by appropriate governmental representative.
***	Applies where a deflection angle of 5 degrees or more in the alignment of pavement occurs.
****	Dimension does not include parking shoulders or turn lanes.

(Amended February 2, 2023)

4-17.6 Excess Right-Of-Way

A slope easement in excess of the right-of-way designated in these regulations may be required whenever, due to topography, additional width is necessary to provide adequate earth slopes. Such slopes shall not be less than three-to-one (3:1). Where solid rock is encountered slopes shall be one-half-to-one (0.5:1).

4-17.7 Public Way Surfacing and Improvements

After underground utilities have been installed, the subdivider shall construct curbs or curbs with gutters, where required, and shall surface or cause to be surfaced public ways to the widths prescribed in these regulations. No public way shall be surfaced until final approval of the subdivision plat has been obtained. Surfacing shall be of such character as is suitable for the expected traffic. Types and methods of paving shall be according to the specifications of the governing body, but in no event shall such construction be below the construction specifications set forth in Appendix A, of these regulations. Adequate provisions shall be made for culverts or other drains, and bridges, as required.

All public way pavements, shoulders, drainage improvements and structures, any curb turnabouts, and sidewalks shall conform to all construction standards and specifications adopted by the Planning Commission and shall be incorporated into the construction plans required to be submitted by the developer for plat approval.

4-18 Road Construction Specifications

The road construction specifications are included in these regulations as Appendix A, and are adopted as a part hereof. These specifications shall be the minimum standards for any subdivision within the jurisdictional area.

4-19 Street and Road Construction

4-19.1 Street Plans

The developer shall provide street construction plans for approval to the Department of Community Development and Planning. These plans shall show plans and profiles of all streets (vertical and horizontal alignments), typical cross sections, natural and finished

grades, vertical curves, horizontal curves, tangents, grades at intersections, angle of intersection, property line locations, street offsets, debris sites, and sidewalk width and position. Plans must be approved prior to street construction.

4-19.2 Centerline

The centerline of proposed streets that intersect existing roadways may be marked or flagged in the right-of-way prior to construction, if directed by staff or the planning commission.

4-19.3 Grading

The subdivider shall grade or fill horizontally all streets, roads, and alleys to the specifications contained in Appendix A.

4-19.4 Debris Site

Any location on the subject property that is proposed for use as a disposal area for organic waste collected on-site during construction of the subdivision shall be approved by the Planning Commission on the final plat.

4-19.5 Construction of Streets and Roads

The construction of streets and roads shall be in accordance with Appendix A of these Subdivision Regulations.

4-19.6 Street Names

Streets which are in alignment with existing streets shall bear the name of the existing streets. Street names shall not duplicate or closely approximate the names of existing streets within the local postal zip code region or as defined by the appointed representative of the Robertson County E-911 service area responsible for street addressing. The number of characters, including spaces, should not exceed twenty (20). Suffixes for street names may include Street, Avenue, Drive, Way, Lane, Place, Court, Boulevard, Parkway, Crossing, Glen, Green, Path, Trail, Terrace, Trace, Square, Point, Loop, or Circle, as appropriate.

4-19.7 Street Lights

Decorative, ornamental streetlights, if desired, shall be purchased and installed by the developer or owner of the subdivision in accordance with the City of Springfield Electric Department specifications.

4-20 Street Signs and Traffic Control Signs

Street signs and traffic control signs shall be provided by the Springfield Department of Public Works and purchased by the subdivider for subdivisions within the City. The installation of these signs shall be coordinated with the Public Works Street Division. If the subdivider chooses to use other than City standard street signs, they must be approved by the Public Works Director. Installation and maintenance of such signs prior to acceptance of the street for City of Springfield maintenance shall be the responsibility of the subdivider. It shall be the responsibility of the subdivider to provide street signs as designated by the County Road Superintendent for subdivisions developed within the Planning Region.

4-21 Drainage and Storm Sewers

4-21.1 General Requirements

The Planning Commission shall not approve any plat of a subdivision, which does not make adequate provisions for stormwater or floodwater run-off channels or basins. The stormwater drainage system shall be separate and independent from any sanitary sewer system. Construction and design of stormwater drainage and detention /retention facilities shall be in accordance with Appendix A.

4-21.2 Nature of Stormwater Facilities

4-21.2 A Location

The subdivider may be required by the Planning Commission to transport by pipe or open ditch any spring or surface water that may exist either prior to or as a result of the subdivision. Such drainage facilities shall be located in the public way right-of-way, where feasible, or in perpetual unobstructed easements of appropriate width and shall be constructed in accordance with the construction specifications contained in these regulations.

4-21.2 B Accessibility to Public Storm Sewers

- (1) The developer shall install storm sewer facilities. Adequate provision shall be made for the disposal of storm-waters, subject to the specifications of the appropriate governmental representative. Inspection of facilities shall be conducted to assure compliance. Inspection of facilities shall be conducted by the enforcing officer.
- (2) If a connection to a public storm sewer shall be provided eventually as determined by the Planning Commission, the subdivider shall make arrangements for future stormwater disposal by a public system at the time the plat receives final approval. Provision for such connection shall be

incorporated by inclusion in the performance bond required for the final subdivision plat.

4-21.2 C Accommodation of Upstream Drainage Areas

A culvert or other drainage facility shall in each case be large enough to accommodate potential runoff from its entire upstream drainage area, whether inside or outside the subdivision. Necessary facilities shall be sized based on the construction specifications and assuming conditions of maximum potential watershed development permitted by the zoning ordinance.

4-21.2 D Effect on Downstream Drainage Areas

The governing body shall also study the effect of each subdivision on existing downstream drainage facilities outside the area of the subdivision. Where it is anticipated that the additional run off incident to the development of the subdivision will overload an existing downstream drainage facility, the Planning Commission may withhold approval of the subdivision until provision has been made for adequate improvement of such drainage facilities in such sum as the Planning Commission shall determine. No subdivision shall be approved unless adequate drainage will be provided to an adequate drainage watercourse or facility.

4-21.2 E Areas of Poor Drainage

Whenever a plat is submitted for an area which is subject to flooding, the Planning Commission may approve such subdivision; provided, that the applicant fills the affected floodway fringe area of said subdivision to place public streets and ways to elevations at or above the 100-year flood. The first-floor elevations (including habitable basements) shall be constructed no less than one (1) foot above the regulatory flood elevation (100-year flood). The plat of such subdivision shall provide for a floodway along the bank of any stream or watercourse of width sufficient to contain or move the flood water, and no fill shall be placed in the floodway; neither shall any building nor flood-restrictive structure be erected or placed therein. The boundaries of the floodway and floodway fringe area, and the regulatory flood elevation, shall be determined by the Planning Commission based upon the review specified in Article 2, of these regulations and the submission of flood data in construction plans as specified in Article 4, of these regulations.

4-21.2 F Floodplain Areas

The Planning Commission may, when it deems it necessary for the health, safety, or welfare of the present and future population of the area, or necessary to the

conservation of water, drainage, and sanitary facilities, prohibit the subdivision of any portion of the property which lies within the floodplain of any stream or drainage course. The regulatory floodway shall be preserved from any and all destruction or damage resulting from clearing, grading, or dumping of earth, waste material, or stumps. Any subdivision which contains flood-prone land shall be subject to the special provisions set forth in Sections 2-2.2; 4- 4 and 4 –6.3 of these regulations.

4-21.3 Dedication of Drainage Easements

4-21.3 A General Requirements

Where a subdivision is traversed by a watercourse, drainage-way, channel, or stream, there shall be provided a stormwater easement or drainage right-of-way conforming substantially to the lines of such watercourse and of such width and construction as will be adequate.

4-21.3 B Drainage Easements

- (1) Where topography or other conditions are such as to make impractical the inclusion of drainage facilities within a public way right-of-way, perpetual unobstructed easements at least twenty feet (20') in width for such facilities shall be provided across property outside the public way lines and with satisfactory access to public ways. Easements shall be indicated on the preliminary and final plats. Drainage easements shall be carried from the public way to a natural watercourse or to other drainage facilities.
- (2) When a new drainage system is to be constructed which will carry water across private land outside the subdivision, appropriate drainage rights must be secured and indicated on the plat.
- (3) The applicant shall dedicate, when required by the Planning Commission, either in fee, or by drainage or conservation easement, the land on both sides of existing watercourse to a distance to be determined by the Planning Commission.
- (4) Along watercourses, low-lying lands within any floodway, as determined by the Planning Commission pursuant to Section 2- 2.2, of these regulations, whether or not included in areas for dedication, shall be preserved and retained in their natural state as drainage-ways.

4-21.3 C Ditching, Concrete Ditch Paving, Culverts, and Storm Drains

The design and construction details of drainage facilities shall be in accordance

with the provisions of Appendix A of these regulations. The design and construction details of all such facilities shall be approved by the appropriate governmental representative.

4-21.3 D See Appendix A for driveway, culverts, cross drains and headwall construction.

4-22 Water Facilities

When the subdivision is located within the service area of the City's public water system, potable water mains shall be designed and constructed by the subdivider and connected to the City's public water system. The design and construction shall be in accordance with the City of Springfield's Water and Sewerage Design and Construction Standards Manual, latest edition.

4-23 Fire Hydrants

Fire hydrants shall be required in all subdivisions; they shall be located no more than six hundred feet (600') apart and be within three hundred feet (300') of any residential lot. Commercial and industrial sites shall not be farther than 300 feet from a fire hydrant. Fire hydrant locations shall be measured along the roadway. The Planning Commission may require closer spacing where physical conditions or types of structures so warrant. To eliminate future public way cuttings or openings, all underground utilities for fire hydrants, together with the fire hydrants themselves, and all other water supply improvements shall be installed before any final paving of a public way shown on the subdivision plat, unless otherwise approved by the Planning Commission.

(Amended February 2, 2023)

4-24 Sewage Facilities

When the proposed subdivision or development is located within the service area of the City's public Sewerage system, sanitary sewers shall be designed by the subdivider and connected to the City's public sewerage system. The design and construction shall be in accordance with the City of Springfield's Water and Sewerage Design and construction Standards Manual, latest edition.

4-25 Connection to Public Sewer System

The Subdivider shall provide sanitary sewer facilities to each lot in the subdivision and connect these facilities to the public sewer system.

4-26 Floodproofing of Sewer Facilities

All sanitary sewer facilities located in a flood hazard area shall be flood-proofed to the regulatory flood-protection elevation. All sewer facilities located below the regulatory flood-

protection elevation shall be designed to prevent infiltration of floodwaters into the sewer system and discharges from the system into floodwaters.

4-27 Individual Disposal System Requirements

- 4-27.1 When the proposed subdivision or development is not located within two thousand (2,000) feet of a public sewerage system, the subdivider may utilize private subsurface sewage treatment systems (septic tanks) provided the systems meet the standards of the Tennessee Department of Environment and Conservation, Division of Ground Water Protection, as administered by the County Environmentalist. The private subsurface sewage treatment system must be located on the lot it serves.
- 4-27.2 The individual disposal system, including the size of the septic tank and size of the drain fields or other secondary treatment device, also shall be approved by the County Environmentalist.
- 4-27.3 Package Treatment Plants, STEP, Low Pressure, or Vacuum Sewage Collection Systems are not approved for installation. In order to provide sufficient and reliable sanitary sewer service, and to help avoid future infrastructure maintenance or replacement costs due to inefficient or remote facilities, the use of “package” or on-site treatment processes are not approved. The collection of sanitary sewer by means other than gravity systems with municipal grade pump stations, as outlined in the City of Springfield’s Design and Construction Standards Manual are not approved.

4-28 Pedestrian Ways

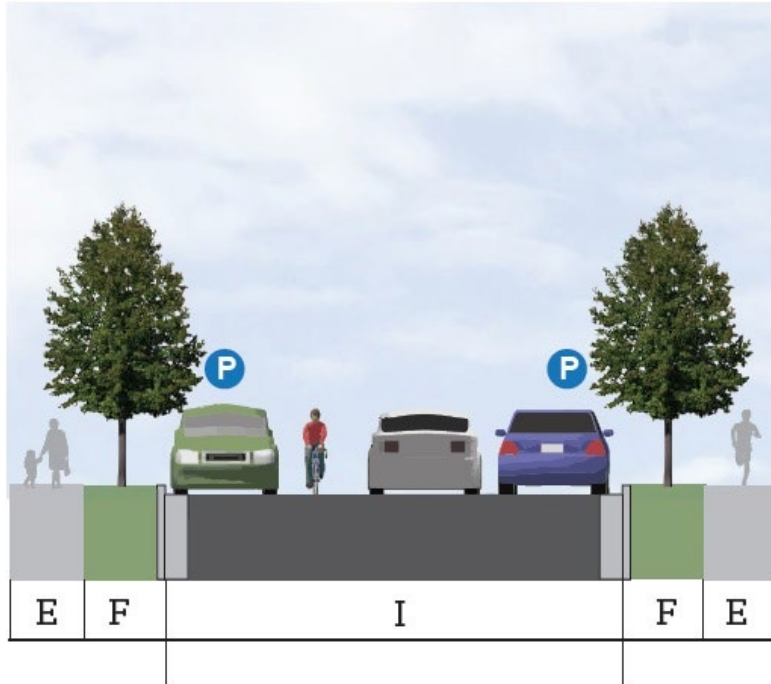
4-28.1 Sidewalks

4-28.1 A Sidewalks (or alternative walkways where authorized) are required for all developments in all zoning districts and shall be provided along all through public streets on both sides of the street within the street right-of-way or adjoining public easement on the entire frontage, and connect to or join existing sidewalks on adjacent properties. For new or infill development, new sidewalks shall connect to the existing sidewalk. Shared use paths may alternatively be used where authorized by the Public Works Director in consultation with the City Engineer. Exceptions to the need of sidewalks are as follows:

1. Sidewalks are not required on minor subdivisions with existing streets not having sidewalks.
2. Residential alleys where approved shall not require sidewalks.

- 4-28.1 B Minimum sidewalk width is **five (5) feet**. Additional width may be required. Where sidewalk obstructions are unavoidable a continuous four-foot-wide path around the obstruction shall be provide upon a field review and approval by the Public Works Director.
- 4-28.1 C Sidewalks shall be ADA compliant and ramps shall be constructed at street corners. Sidewalks shall not be required to cross driveways if the driveway already provides an ADA compliant connection.
- 4-28.1 D Sidewalks shall be constructed at the right-of-way line and at least **five (5) feet** behind the curb to allow for landscaping and street trees when feasible.
- 4-28.1 E Sidewalks shall be concrete or another approved surface. Asphalt sidewalks are prohibited without approval of the Public Works Director. Sidewalks must be constructed of concrete mix with a strength of 3,500 pounds per square inch, a minimum of four inches thick, shall slope 1/4 inch per foot inch width, and shall have saw cuts installed every five feet and expansion joints installed every 20 feet.
- 4-28.1 F Crosswalks shall be provided to connect external pedestrian circulation to a site and safely convey pedestrians to the site destination; and shall be striped in conformance with the latest edition of the Manual on Uniform Traffic Control Devices. The layout of the crosswalk shall be a minimum of **10 ft wide**, regardless of the sidewalk or crossing width.
- 4-28.1 G Alternative pedestrian systems not mentioned here may be provided in lieu of public sidewalks upon the approval by of the Planning Commission or Board of Mayor and Aldermen. Alternative systems shall link all lots with activity areas such as open spaces or parking areas, shall be paved, and shall provide for the ownership and maintenance of such systems.

Typical Roadway Section



Component	Description	Dimensions
E	Sidewalk	5', 6' preferred
F	Green Strip	5' minimum
I	Roadway Width	26'

*Utilities to be located outside ROW in Public Utility & Drainage Easements

4-28.2 Pedestrian Accesses

The Planning Commission may require, in order to facilitate pedestrian access from the public way to schools, parks, playgrounds, or other nearby public ways, perpetual unobstructed easements at least twenty (20) feet in width. Easements shall be indicated on the plat.

(Amended February 2, 2023)

4-29 Driveways

4-29.1 Design

4-29.1 A Driveway culverts shall be a minimum of 15 inches Inside Diameter (ID) and a minimum length of sixteen (16) feet or as indicated on the Driveway Permit required for connection to a public street and shall be made of the materials indicated on said permit issued by the SPWD.

4-29.1 B Polyvinyl Chloride (PVC), High Density Polyethylene (HDPE) or any other plastic pipe shall not be used as a driveway culvert.

- 4-29.1 C Driveway culvert material shall be Reinforced Concrete Pipe (RCP) or Corrugated Metal Pipe, 14-gauge minimum (CMP), only, unless written permission granted by the Director of Public Works.
- 4-29.1 D Headwalls shall be required at both ends of the pipe in all cases when the ditch grade is 6% or greater, and in all cases where CMP is installed.
- 4-29.1 E Driveway aprons must be **six (6) feet** measured from the back of curb and a minimum **six (6) inch thick**. Aprons, curb, and sidewalk must be Class A concrete and have wire and/or macro fiber. Water meter boxes and sewer cleanouts shall not be located within a driveway.
- 4-29.1 F Curb at driveway opening must be cut and match with existing curb material and color.
- 4-29.1 G Driveways that cross sidewalks **MUST** meet all ADA requirements.
- 4-29.1 H All new single-family, two-family or multifamily residential structures shall have paved driveways, turn-arounds and parking areas constructed of concrete or hot mix asphalt. Each unit shall have either a dedicated parking area for a minimum of two (2) vehicles, with a minimum parking area dimension of **360 square feet** and a minimum width of **16 feet**, that is located in the side-yard; or a one (1) vehicle garage or carport; or a garage that will accommodate two (2) or more vehicles.
- 4-29.1 I Residential structures with a one (1) vehicle garage or carport shall have a total minimum paved parking area, both under roof and open driveway, of **360 square feet**. The width of a driveway shall extend no more than **six (6) feet** in front of the house or residential structure.
- 4-29.1 J Residential structures sitting a distance of 150 ft or more from the edge of the street shall be paved from the edge of the street for a distance of at least 100 feet.
- 4-29.1 K Public Works has the authority to grant or make changes where necessary to design.

4-29.2 Access Control

In order to promote the safety of the motorist and pedestrian and to minimize traffic congestion and conflict by reducing the points of contact, the following regulations shall apply. These regulations are shown on the following illustrations.

- 4-29.2 A Maximum width of driveway openings at the property line:
1. Residential uses - 25 feet
 2. Gasoline service stations, freight and truck terminals, or other commercial and industrial uses customarily having a large volume of tractor-trailer vehicle traffic: 40 feet
 3. All other non-residential uses: 35 feet
- 4-29.2 B Minimum distance from an adjoining interior lot line and a driveway opening at the street right-of-way line:
1. Residential uses: Five (5) feet
 2. Non-residential uses: 12.5 feet
- 4-29.2 C Minimum distance from the intersection of street right-of-way lines on a corner lot and a driveway opening – at the right-of-way:
1. Residential uses: 25 feet
 2. Non-residential uses: 25 feet
- 4-29.2 D Minimum distance between two driveways serving the same property and which provide access to the same street, measured at property line:
1. Residential uses: 25 feet
 2. Non-residential uses: 25 feet
- 4-29.2 E Radius of Curb Return. The curb return radius shall meet the following requirements; provided, however, that no such radius shall exceed the distance between the driveway opening at the property line and the adjoining property line or $\frac{1}{2}$ the distance to an adjacent driveway:
1. Residential uses: Five (5) feet minimum, 15 feet maximum.
 2. Non-residential uses: Five (5) feet minimum, 20 feet maximum.
- 4-29.2 F Drainage. All driveways shall be constructed with the drain pipe size for the 25-year storm event that will be conveyed through the culvert.

(Amended February 2, 2023)

4-30 Cross Drains

- 4-30.1 All cross drains shall be a minimum of eighteen (18) inches ID and shall consist of Reinforced Concrete Pipe (RCP), Class III, or higher grade, ASTM C76. All RCP pipe shall be installed to the minimum standards of the SPWD and the typical sections. Excavations for cross drains in public streets shall be approved by the SPWD and a surety bond issued for repair. If approval is granted backfilling shall be according to the backfill detail or as directed by SPWD.
- 4-30.2 Corrugated Metal, Steel, PVC, HDPE, Plastic pipe, etc. shall not be used without the written approval of the Director of Public Works.
- 4-30.3 Pipes that are smaller than forty-eight (48) inches in diameter shall require a minimum cover of one (1) foot, exclusive of base and paving from top of the pipe to finished subgrade. A minimum cover of two (2) feet is required for pipes forty-eight (48) inches and larger. All pipes shall be built on straight line and grade and shall be laid with the spigot end pointing in the direction of the flow, with the ends fitted with a butyl sealant or mortar and matched to provide tight joints and a smooth uniform invert.
- 4-30.4 Pipes shall be bedded on a six (6) inch thickness of crushed limestone TDOT #57 or #67 stone and backfilled per the standard drawing. Bedding shall be crushed limestone Size No. 57 or 67, as shown in Section 903, latest edition of the Standard Specifications. Culverts and storm drains in existing public streets shall backfilled with "flowable fill" materials, placed and allowed to cure to before the placing of surface materials or as directed by the SPDW.
- 4-30.5 Concrete headwalls shall be constructed at both ends of cross drains as detailed in the Standard drawings or as directed by the SPWD.
- 4-30.6 All construction shall be in accordance with section on Storm Sewers & Drain Systems contained in these standards and Section 607, TDOT STANDARD SPECIFICATIONS.

4-31 Utility Easements

- 4-31.1 Easements along lot lines or additionally across lots, if deemed necessary by the Planning Commission, shall be provided for utilities (private or public). Such easements shall be at least ten (10) feet wide except for across-lot easements, which shall be at least twenty (20) feet wide. The subdivider shall take such actions as are necessary to ensure the coordination and continuation of utility easements established on adjacent properties with those proposed within his/her development.
- 4-31.2 Where topographical or other conditions are such as to make impractical the inclusion of utilities within rear lot lines, perpetual unobstructed easements at least ten (10) feet in

width shall be provided alongside lot lines with satisfactory access to public ways or rear lot lines. Easements shall be indicated on the plat.

4-31.3 Temporary construction easements exceeding the width of permanent easements may be required as necessary until completion of any one project.

4-32 Public Uses

4-32.1 Plat to Provide for Public Uses

Whenever a tract to be subdivided includes a school, recreation use, or road as indicated on the land development plan and/or major street or road plan, or any portion thereof, such tract shall be suitably incorporated by the developer into his plat when first presented for review by the Planning Commission.

After proper determination of its necessity by the Planning Commission and the appropriate governmental representative(s) involved in the acquisition and use of such site, and after a determination has been made to acquire the site by the public agency, the site shall be suitably incorporated by the developer into the plat prior to final approval by the Planning Commission and recording of the plat.

4-32.2 Referral to Governmental Agency Concerned

The Planning Commission shall refer any plat presented in accordance with Section 4-26.1 of these regulations to the appropriate governmental agency. The Planning Commission may propose alternative areas for such acquisition and shall allow the appropriate governmental agency thirty (30) days for reply.

Among the areas which the Planning Commission may propose for public acquisition, when the commission deems it appropriate and consistent with the policies and purposes set forth in these regulations, is any land within a floodway or floodway fringe determined according to the procedure outlined herein.

The acquiring agency's recommendation, if affirmative, shall include a map showing the boundaries and area of the parcel to be acquired and an estimate of the time required to complete the acquisition.

4-32.3 Notice to Property Owner

Upon receipt of an affirmative report, the Planning Commission shall notify the property owner and shall designate on all plats any areas proposed to be acquired by any governmental agency. Upon such designation by the Planning Commission, any reserved portion of any floodway or floodway fringe shall not be altered from its natural state by the developer in any manner whatsoever, except upon written approval of the

Planning Commission.

4-32.4 Duration of Land Reservation

The acquisition of land reserved by a governmental agency on the final plat shall be initiated within twenty-four months of notification, in writing, from the owner that he/she intends to develop the land. Such letter of intent shall be accompanied by a plat or a proposed development and a tentative schedule of construction. Failure on the part of the governmental agency to initiate acquisition within the prescribed twenty-four (24) months shall result in the removal of the "reserved" designation from the property involved and the freeing of the property for development in accordance with these regulations.

4-33 Preservation of Natural Features and Amenities

Existing features which would add value to residential development or to the area as a whole, such as trees, watercourses and falls, historic sites, and similar irreplaceable assets, shall be preserved in the design of the subdivision, as required by the Planning Commission. No change of grade of the land shall be affected nor shall any natural features be removed or relocated until a preliminary subdivision plat has been approved by the Planning Commission.

4-34 Nonresidential Subdivisions

4-34.1 General

If a proposed subdivision includes land that is zoned for a commercial or industrial purpose, the layout of the subdivision with respect to such land shall make such provisions as the Planning Commission may require. A nonresidential subdivision also shall be subject to all the requirements of site plan approval set forth in any zoning ordinance. Site plan approval may proceed simultaneously at the discretion of the Planning Commission. A nonresidential subdivision shall be subject to all the requirements of these regulations, as well as such additional standards set forth by the Planning Commission, and shall conform to the proposed land development plan, major street or road plan, and the zoning ordinance.

4-34.2 Standards

In addition to the principles and standards in the regulations, which are appropriate to the planning of all subdivisions, the subdivider shall demonstrate to the satisfaction of the Planning Commission that the public way, parcel, and block pattern proposed is specifically adapted to the uses anticipated and takes into account other uses in the vicinity. The following principles and standards shall be observed:

- 4-34.2 A Proposed industrial parcels shall be suitable in areas and dimensions to the types of industrial development anticipated.
- 4-34.2 B Public way rights-of-way and pavements shall be adequate to accommodate the type and volume of traffic anticipated.
- 4-34.2 C Special requirements may be imposed by the governing body with respect to any public way, curb, gutter, and sidewalk design and construction specifications.
- 4-34.2 D Special requirements may be imposed by the governing body with respect to the installation of public utilities, including water, sewer, and stormwater drainage.
- 4-34.2 E Every effort shall be made to protect adjacent residential areas from potential nuisance from the proposed nonresidential subdivision, including the provision of extra depth in parcels backing on existing or potential residential development and provisions for permanently landscaped buffer strips, when necessary.
- 4-34.2 F Public ways carrying nonresidential traffic, especially trucks normally shall not be extended to the boundaries of adjacent existing or potential residential areas.

4-35 Amendment for Underground Wiring

In order to avoid power outages and interruption of service from ice and wind storms, all subdivisions in Springfield of five lots or more shall be provided with underground utilities. Underground utilities include water, sewer, electricity, gas, telephone and cable TV.

All residential structures located in subdivisions without underground wiring (electricity, telephone, cable TV) shall be provided with underground service from the nearest pole to the house.

(Amended May 3, 2007)