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**MINIMUM REGULATIONS
FOR
SUBDIVISION DEVELOPMENT
WITHIN THE SPRINGFIELD, TENNESSEE PLANNING
REGION**

ARTICLE I

GENERAL PROVISIONS

- 1-1 Title – These regulations shall hereinafter be known and cited as the Subdivision Regulations of Springfield, Tennessee.
- 1-2 Authority – These subdivision regulations are adopted by the Springfield Municipal – Regional Planning Commission (hereinafter referred to as “Planning Commission”), pursuant to the authority and powers granted by Section 13-3-101 through 13-3-102, Tennessee Code Annotated. Having adopted a major street or road plan for the jurisdictional area, and filed a certified copy of the plan with the Robertson County Register of Deeds (hereinafter referred to as “county register”), as required by Section 13-3-402, Tennessee Code Annotated, and having held a public hearing as indicated in Section 13-3-403 of these regulations, the Planning Commission has fulfilled the requirements set forth in state law as prerequisites to the adoption of these regulations.
- 1-3 Jurisdiction -- These subdivision regulations shall apply to all subdivisions, as herein defined, located within the planning region of Springfield, Tennessee. No land shall be subdivided within the jurisdictional area until the subdivider submits a plat as required by these regulations, obtains Planning Commission approval of the plat, and files the approved plat with the county register.
- 1-4 Purpose and Intent – It is hereby declared to be the policy of the Planning Commission to consider the subdivision of land and development of a subdivision plat as subject to the control of the adopted land use, community development plan or growth plan(hereinafter referred to as “land development plan”) of the jurisdictional area for orderly, planned, and efficient physical and economical development.
- Land to be subdivided shall be of such character that it can be used for building purposes without danger of health, fire, flood, or other menace. Land shall not be subdivided until proper provisions have been made for drainage, water, other public utilities, and for other required public services. The existing

and proposed public improvements shall generally conform to and be properly related to the proposals shown in the land development plan.

The regulations herein shall supplement and facilitate the enforcement of the provisions and standards contained in the Springfield Municipal and Regional Zoning Ordinances (hereinafter referred to as “zoning ordinance,” as applicable).

These regulations are adopted for the following purposes:

- 1-4.1 To encourage the development of sound, healthy, and economically stable residential, commercial, industrial, and public areas.
- 1-4.2 To guide the development of the jurisdictional area in accordance with the land development plan, considering the suitability of nonresidential and public areas and having regard for the most beneficial land use in such areas.
- 1-4.3 To provide for adequate light, air, and privacy; to secure safety from fire, flood, and other dangers; and to prevent overcrowding of the land and undue congestion of population.
- 1-4.4 To enhance the character and economic stability and encourage the orderly, beneficial development of the jurisdictional area.
- 1-4.5 To conserve the value of land, buildings, and improvements throughout the jurisdictional area and to minimize detrimental conflicts among the uses of land and structures.
- 1-4.6 To guide public and private policy and action providing for transportation, water, sewerage, schools, recreational areas, and other public requirements and facilities.
- 1-4.7 To provide for the most beneficial relationship between the uses of land and buildings and the efficient traffic movement throughout the jurisdictional area.
- 1-4.8 To establish reasonable standards of design and procedures for subdivisions and resubdivisions; to further the orderly layout and use of land; and to insure proper legal descriptions and proper monumenting of land.
- 1-4.9 To insure that public facilities are available and will have a sufficient capacity to serve the proposed subdivision.
- 1-4.10 To prevent the pollution of air, streams, and ponds; to assure the adequacy of drainage facilities; to safeguard the water table; and to preserve the integrity, stability, beauty, and value of the jurisdictional area.
- 1-4.11 To preserve the natural beauty and topography of the jurisdictional area, and to insure appropriate development with regard to these natural features.
- 1-4.12 To provide for open spaces through efficient design and layout of the land, including the use of average density in providing for

minimum width and area of lots, while preserving the density of land as established in any zoning ordinance.

- 1-4.13 To encourage subdivision design which would maximize the conservation of all forms of energy.
- 1-4.14 To coordinate land developments to ensure that future physical growth will be orderly, efficient, and conducive to a minimum outlay of private and public expense in providing services to new growth areas.
- 1-4.15 To minimize fire hazards, to provide for safe, convenient and efficient traffic circulation, and provide for light and air in habitable structures.
- 1-4.16 To provide for the overall harmonious development in conformance to the adopted comprehensive plan.
- 1-4.17 To provide building sites that are designed to minimize damage to life, structures and land from flooding.

1-5 Interpretation, Conflict, and Severability

1-5.1 Interpretation – These regulations shall be held to be the minimum requirements for the promotion of health, safety, and general welfare.

1-5.2 Conflict with Public and Private Provisions

1-5.2A Public Provisions – These regulations are not intended to interfere with, abrogate, or annul any other ordinance, rule or regulation, statute, or other provision of law. Where any provision of these regulations imposes restrictions different from those imposed by any other ordinance, rule, regulation, or other provision of law, whichever provisions are more restrictive or impose higher standards shall control.

1-5.2B Private Provisions – These regulations are not intended to abrogate any easement, covenant, or any other private agreement or restriction; provided, that where these restrictions are more restrictive or impose higher standards than such easement, covenant, or other private agreement or restriction, the requirements of these regulations shall govern.

Where any private provision exceeds the standards set forth herein, such shall be considered a private contract between the parties of interest, and as such is beyond the jurisdiction of the Planning Commission.

1-5.3 Severability – If any part or provision of these regulations or application thereof to any person or circumstances is adjudged invalid by any court of competent jurisdiction, such judgement

shall be confined in its operation to the part, provision, or application directly involved in the controversy in which such judgement shall have been rendered and shall not affect or impair the validity of the remainder of these regulations or the application thereof to other persons or circumstances. The Planning Commission hereby declares that it would have enacted the remainder of these regulations without any such part, provision, or application.

1-6 Saving Provision – These regulations shall not be construed as abating any action not pending under, or by virtue of prior subdivision regulations; or as discontinuing, abating, modifying, or altering any penalty accruing or about to accrue; or as affecting the liability of any person; or as waiving any right of the governing body under any section or provision existing at the time of adoption of these regulations; or as vacating or annulling any rights obtained by any person by lawful action of the governing body, except as expressly provided otherwise in these regulations.

1-7 Previously Approved Subdivisions

1-7.1 Unexpired Preliminary Approval – The approval granted on any plat prior to the effective date of these regulations shall remain in force and effect for the time period stipulated by the regulations under which the approval was first granted.

1-7.2 Expired Preliminary Approval – In any instance in which the period of preliminary approval shall have passed with some portion of the subdivision not having received final approval, and the applicant wishes an extension of the preliminary approval, the Planning Commission may:

1-7.2A permit the remaining portion of the of the subdivision to be constructed and to receive approval under provisions set forth in the regulations whereby preliminary approval was originally granted, or

1-7.2B stipulate that the plat is null and void and that a new plat be presented subject to the provisions of these regulations.

In making this determination, the Planning Commission shall consider all pertinent facts available to it. The current state and active pursuit of construction and development activities within the subdivision shall be given due consideration in the course of the Planning Commission's deliberation on this question.

1-8 Amendments

1-8.1 Enactment – For the purpose of providing for the public health, safety, and general welfare the Planning Commission may from time to time amend these regulations. Before the adoption of any amendment to these regulations, a public hearing thereon shall be

held by the Planning Commission as required by Chapter 3, Title 13, Tennessee Code Annotated.

1-8.2 Codification and Distribution – Subsequent to the adoption of any amendment to these regulations, such amendment shall be incorporated into the text of these regulations in the following manner.

1-8.2 A Replacement pages shall be prepared incorporating the new or changed language. Each such new or replacement page shall have the amendment number and shall be dated so as to indicate the date of the last revision of the page.

1-8.2 B Each adopted amendment shall be numbered consecutively and printed on pages separate from any other amendment and in a manner which fully states any language deleted from these regulations and any language added and the place in the text of each such change.

1-9 Resubdivision of Land

1-9.1 Procedures for Resubdivision – If any change in an approved or recorded subdivision plat would affect the layout of any public street, alley, or road (hereinafter referred to as public way) shown on such plat, or area reserved thereon for public use, or any lot line, or if it would affect any map, plan, or plat legally recorded before the adoption of any subdivision regulations, such amendment shall be approved by the Planning Commission by the same procedure, rules, and regulations as for a subdivision.

1-9.2 Procedures for Subdivision Where Future Resubdivision Is Foreseen – Whenever a parcel of land is subdivided and the subdivision plat shows one or more lots containing more than one acre of land or double the minimum required area for any zoning district in which the lot is located, and the Planning Commission has reason to believe that any such lot(s) will be resubdivided into smaller building sites, the Planning Commission may require that the subdivision and development of such parcel of land allow for the future opening of public ways and the ultimate extension of adjacent public ways. The Planning Commission may also require that dedications providing for the future opening and Planning Commission extension of such public ways be indicated on the plat.

1-9.3 Conditions – Regulation of the subdivision of land and the attachment of reasonable conditions to land subdivision are exercises of valid police power delegated by the state to the Planning Commission. The developer has the duty of compliance with reasonable conditions imposed by the Planning Commission for design, dedication, improvement, and restrictive use of the land so as to provide for the physical and economical

development of the jurisdictional area and for the safety and general welfare of future plot owners in the subdivision and of the community at large.

1-10 Vacation of Plats – Any plat or any part of any plat may be vacated by the owner of the premise, at any time before the sale of any lot described therein, by a written instrument, to which a copy of such plat shall be attached, declaring the plat or part of the plat to be vacated. The Planning Commission shall follow the same procedure for approval of such instrument as required for approval of plats. The governing body may reject any such instrument which abridges or destroys any public rights in any of its public uses, improvements, or public ways. Such an instrument shall be executed, acknowledged, or approved, and duly recorded or filed; the instrument shall operate to void the recorded plat and divest all public rights in the public ways and public grounds and all dedications laid out or described in such plat. When any lot or lots have been sold the plat may be vacated in the manner herein provided only if all the owners of lots in such platted area join in the execution of such writing.

1-11 Variances

1-11.1 General – If the Planning Commission finds that extraordinary hardships or practical difficulties may result from strict compliance with these regulations, a variance from these regulations may be granted; provided, such variance shall not have the effect of nullifying the general intent and purpose of these regulations and provided, further, that the Planning Commission shall not recommend variations unless it shall make findings based upon written evidence presented to it in each specific case that:

1-11.1 A the granting of the variance will not be detrimental to the public safety, health, or welfare, or be injurious to other property or improvements in the neighborhood in which the property is located;

1-11.1 B the conditions upon which the request for a variance is based are unique to the property

1-11.1 C because of the particular physical characteristics for which the variance is sought and are not applicable generally to other property; surroundings, shape, or topographical condition of the specific property involved, a particular hardship (not self imposed) to the owner would result, as distinguished from a mere inconvenience, if the strict letter of these regulations were carried out; and

- 1-11.1 D the variance will not in any manner alter the provisions of the land development plan, the major street or road plan, or any zoning ordinance.

Where the Planning Commission concludes that the purpose of these regulations may be specifically served to an equal or greater extent by an alternative proposal, condition, or circumstance, it may approve other variations to these regulations.

- 1-12 Procedures – In approving any variation from these regulations the Planning Commission shall state fully in the minutes the grounds for the variation and all of the facts upon which the decision is made.
- 1-13 Conditions – In approving variations, the Planning Commission may impose such conditions as in its judgement will secure substantially the objectives, standards and requirements of these regulations.
- 1-14 Increased Standards -- The Planning Commission may require standards above the minimum contained herein whenever it feels the public health, safety and welfare justifies such increases.
- 1-15 Enforcement, Violation, and Penalties.
- 1-15.1 Authority – The enforcement of these regulations and the penalties for the unapproved recording or transfer of land are provided pursuant to Title 13, Tennessee Code Annotated.
- 1-15.2 Enforcing Officer – It shall be the duty of the building inspector or codes official (hereinafter referred to as “ the enforcing officer”) to enforce these regulations and to bring to the attention of legal council any violations or lack of compliance herewith. Furthermore, the Springfield Customer Service Department shall not provide utilities to subdivisions that are in violation of these regulations.
- 1-15.3 Recording of Plats – Pursuant to Sections 13-3-402, and 13-4-302, Tennessee Code Annotated, no plat of a subdivision of land within the jurisdictional area shall be received or recorded by the county register until the plat has received final approval of the Planning Commission in accordance with these regulations, and such approval has been endorsed in writing on the plat by the Planning Commission secretary. Upon final approval the Director of Community Development of the City of Springfield or his representative shall record the plat in the Robertson County Office of the Register of Deeds upon the payment by the subdivider of any and all fees associated with the plat that are established in these regulations. Recording of the plat shall occur within ten (10) days of collecting all fees and the final certification of all required approving authorities.
- 1-15.4 Use of Unapproved Plats – Pursuant to Sections 13-3-410 and 13-4-306 Tennessee Code Annotated, no owner or agent of the owner of any land shall convey such land contrary to the provisions stated therein.

1-15.5 Acceptance of Streets and Utilities – Pursuant to Sections 13-3-411 and 13-4-307, Tennessee Code Annotated, the governing body shall not nor shall any public authority accept, lay out, open, improve, grade, pave, or light any public way, lay or authorize the laying of water mains or sewers, or construct or authorize the construction of other facilities or utilities in any public way located within the jurisdictional area unless such street corresponds in its location and lines to a way shown on a preliminary subdivision plat approved by the Planning Commission or on a street adopted by the Planning Commission as provided in Section 13-4-303 and Section 13-3-403, Tennessee Code Annotated.

1-15.6 Override – However, the governing body may override the Planning Commission as provided in Title 13, Tennessee Code Annotated. In case of any state highway constructed or to be constructed within the jurisdictional area with state funds as a part of the state highway system, the submission to the Planning Commission shall be by the Tennessee Commissioner of Transportation, who shall have the power to overrule the disapproval of the Planning Commission.

1-16 Access to Lots by Public Way or Private Easement – Pursuant to Sections 13-3-411 and 13-4-308, Tennessee Code Annotated, no building permit shall be issued and no building or structure shall be erected on any lot within the jurisdictional area, unless the public way giving access to the lot upon which the building or structure is proposed to be placed shall have been accepted or opened or shall have been otherwise received the legal status of a public way as provided by law; provided, that the provisions of this section relating to access shall not apply to subdivisions of property zoned commercial or industrial and that no building permit shall be withheld in such cases of noncompliance with this section.

Provided, further, that when a permanent easement to a public way is used as access to a lot or tract of land having been or being separated by deed or plat from other property, such easement shall be at least fifty (50) feet in width from and after the time of adoption of these regulations and shall not be used to provide access to more than one lot or tract of land.

The above section shall not be construed to prohibit the development of buildings on lots or tracts with permanent access provided by private ways when such development is in the form of condominium ownership of such private improvements which have been approved by the Planning Commission and will be in private ownership and control in perpetuity.

1-17 Penalties for Violations

1-17.1 Recording of Unapproved Plats – Any county register receiving, filing, or recording a plat of a subdivision in violation of Section 1-15.3 of these regulations shall be deemed guilty of a

misdemeanor, punishable as other misdemeanors as provided by law.

- 1-17.2 Use of Unapproved Plats – Any owner or agent of the owner of any land who transfers land by means of an unapproved plat shall be deemed guilty of a misdemeanor, punishable as provided by law.
- 1-17.3 Transfer or Sale of Land – Section 13-3-410 and Section 13-4-306, Tennessee Code Annotated provides that whoever being the owner, or agent of the owner, of any land, transfers or sells or agrees to sell or negotiates to sell such land by reference to or exhibition of or by other use of a plat of subdivision of such land without having submitted a plat of such subdivision to the Planning Commission and obtained its approval and the certification of the other approving authorities as required before such plat is recorded in the office of the appropriate county register, shall be deemed guilty of a misdemeanor, punishable as other misdemeanors as provided by law; and the description by metes and bounds in the instrument of transfer or other document used in the process of selling or transferring shall not exempt the transaction from such penalties. The municipality, through its solicitor or their official designated by its chief legislative body and/or the county attorney or other officials designated by the County Commission, may enjoin such transfer or sale or agreement by action or injunction.
- 1-17.4 Erection of Structures – Any building or structure erected in violation of the subdivision regulations shall be deemed an unlawful building or structure, and the City Attorney or other official designated by the chief legislative body may bring action to enjoin such erection or cause it to be vacated or removed as provided in 13-3-411 and section 13-4-308, Tennessee Code Annotated.
- 1-17.5 Civil Enforcement – Appropriate actions and proceedings may be taken in equity to prevent any violation of these regulations, to prevent unlawful construction, to recover damages; to restrain, correct, or abate a violation, or to prevent illegal occupancy of a building, structure, or premises; these remedies shall be in addition to the penalties described in Section 1-17.3 of these regulations.
- 1-17.6 Repeal of Previous Regulations – Upon the adoption and effective date of these regulations, the Subdivision Regulations of Springfield, Tennessee adopted February 16, 1984, as amended, are hereby repealed.

1-18 Administration

It shall be the duty of the Director of Planning designated by the City of Springfield Tennessee to administer and establish the procedures for the proper implementation of these regulations.

ARTICLE 2

PROCEDURES FOR PLAT APPROVAL

2-1 GENERAL In order to secure review and approval of proposed subdivisions by the Planning Commission, any owner of land lying within the City of Springfield, Tennessee, or its Planning Region, wishing to subdivide such land, shall prior to making any improvements or installations follow certain procedures as described below.

The review and approval of a Subdivision Plat consists of three separate steps:

- (1). The initial step is optional and allows for submittal of a Concept Plan or sketch plat and informational consultations with the planning staff.
- (2). The second step involves the preparation and submission to the Planning Commission of a Preliminary Plat of the proposed subdivision.
- (3). Step three is the preparation and submission to the Planning Commission of a Final Plat and Construction Plans together with required certificates. This Final Plat becomes the instrument to be recorded in the County Register's Office when duly signed by the Secretary of the Planning Commission.

The only exceptions to these steps are minor subdivisions of five (5) or fewer lots that do not involve the construction or opening of new streets, water or sewer facilities, or other utilities. These subdivisions may be reviewed for approval by the Planning Commission in the form of a Final Plat.

For the purpose of these regulations, the date of the regular meeting of the Planning Commission at which consideration of approval for a subdivision plat shall constitute the date of official submittal. The statutory period of sixty (60) days as stipulated in Tennessee Code Annotated required for formal approval or disapproval of the plat shall commence at this meeting.

(4). The Subdivider shall, at time of submission of the preliminary plat , pay a review fee as set by the Board of Mayor and Aldermen. Additional fees may be charged to cover the expenses, if required, for making prints of the original plat for distribution to the appropriate official for review.

2-2 CLASSIFICATION OF SUBDIVISIONS REVIEW- The Planning Commission shall classify each subdivision proposal as either major or minor as defined herein.

2-2.1 Review Procedure - The subdivider shall follow the procedure described below in order to secure plat approval.

2-2.1 A Minor Subdivision

- (1) Preapplication conference with the enforcement officer including submittal of a scale drawing or survey of the proposed subdivision for preliminary discussion and review.
- (2) Submittal of a final plat prepared in accordance with the specifications in Section 2-3.5, herein, for approval by the Planning Commission.

2-2.1 B *Major Subdivision*

- (1) Preapplication conference with the enforcement officer and/or staff assistant to the Planning Commission, generally including a sketch plat, and discussion of the proposed area to be subdivided.
- (2) Submittal of the preliminary plat, prepared in accordance with Section 2-3.3, herein for Planning Commission approval.
- (3) Securing of approval from other public agencies.
- (4) Submittal of the final subdivision plat, prepared in accordance with Section 2-3.5, herein for Planning Commission approval.

2-2.2 Policy on Flood-Prone Areas - In determining the appropriateness of land subdivision at any site containing a flood-prone area, the Planning Commission or appropriate Department of the City, in reviewing any plat, shall consider the policy and purpose set forth in Section 1- 4 of these regulations and, additionally consider:

2-2.2 A the danger to life and property due to the increased flood heights or velocities, either potential or actual, caused by subdivision fill, roads, and intended uses;

2-2.2 B the danger that intended uses or improvements may be swept onto other lands or downstream to the injury of others;

- 2-2.2 C the adequacy of proposed water supply, sanitation, and drainage systems, and the ability of these systems to function under flood conditions;
- 2-2.2 D the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage upon the individual owner;
- 2-2.2 E the importance of the services provided by the proposed facility to the community at large;
- 2-2.2 F the requirements of the subdivision for a waterfront location;
- 2-2.2 G the availability of alternative locations not subject to flooding for the proposed subdivision and land uses;
- 2-2.2 H the compatibility of the proposed uses with existing development or development anticipated in the foreseeable future;
- 2-2.2 I the relationship of the proposed subdivision to the land development plan and the floodplain management program for the area;
- 2-2.2 J the safety of access to the property for emergency vehicles in times of flood;
- 2-2.2 K the expected heights, duration velocity, rate of rise, and sediment transport of the floodwaters expected at the site;
- 2-2.2 L the costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, public ways, and bridges; and
- 2-2.2 M the effect of the proposed subdivision upon the governing body's participation in the National Flood Insurance Program, if such governing body is, or elects to be, in the program.

No subdivision or part thereof shall be approved by the Planning Commission if proposed subdivision levees, fills, structures, or other features will individually or collectively, increase flood flows, heights, duration, or damages. The regulatory limits (the one hundred-year flood level) shall be determined from the latest approved flood study for the jurisdictional area, and any subsequent revisions thereto. Specific engineering studies are to be formulated by the developer in those areas in which flood data are not currently available, if deemed necessary by the Planning Commission.

In any instance in which the Planning Commission determines that a proposed subdivision may affect the flood height, velocity, or duration in any flood-prone area outside its jurisdiction, the commission shall take all

actions necessary and proper to ensure the coordinated review of the development with the appropriate governmental agencies of the affected area.

In approving plans for subdivision of land containing flood-prone areas, the Planning Commission shall ensure that development will proceed in such a way that property lying within any floodway, as defined by these regulations, will be maintained in a manner as prescribed by any zoning ordinance. The Planning Commission shall also ensure that development within any floodway fringe area (within the one hundred-year flood level) will be protected adequately against potential flood hazards by the methods prescribed in Article IV of these regulations.

The Planning Commission shall disapprove the subdivision of any land containing a flood-prone area when the Commission determines that subdivision plans are not consistent with the policy stated in this section.

2-3 PLAN SUBMISSIONS

2-3.1 Concept Plan Submission –(Optional)

The subdivider may visit the planning offices and discuss the effects of the official planning literature as well as general design standards, zoning and other related matters that might affect the proposed subdivision. In addition, the subdivider may submit pre-application plans and data for review, advice and assistance by the Planning Commission, City staff, County Highway Superintendent, Health Department or appropriate utility agency. Such professional assistance at this early stage may save time and prevent costly revisions in making formal application for plat approval. After discussing the options for development with the City staff, the subdivider shall submit eight (8) paper copies of the plat to the Planning Department for departmental distribution. The concept plan may also be submitted to the Planning Commission for approval. A preliminary plat and set of construction plans can be prepared and approved based on the concept plan within two years of its approval.

2-3.2 Concept Plan Content

The Concept Plan should show the entire tract and contain the following:

- 2-3.2 A The location of the proposed subdivision in relation to the neighborhood in which it is located;
- 2-3.2 B A simple plan showing general layout of lots and streets, major drainage-ways and other features relevant to existing conditions on the site and adjoining street system;
- 2-3.2 C General subdivision data including land characteristics, proposed community facilities, existing utilities, proposed subdivider-installed utilities, typical building sites, street widths, and contours where necessary.

2-3.3 Preliminary Plat Submission

The purpose of the Preliminary Plat is to safeguard the subdivider from unnecessary loss of time and expense of preparing a Subdivision Plat, which does not conform to the specifications of the minimum standards for subdivision development. Public agencies having jurisdiction will review the Preliminary Plat regarding matters within their jurisdiction.

- 2-3.3 A The subdivider shall submit to the Planning staff eight (8) copies of the Preliminary Plat, signed, dated and stamped by the design professionals for distribution to reviewing agencies as determined by the location of the site. The appropriate copies must be stamped by the design professional responsible for the work.

2-3.3 B Submission shall be at least thirty (30) days prior to the date on which the Planning Commission shall schedule a meeting to consider the plat.

2-3.3 C Preliminary plats and construction plans shall be reviewed by the appropriate agency or the Planning Commission.

2-3.3 D The following agencies shall review the preliminary plat:

City Agencies

Community Development & Planning Department

Public Works Department

Engineering Department

Fire Department

Police Department

Water and Wastewater Department

Gas Department

Electric Department

2-3.3 E The following agencies may review the preliminary plat:

County and/or State Agencies

Emergency Communications Department (911)

Health Department

Highway Department

Tennessee Department of Transportation

Tennessee Department of Environment and Conservation

Public Utilities

Power Company

Telephone Company

Utility District

Natural Gas Company

Cable Television Company

2-3.4 Preliminary Plat

The Preliminary Plat shall be prepared by a land surveyor, licensed to practice in the State of Tennessee. Construction Plans shall be prepared by a civil engineer licensed to practice in the State of Tennessee. All submittals for preliminary approval shall be stamped by the design professional(s) preparing the plat and construction plans. Plats and/or plans that do not clearly display the surveyor's stamp, signature, and date or engineer's stamp, signature, or date shall immediately be deemed incomplete and reviewed by the staff and Planning Commission no further in accordance with the established deadlines for plat submittal defined in these Regulations. In this event, the surveyor or engineer shall be notified in writing by the Director of Community Development and Planning and the documents returned without comment.

- (1) The Preliminary Plat shall be drawn on a minimum 18" x 24" paper and not to exceed 36" x 48" paper, at a scale of not less than one-inch (1") equals one hundred feet (100').
- (2) Multiple pages with appropriate match lines may be considered for large subdivisions that cannot meet these parameters.

2-3.4 A Required Data – Preliminary Plat:

- (1) Subdivision name, location map and total acreage of tract or parcel;
- (2) Subdivider's name and address;
- (3) Surveyor's name, address, stamp, signature and date;
- (4) Date, graphic scale, and north arrow;
- (5) Location of existing physical features such as storm drains, sanitary sewers, power lines, gas lines, water lines, buildings and water bodies;
- (6) Names, location, widths, and other dimensions of streets, alleys, easements and lot lines on adjoining property;
- (7) Current zoning classification and building setback lines;
- (8) Names of adjoining property owners of unplatted property;
- (9) Contours at not more than 2' intervals and note stating where the contours were derived;
- (10) Boundary of Flood Fringe and Floodway as established by City Zoning, County Zoning or the most current FEMA Flood Map;
- (11) Location of any planting strips, signage, street plantings, sidewalks, or other features proposed as part of the public right-of-way;
- (12) Proposed utility lines and easements.

(13) Proposed location of all boundary monuments.

2-3.4 B Notice of Hearing - The Planning Commission shall hold a hearing as required by Chapter 3 or 4 of Title 13, Tennessee Code Annotated, on each plat brought before it.

2-3.4 C Preliminary Approval - After the Planning Commission has reviewed the preliminary plat, construction plans, exhibits, and the results of administrative review, the applicant shall be advised of any required changes. The Planning Commission shall approve, conditionally approve, or disapprove the preliminary plat within sixty (60) days after the date of the regular meeting of the Planning Commission at which the hearing on the preliminary approval, including adjourned date thereof is closed.

A certificate of preliminary approval shall be issued by the secretary of the Planning Commission, upon demand, and the applicant may proceed to apply for final subdivision plat approval in the manner prescribed by Section 2-3.5 of these regulations.

After the Planning Commission approves, conditionally approves, or disapproves the preliminary plat, one copy of the proposed preliminary plat shall be returned to the developer with the date of approval, conditional approval, or disapproval thereon. If a preliminary plat is disapproved, the Planning Commission shall state specified reasons for disapproval, which shall be entered into the minutes of the meeting.

Before the Planning Commission approves a preliminary plat showing land for any public use, the Planning Commission shall obtain approval for the land reservation from the governing body or appropriate governmental agency.

2-3.4 D Public Improvements - The Planning Commission may require that all public improvements be installed and dedicated prior to the signing of the final subdivision plat by the secretary of the Planning Commission. If the Planning Commission does not require that all public improvements be installed and dedicated prior to signing of the final subdivision plat, an adequate performance bond shall be approved. The amount of such bond shall be established by the Planning Commission based upon the recommendation of the appropriate governmental representative or by receipt of cost bids from two (2) or more independent contracting firms equal to the cost of all necessary improvements; an additional ten-percent (10%) to cover inflation shall be added. It is the subdivider's responsibility to furnish these estimates to the Planning Commission.

Such bond shall be submitted by the applicant prior to final plat being recorded. The Planning Commission shall require the applicant to

indicate on the plat all public ways and improvements to be dedicated, and any other special requirements deemed necessary by the Planning Commission in order for the subdivision plat to conform to the major street or road plan and the land development plan for the jurisdictional area.

2-3.4 E Zoning Regulations - Every plat shall conform to any existing zoning regulations and subdivision regulations applicable at the time of proposed final approval, except that any plat which has received preliminary approval shall be exempt from any subsequent amendments to such zoning ordinance or these regulations rendering the plat nonconforming as to bulk, use, or development standards; provided, that final approval is obtained within the effective period of preliminary approval set forth in Section 2-3.4 F., herein

2-3.4 F Elapsed Time:

Unless a time extension has been requested by the subdivider in writing and granted by the Planning Commission, all final plats shall be submitted within twenty-four (24) months of the approval date of the preliminary plat. Expired preliminary plats and construction plans shall be deemed obsolete upon a twenty-four (24) month period and the developer shall be required to resubmit the preliminary plat and construction plans in accordance with the time requirements set forth in these Regulations prior to final plat submittal.

2-3.5 Final Plat and Construction Plans Content

2-3.5 A **Submission**

A Final Plat shows all property lines and other dimensions important for the accurate and legal transfer of property, and records the location of street rights-of-way, property lines, utility easements, and drainage easements.

- (1) Subsequent to Final Plat approval and installation of improvements or their instrument of surety, the subdivider shall submit to the planning department staff seven (7) paper copies of the Final Plat and Construction Plans for distribution to reviewing agencies as determined by the location of the site.
- (2) Submission shall be not less than thirty (30) days prior to the Planning Commission meeting at which the plat shall be considered for approval.
- (3) Within ten (10) days of the scheduled Planning Commission meeting at which the plat is to be considered for final approval, the subdivider

shall submit one (1) mylar or vellum copy of the plat, the completed application for surety (if required) and a digital copy on diskette compatible with the latest City version of AutoCAD of the final plat.

- (4) The following agencies shall review the final plat and construction plans:

City Agencies

Community Development & Planning Department

Public Works Department

Engineering Department

Fire Department

Police Department

Water and Wastewater Department

Gas Department

Electric Department

- (5) The following agencies may review the final plat and construction plans:

County and/or State Agencies

Emergency Communications Department (911)

Health Department

Highway Department

Tennessee Department of Transportation

Tennessee Department of Environment and Conservation

Public Utilities

Power Company

Telephone Company

Utility District

Natural Gas Company

Cable Television Company

2-3.5 B Content

The Final Subdivision Plat should be drawn to a scale no smaller than one inch (1") equals one hundred feet (100') on a sheet 18 by 24 inches with at least a 1/2 inch border on all four sides. Multiple pages with appropriate match lines may be considered for large subdivisions that cannot meet these parameters. The following data and certifications shall be shown on all final plats.

(1) Required Data:

- a. Subdivision name, acreage of site, location map, north arrow, and Subdivider's name;
- b. A graphic scale and numerical scale;
- c. Surveyor's stamp, name, date, signature and registration number;
- d. Streets on adjoining land;
- e. Name and locations of adjoining properties;
- f. Boundary lines of tract distinguished from adjacent property and length of courses to the nearest hundredth of a foot. In all cases where the tract being subdivided, either in whole or in part thereof, consists of less than five acres, the entire boundary of the tract, including all exterior lot lines as well as new interior subdivision lines, shall be shown on the plat to the nearest hundredth of a foot.
- g. Street names, bearings, angles of intersection, and width;
- h. Arc-length, radius, chord, bearing and distances;
- i. Locations, widths, name and purpose of all easements;
- j. All lot line distances expressed to the nearest one-hundredth of a foot and all lot line bearings expressed to the nearest second of arc. The survey shall be tied into the Tennessee Grid Coordinate System with two or more points within the subdivision. The elevations of these points shall be provided. The elevations shall be referred to the USGS Datum Plane.
- k. A licensed surveyor will establish the Tennessee Grid Coordinates and USGS elevations on the points for the proposed subdivision using global positioning or surveying standards of practice in accordance with the current policy of the City of Springfield. (See j. above)
- l. Reservations and dedications indicated as to purpose on tract;

CERTIFICATE OF OWNERSHIP
AND DEDICATION

I (We) hereby certify that I am (we are) the owner(s) of the property shown and described hereon and that I (we) hereby adopt this Plan of Subdivision with my (our) free consent, establish the building lines, and dedicate all streets, alleys, walks, parks and other open spaces to public or private use as noted.

_____, _____
Date

Owner

CERTIFICATION OF THE
APPROVAL OF PUBLIC WAYS
AND BOND POSTING

I hereby certify: that streets, drainage systems and _____ have been installed in an acceptable manner and according to city specifications and, (2) that a performance bond or other surety has been posted with the Planning Commission to assure completion of all required improvements in case of default.

_____, _____

Date

Public Works Director, City Engineer
or County Road Superintendent

CERTIFICATE OF THE APPROVAL
OF SEWERAGE SYSTEM

I hereby certify that the sanitary sewage facilities have been installed in accordance with the City of Springfield's Water & Sewerage Design and Construction Standards Manual, and are hereby approved for service.

_____, _____
Date

Water/wastewater Director

CERTIFICATE OF APPROVAL
FOR RECORDING

I hereby certify that the subdivision plat shown hereon has been found to comply with the subdivision regulations for Springfield, Tennessee, with the exception of such variances, if any, as are noted in the minutes of the Planning Commission and that it has been approved for recording in the Office the Robertson County Register.

_____, _____
Date

Secretary, Springfield
Municipal/Regional
Planning Commission

CERTIFICATE OF ACCURACY

I hereby certify that this is a Category II survey and the ratio of precision of the unadjusted survey is 1:7,500 as shown hereon.

_____, _____
Date

Surveyor TN. Reg. No.

CERTIFICATION OF THE APPROVAL OF WATER SYSTEM

I hereby certify that the water facilities have been installed in accordance with the City of Springfield's Water and Sewerage Design and Construction Standards Manual, and are hereby approved for service.

_____, _____
Date

Water/Wastewater Director

Sample Template:

						Vicinity Map	
						North Arrow	Surveyors Name Address Telephone Number
						Notes:	Title Box – Name of Plat, Date, Total Lots, Total Acres Miles of New Road Property Owner Owners Address Tax Map Civil District. Deed Book Scale
	Surveyor Stamp						
Certificate of Ownership	Certificate of Accuracy	Certificate of Public	Certificate of Water	Certificate of Sewer or	Certificate of Approval		

2-3.5 C Final plat of a condominium subdivision -shall contain, in addition to the other information required by this Section:

- (1) an “as-built” building location and boundary survey, to “American Land Title Association” or other comparable standards, showing complete and accurate dimensions and angles of the boundary of the parcel(s) on which the condominium is located, together with exterior dimensions and location relative to those boundaries of the building(s) which constitute the condominium subdivision;
- (2) a benchmark tied to the SGRN vertical location reference. In meeting these requirements, it is only necessary that the upper and lower limits of each level of each condominium unit be identified specifically in relation to the vertical reference, (e.g., an appropriate permanent monument or other acceptable reference datum or fixed known point). Elaborate exterior elevations and architectural detail are not necessary to satisfy this requirement; and
- (3) any other special information which the Planning Commission may require to protect the rights of future owners of the condominium or the public in general.

2-3.5 D Additional information - may be required by the Planning Commission where necessary.

2-3.5 E Recording the Final Plat - Upon final approval, a staff representative of the City of Springfield shall record the plat in the Robertson County Office of the Register of Deeds upon the payment by the subdivider of any and all fees associated with the plat that are established in these regulations. Recording of the final plat shall occur within 270 calendar days of final approval by the Planning Commission unless a time extension has been requested by the subdivider in writing and granted by the Planning Commission. Failure to record the final plat within this time period shall result in said plat being deemed obsolete and the owner shall be required to resubmit the final plat for approval and in accord with ordinances and regulations in effect at the time of re-submittal. Any existing subdivisions that have received final approval and have not been recorded have 270 days from the time of passage of this amendment to be recorded or be subject to the provisions of this section. (Amended February 1,2007)

2-3.5 F Sectionalizing Major Subdivision Plats - Prior to granting final approval of a major subdivision plat, the Planning Commission may permit the plat to be divided into two (2) or more phases and may impose such conditions upon the filing of each phase as it may deem necessary to assure the orderly development of the subdivision. The Planning Commission may require that a performance bond be in such amount as is commensurate with the phase or phases of the plat to be filed and may defer the remaining required performance bond principal amount until the remaining phases of the plat are offered for filing. The developer also

may file irrevocable offers to dedicate public ways and improvements in the phase offered to be filed and defer filing offers of dedication for the remaining phases until such phases, subject to any conditions imposed by the Planning Commission, shall be granted concurrently with final approval of the plat. Such authorized phases must contain at least ten-percent (10%) of the total number of lots contained in the proposed plat, unless, a specific waiver of this requirement is granted by the Planning Commission.

2-3.4G Changes - After final approval; there shall be no changes by any governing body, agency, department, or private party. Any changes require re-approval by means of a replat approved by the Planning Commission.

2-3.5 H Vested Rights - No vested rights shall accrue to any plat by reason of preliminary or final approval until the actual signing of the plat by the secretary of the Planning Commission. All requirements, conditions, or regulations adopted by the Planning Commission, applicable to the particular subdivision or to all subdivisions generally, shall be deemed a condition of approval for any subdivision prior to the time of the signing of the final plat by the secretary of the Planning Commission. Where the Planning Commission has required the installation of improvements prior to the signing of the final plat, the Planning Commission shall not modify unreasonably the conditions set forth in the resolution of final approval.

2-3.5I Required Data for Construction Plans

In the event of phased construction, plans for the full development shall be presented with the preliminary plat. Detailed construction plans may be submitted in phases prior to final plat submission in the event of a phased development schedule. All design information should be based on true topographic field data.

All construction plans shall be required to make use of the "revision" section of plan sheet showing date and general nature of the revision. If a staff review results in written comments, all resubmitted construction plans shall be required to provide a narrative of how each comment was addressed.

Construction plans should include the following:

- (1) Street Construction Plan including the following:
 - a. Plan and profile(s) of proposed streets with elevations derived from field surveys.
 - b. Detail plans plotted on plan and profile sheets to a minimum scale of one inch (1") = fifty feet (50') horizontal, and one inch (1") = five feet (5') vertical.
 - c. Cross sections including the street and right of way plotted to the proper scale with stationing shown as requested by Staff.
 - d. Traffic control devices.

- e. Where conventional sections are used, the stabilization required for the roadside ditches, including the linear extent and type of stabilization required.
- f. Typical roadway sections, as appropriate.
- g. Profile section plotted to the same scale as identified above and including the proposed center line finish grade profile, in addition to the existing center line profile.
- h. All vertical control points on or pertaining to the proposed center line profile such as P.V.C., P.V.I., P.V.T., all low points, street intersections, all percent grade and vertical curve data.
- i. All horizontal control points on or pertaining to the proposed center line alignment, such as P.C., P.I., P.T., radii, and angle of intersections.

(2) Storm Drainage Plan including the following:

The drainage control plan shall be of quality suitable for reproduction by microfilm, and shall include as a minimum all of the following: A complete plan of the proposed development at a scale no less than 1" (one inch) = 100' (one hundred feet). This plan is to include existing and proposed contours at intervals no greater than 2' (two feet) (SGRN to be used exclusively). These contours will be based upon actual field survey. Contours shall extend to the centerline of all roads bordering the site. Where drainage ultimately enters the groundwater via a sinkhole or drainage well, the drainage area tributary to the sinkhole or drainage well shall be delineated.

- a. Existing buildings on the property.
- b. Existing impervious surfaces.
- c. Proposed and existing drainage structures, including inlets, catch basins, junction boxes, drive pipes, culverts, cross drains, headwalls, and outlet facilities, with size, type, slope, invert elevations, and quantity indicated.
- d. Hydrologic and hydraulic calculations for the appropriate design conditions and facilities. Detention facilities shall be designed so that the post-developed stormwater runoff is equal to or less than the pre-developed condition. (See Appendix "A" for design requirements)
- e. Detention area and control structures details. Cross-section through the detention area and control structure indicating important elevations. If pond is overtopped by 100-year storm, include the emergency spillway.
- f. Any proposed swale ditches, channel changes, or improvements, with typical section and length of change indicated.

- g. Any high water or flood lines in the vicinity of the proposed development, and the source of said line or elevation indicated.
- h. All fill areas indicated as such, with the limits and elevation indicated.
- i. At least one benchmark located, with the proper elevation indicated (USGS datum plane to be used).
- j. The location and size of the two drainage structures immediately downstream of the proposed development. This may be shown on a vicinity map with a scale no less than 1" (one inch) = 2000' (two thousand feet).
- k. Drainage arrows indicating the existing and proposed direction of runoff throughout the plan.
- l. Invert and top of grate elevations on all catch basins and inlets in addition to flow line elevations, stations, and percent grades of all cross drains and pipe between inlets and catch basins.
- m. Flood plain areas require the following information: existing and proposed flood plain and floodway boundaries along with flood plain elevations, cut and fill cross sections and calculations, and lowest floor elevations for buildings in the flood plain. Hydraulic calculations should be submitted, as appropriate. (See Appendix A)
- n. Temporary erosion and sediment control measures to be implemented during construction (straw bales, silt fence, etc.).
- o. Final stabilization measures proposed for all disturbed areas on the property. Areas with slopes 2:1 or greater shall be stabilized with riprap or by other methods approved by the City. The plan shall show stabilization measures for each ditch.
- p. Where special structures such as box culverts, bridges, or junction boxes are proposed, detail plans showing dimensions, reinforcement, spacing, sections, elevations, and other pertinent information shall be submitted.
- q. Plans and calculations shall be designed and sealed by a registered engineer, and/or land surveyor, if application is for a grading permit. All plans requiring engineering calculations (e.g., subsurface drainage design) shall be signed and sealed by a registered engineer.
- r. The following note shall be included on the construction plans:

“ Upon completion of site grading and drainage construction, the Owner shall be responsible to provide to the City of Springfield, a written certification that the detention and drainage requirements for the subdivision/site plan (as approved in

the construction plans) have been met. Written certification shall include record drawings and various analysis as may be required by the Public Works Department and must be certified by the Design Engineer of Record.”

Omission of any of the above requirements for detailed plans and calculations shall render the plans incomplete. Incomplete plans may be returned to the applicant, or his engineer, for additional information. Final plans and Construction plans shall be reviewed on their own merit.

- (3) Grading and Erosion Control Plans including the following:
 - a. All cut and fill areas indicated as such, with the limits.
 - b. Temporary erosion and sediment control measures (straw bales, silt fences, and sediment ponds) in accordance with the Zoning Ordinance of the City of Springfield to be implemented before and during construction.
 - c. Any proposed swale ditches, channel changes, or improvements, with typical section and length of change indicated.
 - d. Any proposed organic debris fill areas.
 - e. Grading and Erosion Control Plans must meet the requirements for a Tennessee Construction General Permit as required by the Tennessee Department of Environment and Conservation according to EPA regulation 40 CFR 122.26 (b) (14), category (x). Proof of compliance must be submitted to the Community Development Department and verified by the Engineering Department before start of construction can begin and before a grading permit or any building permit can be issued.
- (4) The following Sinkhole and Drainage Well Plan information or approval from the appropriate regulating agency must be provided prior to the alteration or increase of the natural drainage for watershed discharging to such features as sinkholes and drainage wells.
 - a. Proposed onsite and offsite drainage channels that are tributary to a sinkhole throat or drainage well inlet shall be delineated, along with appropriate hydraulic calculations to define the existing and altered (if appropriate) 100-year flood plain and to confirm that offsite flooding will not be increased.
 - b. Detailed contours are to be shown for all sinkholes that are to receive storm water runoff from the site. These contours are to have a maximum interval of 2 feet and are to be verified by field surveys.

- c. A geologic investigation of all sinkholes receiving storm water runoff from the site shall be performed. The report from this investigation shall be signed and sealed by a registered professional, licensed in the State of Tennessee and experienced in geology and groundwater hydrology and shall contain the following:
 - 1. Location and nature of aquifers.
 - 2. Potential for siltation problems.
 - 3. Foundation problems that may be expected around sinkholes.
 - 4. Details of drainage structures to be built in sinkholes.
 - 5. Any other factors relevant to the design of drainage from sinkholes.
 - 6. Plans showing the 100-year flood plain.
 - 7. This flood plain shall be designated as a drainage easement on final subdivision plat.
 - 8. Details of plan for grading and clearing of vegetation within the 100-year flood plain.
 - d. Compliance with any and all conditions that may be required by the federal government or the State of Tennessee shall be documented.
 - e. The Tennessee Division of Ground Water is the primary regulatory agency for sinkholes and drainage wells. Drainage into a sinkhole may require a permit for a Class V well under rules for Underground Injection Control (UIC).
 - f. Demonstration that development will not occur within the area flooded by the 100-year flood. The 100-year elevation may be lowered by construction of a detention pond. Calculations that document a lowering of the 100-year flood elevation shall be based on the 100-year, 24-hour storm using an appropriate safety factor for discharge into the sinkhole.
- (5) Plan and Profile(s) of water utilities and calculations
 - (6) Plan and Profile(s) of sewer utilities and calculations
 - (7) Plan for underground street lighting system, if applicable, prepared by the appropriate power company. Underground street lighting conduit plan shall be developed by the Springfield Electric Department in conjunction with electric conduit plan and designed per Springfield Electric Department specifications prior to construction.

- a. Decorative streetlights may be installed at developer's expense as per City of Springfield Condition of Service Manual.
- (8) Plan for natural gas utilities: The City of Springfield carries out the design and construction of the natural gas distribution system.
- a. The developer may be assessed a fee from the gas department for materials and labor as defined by the City of Springfield's Conditions of Service Manual.
 - b. It shall be the responsibility of the subdivider to inform the Director of the Gas Department if he wishes the proposed subdivision to be considered for natural gas service. The provision of the requested service and the fees to be assessed for the service shall be determined by the current operating policies of the gas utility.
 - c. Any and all easements, whether existing or proposed, shall be shown on the preliminary plat of the proposed subdivision and, through the final platting process, be dedicated to the public. All such easements shall be noted on said plat as a "utility easement" and be available for the installation of any public utility.
- (9) Plan for electrical utilities: The City of Springfield carries out the design and construction of electric distribution facilities in accordance with the National Electric Safety Code (NESC). All subdivider installed electric utilities shall be constructed in accordance with the National Electric Code (NEC).
- a. The developer may be assessed a fee from the electric department for materials and labor as defined by the City of Springfield's Conditions of Service Manual.
 - b. It shall be the responsibility of the subdivider to inform the Director of the Electric Department if he wishes the proposed subdivision to be considered for underground electrical service. If underground electric is desired, the electric department shall specify and design the conduit plan with the subdivider prior to construction. The provision of the requested service and the fees to be assessed for the service shall be determined by the current operating policies of the electric utility.
 - c. Any and all easements, whether existing or proposed, shall be shown on the preliminary plat of the proposed subdivision and, through the final platting process, be dedicated to the public. All such easements shall be noted on said plat as a "utility easement" and be available for the installation of any public utility.

2-3.5 J Review by Individual Agencies:

No final plat shall be submitted to the Planning Commission without the final plat and construction plans being reviewed by the City Engineering Department, the Department of Public Works, Community Development Department, Health Department, County Highway Department, Water and Wastewater Department and other utility providers, as appropriate. These agencies shall review the final plat and construction plans. If rejected, the agency shall provide the Planning Commission and the developer with a written statement specifying all reasons for rejection prior to the Planning Commission meeting date.

- 2-3.5 K Administrative Review - An administrative review meeting shall be conducted on the final plat, construction plans and any exhibits submitted in conformance with these regulations. This review shall include the staff assistant to the Planning Commission and any other appropriate governmental representative(s). The review shall be held prior to the regularly scheduled Planning Commission meeting at which the plat is to be reviewed. The findings of the review committee shall be presented to the Planning Commission.

With expert assistance, as necessary, the subdivider shall prepare a report, on any proposed subdivision containing or abutting a flood-prone area. Such report shall estimate the discharge of the regulatory flood; determine the specific flooding threat at the site of the proposed subdivision; and indicate whether the subdivision is located in a floodway or floodway fringe area by:

- (1) calculation of water surface elevations and regulatory flood protections based upon a hydraulic analysis of the capacity of the stream channel and over-bank areas to convey the regulatory flood;
- (2) computation of the floodway required to convey the regulatory flood without increasing natural flood heights of the regulatory flood more than one (1) foot at any point; and
- (3) unless otherwise established, computation of increases in flood heights caused by any encroachment shall be based upon the reasonable assumption that there will be an equal degree of encroachment on both sides of the stream within that reach. No increase in flood storage attributable to encroachments on the floodplain of any river or stream shall be permitted in any one reach or for the cumulative effect of several reaches.

2-4 MINOR SUBDIVISION PROCEDURE

The procedure for submitting Minor Subdivision plats is as follows:

2-4.1 Submission

2-4.1 A The subdivider shall submit the final plat to the Department of Community Development and Planning at least thirty (30) days prior to the Planning Commission meeting at which it is to be considered for approval.

2-4.1 B Final submission shall consist of one (1) mylar, seven (7) paper copies and a digital copy on diskette, CD ROM, or EMAIL compatible with the latest City of Springfield version of AutoCAD, prior to final approval.

2-4.2 Review

The platting information shall be the same as required for final plat approval. Under special circumstances, where unusual topographic problems exist the staff may require topographic information, a drainage plan, or a map showing existing utilities. If the staff determines that the Subdivision complies with such regulations governing a subdivision of land as adopted by the Planning Commission, the plat will be presented for approval.

2-4.3 Two Lot Subdivision

The staff shall review plats for subdivisions consisting of two or fewer lots within thirty (30) days of submittal. Platting information for subdivisions consisting of two lots shall be the same as required for Minor Subdivisions. If the staff determines the subdivision complies with these regulations, it will certify the plat in writing to the Planning Commission for approval.

Iron pins are permissible as boundary markers in subdivisions of two lots or less.

2-4.4 Replat Subdivisions

The staff shall review plats for subdivisions that are replats of previously approved subdivision plats within thirty (30) days of submittal. Platting information for replat subdivisions shall be the same as required for Minor Subdivisions. If the staff determines the subdivision complies with these regulations, it will certify the plat in writing to the Planning Commission for approval.

2-5 Special Provisions Governing Unit Ownership (Condominium) Subdivisions

2-5.1 General Provisions

2-5.1 A Intent – This section is intended to augment the general legislation of Sections 66-27-101 through 67-27-122, Tennessee Code Annotated, entitled “Horizontal Property Act,” by providing supplemental rules and regulations for the implementation of the act, as specifically authorized in Section 66-27-121, Tennessee Code Annotated.

2-5.1 B Applicability – Whenever a developer, the sole owner, or the co-owners of a building or buildings expressly declare through the submission of a master deed, lease, or plat their desire to submit their property to a regime, as established and provided by Sections 66-27-101 through 66-27-122, Tennessee Code Annotated, wherein there is established a horizontal property regime, each such condominium or horizontal property regime created under the authority of these provisions for the purpose of sale or transfer of real property is subject to the provisions of these regulations.

2-5.2 Submission of Plat Required – Prior to the sale or transfer of any real property incorporated in the property regime, the developer, sole owner, or co-owners of such property shall submit to the Planning Commission a subdivision plat of such property in the manner prescribed by this article; such plat, if approved, shall be filed with the county register in the manner prescribed by this article.

2-5.3 Determination of Subdivision Type – Condominium subdivisions shall be classified by the Planning Commission during the plat review process as either horizontal condominiums or vertical condominiums.

2-5.4 Procedure – An applicant seeking approval of a condominium subdivision shall proceed through the normal procedure for subdivision approval, as set forth in this article.

2-5.5 Contents of Plans and Documents – The plats, plans, and documents submitted by an applicant seeking approval of condominium subdivision shall conform with the specifications set forth in these regulations

2-6 FIELD TRIPS

The staff shall arrange for and conduct conferences with developers and field trips necessary for proper investigation of the Preliminary and Final Plats by affected City departments or area agencies and the Planning Commission.

2-7 NOTIFICATIONS

The staff shall notify the subdivider or his authorized agent by mail of the time and place of the public meeting to consider approval of the Preliminary and Final Plats. Notification shall take place at least five (5) days prior to the meeting of the Planning Commission. The subdivider, or his representative, shall attend the meeting at which the plat is to be considered. The Commission may deny approval if the subdivider is not represented.

2-8 APPROVAL OR DISAPPROVAL

The Planning Commission shall receive the recommendations of its staff and approve or disapprove the plat. In the event that the Planning Commission fails to either approve or disapprove a plat within sixty (60) days of its presentation to the Planning Commission, such plat shall be deemed approved. If a plat is disapproved, reasons for such disapproval shall be stated in the records of the Planning Commission.

The Planning Commission may, at the subdivider's request, review all plats that are in arbitration between the City staff and the developer/surveyor to render a final decision.

2-9 FEES

The subdivider shall, at the time of submission of the preliminary plat, pay a Review Fee, as set by the Board of Mayor and Aldermen. Additional fees may be charged to cover the expense, if required, of making prints of the original plat and for distribution to the appropriate officials and agencies.

2-10 RECORDS

The staff shall keep a record of all plats and Planning Commission actions pertaining thereto.

ARTICLE 3

ASSURANCE FOR COMPLETION AND MAINTENANCE OF IMPROVEMENTS

3-1 IMPROVEMENTS AND PERFORMANCE BOND

- 3-1.1 Installation of Improvements - All of the underground works and all service connections shall be installed completely, and approved by the appropriate agency throughout the length of the road and across the right-of-way section. All utilities shall be developed in accordance with appropriate state, local, and utility agency requirements, and meet the design standards contained in these regulations.
- 3-1.2 Completion of Improvements - Before the final subdivision plat is signed by the Secretary of the Planning Commission, all applicants shall complete, in accordance with the Planning Commission's decision and to the satisfaction of the appropriate governmental representative, all public way, sanitary, and other improvements, including lot improvements on the individual lots of the subdivision, as required in these regulations and approved by the Planning Commission, and shall dedicate such improvements to the governing body free and clear of all liens and encumbrances on the property and public improvements thus dedicated.
- 3-1.3 Surety Instrument - The Planning Commission at its discretion may waive the requirement that the applicant complete and dedicate all public improvements prior to the signing of the final subdivision plat by providing that, as an alternative, the applicant post a bond at the time of submission for final subdivision approval in an amount approved by the Planning Commission as sufficient to guarantee to the governing body the satisfactory construction, installation, and dedication of the incomplete portion of required improvements. (See Section 2-3.5 G).

Such performance bond shall comply with all statutory requirements and shall be satisfactory to legal counsel as to form, sufficiency, and manner of execution, as set forth in these regulations. The period within which required improvements must be completed shall be specified by the Planning Commission in the resolution approving the final subdivision plat and shall not exceed two (2) years from the date of final approval.

Such bond shall be approved by the governing body as to amount and conditions and shall not exceed a period of two (2) years. The Planning Commission may, upon proof of difficulty, recommend to the governing body extension of the completion date set forth in such bond for a maximum period of one additional year. The governing body may

accept at any time during the period of such bond a substitution of principal.

- 3-1.4 Temporary Improvements - The applicant shall build and pay for all costs of temporary improvements required by the Planning Commission, and shall maintain them to a reasonable satisfaction for the period specified by the Planning Commission. Prior to construction of any temporary facility or improvement, the applicant shall file with the governing body a separate suitable bond for temporary facilities, which shall ensure that the temporary facilities will be properly constructed, maintained, and removed.
- 3-1.5 Costs of Improvements - All required improvements shall be made by the applicant at his/her expense. Any provisions for reimbursement by the governing body or any utility agency shall be stipulated clearly in the provisions of any bonds.
- 3-1.6 Governmental Units - Governmental units to which these bonds and contract provisions apply may file, in lieu of said contract or bond, a certified resolution or ordinance from officers or agencies authorized to act in their behalf agreeing to comply with the provisions of this Article.
- 3-1.7 Failure to Complete Improvements - In subdivisions for which no performance bond has been posted, if the improvements are not completed within the period specified by the Planning Commission in the resolution approving the plat, the approval shall be deemed to have expired. In those cases in which a performance bond has been posted and required improvements have not been installed within the terms of such performance bond, the governing body thereupon may declare the bond to be in default and require that all the improvements be installed regardless of the extent of the building development at the time the bond is declared to be in default.
- 3-1.8 Acceptance of Dedication Offers - Acceptance of formal offers of dedication of public ways, easements, and parks shall be by formal action of the governing body. Such action shall be in the form of a resolution recommended by the Planning Commission to the governing body. The approval by the Planning Commission of a subdivision plat shall not be deemed to constitute or imply an acceptance by the local government of any public way, easement, or other ground shown on the plat. The Planning Commission may require the plat to be endorsed with appropriate notes to this effect.
- 3-1.9 Responsibility for Compliance – In all matters involving enforcement of, or compliance with, the provisions contained herein, the subdivider (as defined in the Definitions, Section 5-2) is considered as the party legally responsible for performance; and the use of engineers, contractors, or other agents shall in no way diminish or absolve the subdivider of this basic responsibility.

3-2 Inspection of Improvements

General Procedure - All subdivisions shall be inspected by the City of Springfield or Robertson County as appropriate. Sufficient inspections shall be made to ensure compliance with the specifications set forth in these regulations. The subdivider shall notify the appropriate agency of his intention to begin work five (5) days prior to commencing. If the appropriate governmental representative finds upon inspection that any of the required improvements have not been constructed in accordance with the governing body's construction standards and specifications, the applicant shall be responsible for completing the improvements to the required standards. Whenever the cost of improvements is covered by a performance bond, the applicant and the bonding company shall be liable severally and jointly for completing said improvements according to approved specifications.

Section 3-2.1 Performance Surety

The acceptable methods of bonding for subdivision improvements are the following:

A Performance Bond issued by a Surety Company approved by the City Attorney

An Irrevocable Letter of Credit issued by a Bank or Financial Institution approved by the City Attorney.

A Cashiers Check or Certified Check backed by a Bank approved by the City Attorney.

A Cash Bond.

The amount of this surety shall be established by the City staff to cover the estimated costs of improvements in a subdivision plus an appropriate amount to cover the cost of inflation. The amount of this surety shall be approved by the Planning Commission, who in turn may recommend acceptance to the Board of Mayor and Aldermen.

Performance Bonds shall be required for all amounts \$15,000 or over.

Irrevocable letters of credit, Cashiers Checks, Certified Checks, or Cash may be used for bonds of less than \$15,000.

The City Attorney, acting under authority of the Board of Mayor and Aldermen, shall be empowered to demand forfeiture of any performance bond, letter of credit, cashiers check, certified check or cash bond deemed necessary by the Board of Mayor and Aldermen in order to complete the needed improvements and/or maintenance in the approved subdivision.

Adopted this 5th Day of February, 2009.

3-2.2 Release or Reduction of Performance Bond

- 3-2.2 A Certificate of Satisfactory Completion - The governing body shall not accept dedication of required public improvements nor release nor reduce a performance bond until the appropriate governmental representative submits a certificate stating that all required improvements have been satisfactorily completed, and until the applicant's engineer or surveyor has certified to the the appropriate governmental representative (through submission of a detailed "as built" survey of the subdivision indicating location, dimensions, construction materials, and any other information required by the Planning Commission) that the layout and the line and grade of all public improvements are in accordance with the approved construction plans for the subdivision. Upon such approval and recommendation, the governing body, thereafter, may accept the dedicated improvement(s) in accordance with the procedures set forth in Sections 3-1.2 and 3-1.8 of these regulations.
- 3-2.2 B Reduction of Performance Bond - A performance bond may be reduced upon actual dedication and acceptance of public improvements and then only to the ratio that the dedicated public improvements bear to the total public improvements for the plat. In no event shall a performance bond be reduced below twenty-five-percent (25%) of the principal amount prior to final acceptance of all items covered under the bond.
- 3-2.2 C Release of Guarantee – The Planning Commission shall formally recommend the release of the guarantee by the Board of Mayor and Aldermen once all required improvements are installed and approved by the appropriate agency.

3-3 Maintenance of Improvements

A maintenance bond, irrevocable letter of credit or other surety approved by the City Attorney shall be established. The amount of this surety shall be established by the Staff to cover the estimated costs of maintenance for the developer (subdivider) installed infrastructure improvements for a minimum of one (1) year. The amount of this surety shall be recommended to the Board of Mayor and Aldermen.

The City Attorney, acting under the authority of the Board of Mayor and Aldermen, shall be empowered to demand forfeiture of any maintenance bond or the payment

of any irrevocable letter of credit, deemed necessary by the Board of Mayor and Aldermen in order to complete the needed improvements and/or maintenance in the approved subdivision.

3-4 Dedication of Improvements

Upon the expiration date of the maintenance bond and upon certification by all the approving authorities that all improvements meet the minimum standards of design, the Board of Mayor and Aldermen may accept and dedicate the improvements in a subdivision by Resolution.

3-5 Escrow Deposits for Lot Improvements

3-5.1 Acceptance of Escrow Funds - Whenever by reason of the season of the year, any lot improvements required by these regulations cannot be performed, the enforcing officer nevertheless may issue a certificate of occupancy upon accepting a cash escrow deposit in an amount to be determined by the appropriate governmental representative for the cost of such improvements; provided, there otherwise is no danger to the health, safety, or general welfare. The performance bond covering such lot improvements shall remain in full force and effect.

3-5.2 Procedures on Escrow Fund - All required improvements for which escrow moneys have been accepted by the enforcing officer at the time of issuance of a certificate of occupancy shall be installed by the developer within a period of nine (9) months from the date of deposit and issuance of the certificate of occupancy. In the event that the improvements have not been installed properly at the end of the time period, the enforcing officer shall provide written notice of two (2) weeks to the developer requiring him to install the improvements, and in the event they are not installed properly, in the judgment of the enforcing officer, he/she may request the governing body to proceed to install or to contract for the installation of the necessary improvements in a sum not to exceed the amount of the escrow deposit.

At the time of the issuance of the certificate of occupancy for which escrow moneys are being deposited, the applicant shall file with the enforcing officer, prior to obtaining the certificate of occupancy, a notarized statement from the purchaser(s) of the premise authorizing the enforcing officer to install the improvements at the end of the nine (9) month period in the event the improvements have not been installed properly by the developer.

3-6 Issuance of Building Permits and Certificates of Occupancy

Where a performance bond or irrevocable letter of credit has been required for a subdivision, or any phase of a subdivision, no applicable building permit or

certificate of occupancy for any building in the subdivision or section thereof shall be issued prior to the completion of improvements as set forth below.

A. Building Permits

Building permits shall not be issued for any lot prior to completion of the required improvements for street base stone and utilities as set forth in these regulations. These improvements include:

All City-required and developer (subdivider) installed utilities, *id est*.

- All underground utility conduit located on public ROW (if applicable)
- Sanitary sewer facilities
- Storm sewer basins facilities
- Water system facilities
- Property corner markers have been installed by a licensed surveyor and have been approved by the appropriate official.

All streets and designated turn-around areas (temporary cul-de-sacs) are constructed to the minimum standards for base stone as set forth in these regulations, including all required tests established in these regulations, and approved by the Public Works Engineer or the City Engineer.

All drainage and erosion control improvements are installed in accordance with the minimum standards set forth in these regulations and are approved by the Public Works Engineer or City Engineer.

The extent of public way improvements shall be adequate for vehicular access by the prospective occupant and by police and fire equipment prior to the issuance of a building permit. The developer shall at the time of the dedication of public ways submit monies in escrow to the governing body for maintenance in a sum to be determined by the appropriate governmental representative. This bond shall be for one year.

Final Ten Percent or Last Two Lots

It shall be unlawful for the owner of any subdivision to sell the final ten percent (10%) of lots in a subdivision, or if ten percent (10%) be less than two (2) lots, the final two (2) lots of a subdivision, until all public improvements required by the planning commission resolution of final plat approval have been fully completed, dedicated, and accepted by the governing body; or the governing body has accepted a maintenance bond for the purpose of securing final completion by the owner, maintenance of infrastructure (or use improvements) and acceptance by the governing body. Failure of the owner to comply with this section may result in the immediate forfeiture of the bond and completion of the final improvements by the city. (Amended February 1, 2007)

B. Certificates of Occupancy

Certificates of occupancy (CO's) shall not be issued until the hot mix asphalt "binder layer" has been installed, tested and approved by the appropriate authority of the City. This condition may be waived by the City of Springfield Planning Commission if the certificate of occupancy (CO) is requested during the months of January, February, or March and it is determined by the Planning Commission that the hot mix asphalt "binder layer" cannot be installed due to weather. If this waiver is issued, the developer will be required to install the hot mix asphalt "binder layer" within thirty (30) calendar days from the date of the opening of the local hot mix asphalt plant(s). If this condition is not met, the developer may be considered in default of his surety bond.

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 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 In the event that an existing SGRN reference monument is to be displaced by the construction of the proposed improvements, the surveyor shall show the existing SGRN monument and its proposed relocation on the preliminary plat and shall notify the City Engineering Department in writing prior to disturbing the monument. The subdivider shall replace the reference monument or shall pay the City for each SGRN monument to be relocated. All relocated SGRN Monuments 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 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.
- 4-3.4 Boundary Monuments
- 4-3.4 A 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.
- 4-3.4 B Iron bar monuments may be used in lieu of concrete monuments in the following circumstances: Iron bars shall be at least 5/8 " in diameter and no less than 18" in length. Each bar shall have a permanent metal cap measuring at least 2 ½ " in diameter, bearing the surveyor's name, license number, or company name and bearing a permanent mark for the exact survey point.
- 4-3.4 C 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.

- 4-3.4 D The proposed locations of the required boundary monuments shall be shown on the preliminary plat.
- 4-3.4 E 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.
- 4-3.4 F 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.

4-6.2 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.

4-6.3 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.

4-6.4 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 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 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 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** - 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

<u>Voltage of line</u>	Building Setback
13 kV	
46 kV	20 feet
69 kV	37.5 feet
161 kV	50 feet
	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 Street – 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 Street – 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 right-of-ways, 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 fifty feet (50'), the radius of the paved area forty feet (40'). 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.

4-17.4 K Temporary Dead End Street – 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	60	50	
Minor Residential	60	50	
<u>Minimum Width of Roadway (feet)****</u>			
Principal/Minor Arterials	*	*	
Collector	26	24	
Local Residential		22	
Minor Residential		20	
Non Residential			26
<u>Maximum Percentage of Grade (feet)</u>			
Principal/Minor Arterials	*	*	

Collector	6%	7%
Local Residential	6%	10 %
Minor Residential	6%	10%

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.

ResidentialNon-ResidentialMinimum Radius of Horizontal Curve (feet) ***

Principal /Minor Arterials	*	*
Collector	300	250
Local Residential	250	150
Minor Residential	200	100

Minimum Length of Crest Vertical Curves (feet)

Principal/Minor Arterials	*	*
Collector	30 times the Algebraic Difference in Grades	
Local	20 times the Algebraic Difference in Grades	

Minimum Length of Sag Vertical Curves (feet)

Principal/Minor Arterials	*	*
Collector	40 times the Algebraic Difference in Grades	
Local	30 times the Algebraic Difference in Grades	

* 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.

		<u>Residential</u> <u>Residential</u>	<u>Non-</u>
<u>Minimum Sight Distance (feet)</u>			
Principal/Minor Arterials	*		*
Collector	300	250	
Local	250	200	
Intersections	Across Corners	Across Corners	
	75 feet back	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 .

Minimum Diameter of Turnaround on Cul-de-sacs (feet)

Pavement Diameter	150	80
Right-of-way Diameter	170	100

Pavement Crown

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 0.033 feet per foot 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.

* 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.

Length of Cul-de-sac Streets

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.

	<u>Residential</u>	<u>Residential</u>	<u>Non-</u>
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Minimum Radius of Return at Intersections (feet)

Pavement Radius	50	30
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Right-of-Way Radius	30	25
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Minimum Length of Tangents Between Reverse Horizontal Curves (feet)

Principal/Minor Arterials	*	*
Collector	250	200
Local	200	100

* 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.

NOTE: For design criteria not covered in these standards, the design criteria shall refer to the American Association of State Highway and Transportation Officials, Policy on Geometric Design of Highways and Streets.

- 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.

See Appendix A for driveway, culverts, cross drains and headwall construction.

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 eight hundred feet (800') apart and be within four hundred feet (400') 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.

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

Sidewalks, where required by the Planning Commission or these regulations, shall be included within the dedicated non-pavement right-of-way of all public ways as indicated in the following table and shall be improved as required by Section 4 – 17.7 of these regulations. Concrete curbs are required for all public ways where sidewalks are to be constructed.

Sidewalks measuring four feet in width are required on at least one side of all-new Residential streets and five feet in width on Collector streets with the following exceptions:

- (1) Sidewalks are not required on Minor Residential Streets or in proposed minor subdivisions with existing streets not having sidewalks.
- (2) Residential alleys shall not require sidewalks.
- (3) The developer shall install all required sidewalks within the platted subdivision upon eighty (80%) of the residences or buildings for construction within the platted subdivision having been completed and certificates of occupancy have been issued by the City, or the City of Springfield Board of Mayor and Aldermen requests that the sidewalk construction be done, or eighteen (18) months after the street binder layer has been placed.

Sidewalks shall be bonded as with other subdivision improvements.

SIDEWALK DESIGN		
Class of Street	Sidewalk Width	
	Residential Public Way	Nonresidential Public Way
Minor Residential Residential	4 feet wide	

Collector	5 feet wide	5 feet wide
Arterial	5 feet wide	5 feet wide

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.

4-29 DRIVEWAYS

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.

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

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.

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.

All driveways shall have a minimum of six (6) feet, measured from back of the curb, constructed of hot mix asphalt or concrete pavement.

Driveways with grades greater than 6% shall be constructed of hot mix asphalt or concrete pavement. The six (6) percent grade is determined elevation change of the driveway measured from the back of the curb to fifty (50) feet away from the street.

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 crossdrains 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, plated 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 along side 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 effected 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 truck normally shall not be extended to the boundaries of adjacent existing or potential residential areas.

ARTICLE 5

DEFINITIONS

5-1 USAGE

- 5-1.1 Abbreviations, terms, and words used herein shall be used, interpreted, and defined as set forth in this Article.
- 5-1.2 Unless the context clearly indicates to the contrary, words used in the present tense include the singular; and the word “herein” means “in these regulations” and the word “regulations” means “these regulations”.
- 5-1.3 A “person” includes a corporation, a partnership, and an unincorporated association of persons, such as a club; “shall” is always mandatory; a “building” or “structure” includes any part thereof; “used” or “occupied,” as applies to any land or building, shall be construed to include “intended, arranged, or designed to be used or occupied.”

5-2 WORDS AND TERMS DEFINED

Alley - A public or private right-of-way primarily designed to serve as secondary access to the side or rear of those properties whose principal frontage is on some other street.

Applicant - The owner of land proposed to be subdivided or his authorized representative. Consent shall be required from the legal owner of the premise(s).

Approving Authorities – Those responsible for reviewing and applying certification to subdivision plats indicating conformance with all applicable laws, ordinances and regulations as required in these regulations and in the Tennessee Code Annotated. Approving Authorities include but are not necessarily limited to the responsible party that signs on a subdivision plat (1) Certificate of ownership and dedication, (2) Certificate of accuracy, (3) Certification of the approval of public ways, (4) Certification of the approval of water and sewerage system, and (5) Certificate of Approval for Recording.

Architect - An architect certified and registered by the State Board of Architectural and Engineer Examiners pursuant to Tennessee Code Annotated, to practice in Tennessee; or a landscape architect certified and licensed by the State Board of Landscape Architects pursuant to Tennessee Code Annotated, to practice in Tennessee.

Arterial Street or Road - A major public way intended to move traffic to and from major industrial areas or a route for traffic between communities or large areas and which has an average daily traffic count in excess of 3,000 vehicles.

Average Daily Traffic (ADT) A projected traffic volume based upon the estimated number of vehicles traveling upon a given street within a twenty-four hour period.

Block - A tract of land bounded by public ways or by public parks, cemeteries, railroad right-of-way, or shorelines or waterways, or a combination of such.

Bond - An instrument with a clause, with a sum of money fixed as a penalty, binding the parties to pay the same: conditioned, however, that the payment of the penalty may be avoided by the performance by some one or more of the parties of certain acts.

Building - Any structure built for the support, shelter, or enclosure of persons, animals, chattels, or movable property of any kind; including mobile homes.

Building Setback - A line beyond which no foundation, wall or part of the structure of any building shall project with the exception of open walkways and the sub-surface projection of footings.

Bikeway - A facility that is explicitly provided for non-motorized bicycle travel.

Capital Improvements Program - A proposed schedule of future projects, listed in order of construction priority, together with cost estimates and the anticipated means of financing each project. All major projects requiring the expenditure of public funds, over and above the annual governing body's operating expenses, for the purchase, construction, or replacement of the physical assets of the community are included.

Common Elements - Any portion of a condominium which is held in common by owners of condominium units. These elements may be either general common elements or limited common elements, as defined below.

- a) General Common Elements - Any of the common elements of a condominium which are held in joint ownership by all owners of the condominium.
- b) Limited Common Elements - Any of the common elements of a condominium which are reserved for use by the owner(s) of a particular condominium unit or group of units.

Comprehensive Plan – The comprehensive plan or any applicable element of the plan for the Springfield Area approved by the Planning Commission. The plan may consist of such elements as major street and road plan, major thoroughfare plan, general land use plan, and other maps data, and descriptive matter for the physical development of the urban area or any portions thereof, including any amendments, extensions, or additions thereto as adopted by the Planning Commission. It may also include all or part of the Public Chapter 1101 Growth Plan for Springfield. The plan and its elements shall also be used to identify the General Plan or Community Plan. It is the official statement of the Planning Commission which sets forth major policies concerning future development of the jurisdictional area.

Condominium - A form of ownership of less than the whole of a building or system of buildings under a statute which provides the mechanics and facilities for formal filing and recordation of divided interests in real property, whether the division is vertical or horizontal.

Condominium Subdivision - The subdivision of property through the establishment of a condominium or horizontal property regime.

Condominium Unit - A space conveyed by separate title and located within a condominium structure.

Construction Plan - The maps or drawings accompanying a subdivision plat and showing the specific location and design of improvements to be installed in the subdivision in accordance with the requirements of the Planning Commission.

Contractor - An individual, firm, or corporation with whom an owner or authorized agent has executed a work agreement.

County Environmentalist - An agent designated to administer local and/or state health regulations.

County Road Superintendent – The Robertson County Road Superintendent.

Count Register's Office – Robertson County Register of Deeds office.

Cul-de-sac - A minor street having only one outlet and having an appropriate terminal for the safe and convenient reversal or traffic movement, definition includes: dead-end, turnaround, or turnabout.

Cut Area – Consists of the excavation and grading of an area (roadway, borrow pit, waterways, ditches, benches, etc.), which in turn lowers or rearranges the elevation of the existing area.

Design Specifications - Written descriptions of a technical nature of materials, equipment, construction systems, standards, and workmanship required for a project intended for local governing body's ownership or maintenance.

Developer - The owner of land proposed to be subdivided or his authorized representative.

Design Manuals – Condition of Service Manuals – The manuals adopted by Robertson County and the City of Springfield, Tennessee for design and specifications of road, water mains, sanitary sewers, storm drains, culverts, and any amendments thereto.

Dwelling Unit - A room, or rooms connected together constituting a separate, independent housekeeping establishment for owner occupancy, rental or lease on a daily, weekly, monthly, or longer basis; physically separated from any other room(s) or dwelling units which may be in the same structure; and containing independent cooking and sleeping facilities.

Easement - Authorization by a property owner for the use by another, for a specified purpose, of any designated part of his/her property.

Enforcing Officer – The planning director, building inspector or other such person designated by the Chief Executive Officer (City Manager) to be responsible for enforcing the provisions of these regulations.

Engineer - An engineer certified and registered by the State Board of Architectural and Engineer Examiners pursuant to Tennessee Code Annotated, to practice in Tennessee.

Engineering Official – The City Engineer, his or her designate or any duly authorized city employee.

Equal Degree of Encroachment - The delineation of floodway limits so that floodplain lands on both sides of a stream are capable of conveying a proportionate share of flood flows. This is determined by considering the hydraulic conveyance of the floodplain along both sides of a stream for a significant reach.

Escrow - A fiduciary agreement with the governing body in lieu of actual performance and intended to assure performance. An escrow account may be provided as a bond subject to agreement of the governing body.

External Subdivision Boundary - All points along the periphery of a subdivision.

Fill Area – Consists of placing of approved materials in an area to create an embankment for a roadway, building structure, etc. which in turn raises the elevation of the existing area.

Final Subdivision Plat - The final map or drawing and accompanying materials, described in these regulations, on which the Subdivider's plan of the subdivision is presented to the Planning Commission for approval and which, if approved by the Planning Commission, is recorded with the county register of deeds.

Flood - A temporary rise in stream level that results in inundation of areas not ordinarily covered by water.

Flood Frequency - The statistically determined average for how often a specific flood level or discharge may be equaled or exceeded.

Flood Hazard Boundary Map - An official map on which the boundaries of the floodplain areas having special flood hazards have been delineated.

Flood Hazard or Flood-Prone Area - The maximum area of the floodplain that, on the average, is likely to be flooded once every one hundred years ((i.e., that has a one percent (1%) chance of being flooded in any year)).

Floodplain - A land area adjoining a river, stream, watercourse, bay, or lake which is likely to be flooded. It is composed of a floodway and floodway fringe.

Floodplain Management Program - The overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works, building code regulations, health regulations, zoning ordinance regulations, and these subdivision regulations.

Flood Profile - A graph showing the water-surface elevation or height of a particular flood event for any point along the longitudinal course of a stream. The flood profile is determined through the use of standard open-channel hydraulic calculations.

Flood-proofing - Any combination of structural and non-structural additions, changes, or adjustments to properties and structures which reduce or eliminate potential flood damage to lands; water facilities, sanitary facilities, and other utilities; structures; and contents of buildings; and which prevent pollution of floodwaters from such natural or man-made sources.

Floodway - The stream channel and adjacent over-bank areas required to carry and safely discharge the 100-year flood without increasing flood levels more than one (1) foot above natural flood levels.

Floodway Encroachment Limits - The lines marking the limits of floodways on official federal, state, and local floodplain maps.

Floodway Fringe - The area adjoining a watercourse which, although not lying within a floodway, has been or may hereafter be covered by a 100-year flood.

Frontage - That side of a lot abutting a public way ordinarily regarded as the front of the lot. It shall not be considered as the ordinary side of a corner lot.

Governmental Agency - Any public Body other than the governing body.

Governing Body - The chief legislative body of any government.

Governmental Representative - An outside person or designated local official or employee authorized to act on behalf of the governing body in making determinations regarding legal, public works, planning, community development, or other public business.

Grade - The slope of a public way specified in percentage terms.

Health Department Tennessee Department of Environment and Conservation, County Environmentalist, and other agencies of the city of Springfield that hold responsibility for environmental and other health related functions.

Highway Department (Street Department)– Robertson County Highway Department and the City of Springfield Department of Public Works.

Highway, Limited Access – 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. Private driveways are not allowed onto this road classification.

Horizontal Property Act - “The Tennessee Horizontal Property Act” as codified in Sections 66-27-101 through 66-27-121, Tennessee Code Annotated

Individual Sewage Disposal System - A septic tank, seepage tile sewage disposal system, or any other sewage treatment device other than a public treatment system approved by the appropriate governmental representative.

Internal Subdivision Boundary - All points within a subdivision which do not constitute external boundaries.

Joint Ownership - Joint ownership among persons shall be construed as the same owner for the purpose of imposing subdivision regulations.

Jurisdictional Area - Planning boundary(s) established in keeping with Sections 13-3-101, 13-3-102, and 13-3-201, Tennessee Code Annotated.

Land Development Plan - An element of the general plan, which sets out a plan, or scheme of future land usage.

Land Surveyor - A land surveyor certified and registered by the State Board of Land Survey Examiners pursuant to Tennessee Code Annotated, to practice in Tennessee.

Legal Counsel - The certified attorney designated by the governing body to provide legal assistance for the administration of these and other regulations.

Lot - A tract, plot, or portion of a subdivision or parcel of land intended as a unit for the purpose, whether immediate or future, of transfer of ownership, or for building development.

Lot Corner - A lot situated at the intersection of two (2) public ways.

Lot, Double Frontage – A lot which runs through a block from street to street.

Lot Improvement - Any building, structure, place, work of art, or other object or improvement of the land on which it/they are situated constituting a physical betterment of real property, or any part of such betterment.

Lot, Interior – A lot other than a corner lot.

Lot, Reverse Frontage – A double frontage lot which has its vehicular access point limited to the back of the lot rather than having access on its front.

Lot Width – The mean horizontal distance across the lot measured at right angles to the depth.

Major Street or Road - A public way that is classified as a collector or arterial public way according to these regulations or by the major street or road plan for the jurisdictional area.

Major Street or Road Plan - The plan adopted by the Planning Commission, pursuant to Section 13-3-402 and 13-4-302, Tennessee Code Annotated, showing, among other things, “the general location, character, and extent of public ways... (and) the removal, relocation, extension, widening, narrowing, vacating, abandonment or change of use of existing public ways...”

Major Subdivision - All subdivisions not classified as minor subdivisions including but not limited to subdivisions of six or more lots or subdivisions of any size requiring any new or improved road, the extension of government facilities, or the creation of any public improvements, or containing any flood-prone area.

Minor Street or Road - A public way that is not classified as an arterial or collector.

Minor Subdivision - Any subdivision containing five (5) or less lots fronting on an existing public way; not involving any new or improved public way, the extension of public facilities, or the creation of any public improvements, and not in conflict with any provision of the adopted general plan, major street or road plan, zoning ordinance, or these regulations.

National Flood Insurance Program - A program established by the U.S. Government in the National Flood Insurance Act of 1968, and expanded in the Flood Disaster Protection Act of 1973, in order to provide flood insurance at rates made affordable through a federal subsidy in local political jurisdictions which adopt and enforce floodplain management programs meeting the requirements of the National Flood Insurance Program regulations.

Off-Site - Any premise not located within the area of the property to be subdivided, whether or not in the same ownership of the applicant for subdivision approval.

One Hundred-Year Flood - A flood having an average frequency of occurrence of once in 100 years, although it may occur in any year. It is based on statistical analysis of stream flow records available for the watershed and analysis of rainfall and runoff characteristics in the general region of the watershed.

Owner - Any person, group of persons, firm or firms, corporation or corporations, or any other legal entity having legal title to or sufficient propriety interest in the real property.

Permanent Easement – An easement providing legal access from one or more lots to existing public highways, streets, thoroughfares, utilities or drainage facilities. Maintenance of such permanent easements shall not be the responsibility of the City or County.

Performance Bond - See "Bond."

Perimeter Street - Any existing street to which the parcel of land to be subdivided abuts on only one side.

Planning Commission - A public planning body established pursuant to Title 13, Chapters 3 or 4, Tennessee Code Annotated, to execute a partial or full planning program within authorized areal limits.

Planning Region – For the purpose of these regulations, the area composed of territory of the Springfield, Tennessee municipality together with the designated Springfield Planning Region granted to the city by the State of Tennessee under Section 13-3-102 of Tennessee Code Annotated.

Plat – The map, drawing, or chart upon which the plan of subdivision is presented to the Planning Commission for approval.

Preliminary Plat - The preliminary drawing or drawings, described in these regulations, indicating the proposed manner of layout of the subdivision to be submitted to the Planning Commission for approval.

Premise(s) - A tract of land together with any buildings or structures which may be thereon.

Public Improvement - Any drainage ditch, roadway, parkway, sidewalk, pedestrian way, tree, lawn, off street parking area, lot improvement, or other facility for which the governing body may ultimately assume the responsibility for maintenance and operation, or which may affect an improvement for which the governing body's responsibility is established.

Public Way - Any publicly owned street, alley, sidewalk, or land right-of-way which provides for movement of pedestrians and/or vehicles.

Reach - A hydraulic engineering term to describe longitudinal segments of a stream or river. A reach generally includes the segment of the flood hazard area where flood heights are influenced by a man-made or natural obstruction. In an urban area, the segment of a stream or river between two (2) consecutive bridge crossings typically would constitute a reach.

Regulatory Flood - The one-hundred year flood.

Regulatory Flood Protection Elevation - the elevation of the regulatory flood plus one (1) foot of freeboard to provide a safety factor.

Resubdivision - A change in a map of any approved or recorded subdivision plat altering the number of lots incorporated within the confines of the original plat.

Right-of-Way - A strip of land occupied or intended to be occupied by a public way, crosswalk, railroad, electric transmission line, oil or gas pipeline, water main, sanitary or storm sewer line, or for another special use. The usage of the term "right-of-way," for land platting purposes, shall mean that every right-of-way

hereafter established and shown on a final plat is to be separate and distinct from the lots or parcels adjoining such right-of-way and shall not be included within the dimensions or areas of such lots or parcels.

Sale or Lease - Any immediate or future transfer of ownership, including contract of sale or transfer, of an interest in a subdivision or part thereof, whether by metes and bounds, deed, contract, plat, map, or other written instrument.

Same Ownership - Ownership by the same person, corporation, firm, entity, partnership, or unincorporated association or ownership by different corporations, firms, partnerships, entities, or unincorporated associations, in which a stockholder, partner, associate, or member of his family owns an interest in each corporation, firm, partnership, entity, or unincorporated association.

Setback - The distance between a building wall and the nearest public way right-of-way.

Sketch Plat - A sketch preparatory to the preliminary plat (or final subdivision plat, in the case of minor subdivisions).

Special Flood Hazard Map - The official map designated by the Flood Insurance Administrator to identify floodplain areas having special flood hazards.

Staff Assistant to the Planning Commission - The person(s) employed by the local governing body to assist the Planning Commission in planning and land use regulation activities.

Start of Construction - For purposes of subdivision control any alteration of the original surface area of the land, from and after the date and adoption of these regulations.

Structure - Anything constructed above or below ground.

Subdivider - Any person who (1) having an interest in land, causes it, directly or indirectly, to be divided into a subdivision or who (2) directly or indirectly, sells, leases, or develops, or offers to sell, lease, or develop, or advertises for sale, lease, or development, any interest, lot, parcel, site, unit, or plot in a subdivision or who (3) engages, directly or indirectly, or through an agent in the business of selling, leasing, developing, or offering for sale, lease, or development a subdivision or any interest, lot, parcel site, unit, or plot in a subdivision or who (4) is directly or indirectly controlled by or under direct or indirect common control with any of the foregoing.

Subdivision - Subdivision means the division of a tract or parcel of land into two (2) or more lots, sites, or other divisions requiring new street or utility construction, or any division of less than five (5) acres for the purpose, whether immediate or future, of sale or building development, and includes resubdivision and, when appropriate to the context, relates to the process of resubdividing or to the land or area subdivided. (See Sections 13-3-401 or 13-4-301, Tennessee Code Annotated).

Subdivision Agent - Any person who represents or acts for or on behalf of a subdivider or developer in selling, leasing, or developing or offering to sell, lease, or develop any interest, lot, parcel, unit, site, or plot in a subdivision, except in an instance where only legal counsel is provided.

Surveyor – An individual licensed and registered by the State of Tennessee to practice surveying in the State of Tennessee.

Temporary Improvement - Any improvement built and maintained by a subdivider during construction of the subdivision and prior to release of the surety for completion of required improvements.

Tract – A portion of land with definite and ascertainable limits or boundaries.

Twenty-Five Year Flood - A flood having an average frequency of occurrence of once in 25 years.

Water Surface Elevation - The heights in relation to mean sea level expected to be reached by floods of various magnitudes and frequencies at pertinent points in the floodplain. Also, the level of natural flows or collectors or water which may be expected to be found above or below surface.

Zoning Ordinance or Resolution - A statute, legally adopted pursuant to Title 13, Chapter 7, Tennessee Code Annotated, for the purpose of regulating, by district, land development or use for a designated area.

ARTICLE 6

GENERAL PROVISIONS

6-1 AREA OF JURISDICTION

These regulations shall govern all subdivisions of land within the corporate limits of Springfield and within the Springfield Planning Region.

6-2 INCREASED STANDARDS

The Planning Commission may require standards above the minimum contained herein whenever it feels the public health, safety and welfare justifies such increases.

6-3 VARANCIES

Where the Planning Commission finds that extraordinary hardships or particular difficulties may result from the strict compliance with these regulations, it may, after written application by the developer, grant variances to the regulations, subject to specified conditions, so that substantial justice may be done and the public interest secured, provided that such variances shall not have the effect of nullifying the intent and purpose of these regulations. The Planning Commission shall not grant variances to these regulations unless they shall make findings based upon the evidence presented to them in each specific case that:

6-3.1 Physical Surroundings

Because of the particular physical surroundings, shape, or topographical conditions of the specific property involved, a particular hardship to the owner would result, as distinguished from a mere inconvenience, if the strict letter of the regulations was adhered to.

6-3.2 Unique Conditions

The conditions upon which the request for a variance is based are unique to the property for which the variance is sought and are not applicable, generally, to other property, and have not been created by any person having an interest in the property. A variance shall not be requested for financial gain.

6-3.3 Detriment to Public Safety

The granting of the variance will not be detrimental to the public safety, health or welfare, or injurious to other property or improvements in the neighborhood in which the property is located.

6-4 AMENDMENTS

The Planning Commission may from time to time revise, modify or amend these regulations by appropriate action taken at a regularly scheduled meeting after the required notice and holding of a public hearing as required by law.

6-5 ENFORCEMENT AND PENALITES FOR VIOLATIONS

The enforcement of these regulations and penalties for the unapproved recording or transfer of land is provided by state law in the authority granted by public acts of the State of Tennessee. The following procedures are provided in the Tennessee Code Annotated for the enforcement of subdivision regulations:

6-5.1 Recording

6-5.1 A No plat or plan of a subdivision of land into two or more lots located within the area of planning jurisdiction shall be admitted to the land records of the county or received or recorded by the County Register of Deeds until said plat or plan has received final, certified approval of the Planning Commission as provided in Section 13-4-302 and Section 13-3-402, Tennessee Code Annotated.

6-5.1 B Upon final approval, a staff representative of the City of Springfield shall record the plat in the Robertson County Office of the Register of Deeds upon the payment by the subdivider of any and all fees associated with the plat that are established in these regulations. Recording of the plat shall occur within ten (10) days of collecting of all fees or the final certification of all required approving authorities of the subdivision whichever comes last.

6-5.2 Acceptance of Streets and Utilities

No board, public officer, or authority shall light any street, lay or authorize the laying of water mains or sewers, or the construction of other facilities or utilities in any street located within the area of planning jurisdiction unless such street shall have been accepted, opened, or otherwise received the legal status of a public street prior to the adoption of these regulations, or unless such street corresponds in its location and lines to a street shown on a subdivision plat approved by the Planning Commission, or on a street plan made and adopted by the Planning Commission as provided in Section 13-4-303 and Section 13-3-403, Tennessee Code Annotated. Final acceptance of a new street shall not be complete until approved by the Planning Commission on a subdivision plat, certified by all the required approving authorities, and approved by the Board of Mayor and Aldermen or County Commission by resolution.

6-6 PENALITES

For violation of these regulations, the following penalties are provided by the Tennessee Code Annotated:

6-6.1 Recording

No county register shall receive, file, or record a plat of a subdivision within the planning region without the approval of the Planning Commission as required in Section 13-4-302 and Section 13-3-402, Tennessee Code Annotated; and any county register so doing shall be deemed guilty of a misdemeanor, punishable as other misdemeanors as provided by law.

6-6.2 Transfer or Sale of Land

Section 13-3-410 and Section 13-4-306, Tennessee Code Annotated provides that whoever being the owner, or agent of the owner, of any land, transfers or sells or agrees to sell or negotiates to sell such land by reference to or exhibition of or by other use of a plat of subdivision of such land without having submitted a plat of such subdivision to the Planning Commission and obtained its approval and the certification of the other approving authorities as required before such plat is recorded in the office of the appropriate county register, shall be deemed guilty of a misdemeanor, punishable as other misdemeanors as provided by law; and the description by metes and bounds in the instrument of transfer or other document used in the process of selling or transferring shall not exempt the transaction from such penalties. The municipality, through its solicitor or their official designated by its chief legislative body and/or the county attorney or other officials designated by the County Commission, may enjoin such transfer or sale or agreement by action or injunction.

6-6.3 Erection of Structures

Any building or structure erected in violation of the subdivision regulations shall be deemed an unlawful building or structure, and the City Attorney or other official designated by the chief legislative body may bring action to enjoin such erection or cause it to be vacated or removed as provided in Section 13-3-411 and Section 13-4-308, Tennessee Code Annotated.

6-7 FEES

The subdivider shall, at the time of submission of the preliminary plat, pay a Review Fee of fifty (\$50.00) dollars plus five (\$5.00) dollars per lot. Final plats, minor, and two-lot subdivision plats shall have a plat Review Fee of one hundred (\$100.00) dollars plus ten (\$10.00) dollars per lot. Additional fees may be charged to cover the expense, if required, of making prints of the original plat and for distribution to the appropriate officials and agencies.

6-8 SEVERABILITY

Should any section, subsection, paragraph, or provision of these regulations be held invalid or unenforceable by a court of competent jurisdiction, such decision shall in no way affect the validity of any other provision of these regulations.

6-9 REPEALER

All regulations in conflict with the provisions of these requirements are hereby repealed, except that all plats having preliminary approval prior to the adoption of these regulations will be governed by all previous regulations for a period of twenty-four (24) months from the date of preliminary approval. At the end of that period all preliminary approvals granted will be subject to the requirements of these regulations.

6-10 PUBLIC HEARING, ADOPTION, AND EFFECTIVE DATE

Before adoption of these regulations, a public hearing as required by Sections 13-4-303 and 13-3-403, Tennessee Code Annotated, was afforded any interested person or persons and was held on_____. Notice of said hearing was announced in the Robertson County Times, being a newspaper of general circulation in Robertson County and within the Springfield Planning Region. These formal regulations shall be in full force and effect from and after their adoption.

Adopted: _____
Date

Bill Powell, Secretary
Springfield Regional Planning Commission

APPENDIX A REQUIRED IMPROVEMENTS

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.

DEFINITIONS:

1. SPWD – City of Springfield, Public Works Department
2. SED - City of Springfield Engineering Department
2. TDOT - Tennessee Department of Transportation
3. ENGINEER - An engineer certified and registered by the State Board of Architectural and Engineer Examiners pursuant to Section 62-2, Tennessee Code Annotated.
4. TDOT STANDARD SPECIFICATIONS – Standard Specifications for Road and Bridge Construction, Tennessee Department of Transportation, Nashville, Tennessee, March 1, 1995 Edition, and any subsequent revisions, special provisions and additions.
5. AASHTO – American Association of State Highway and Transportation
6. ASTM - American Association for Testing Materials
7. SUBDIVIDER – Developer of the site or owner.

STREET AND ROAD CONSTRUCTION

AP-1.1 Street Plans

The developer shall provide street construction plans, including drainage calculations, for approval by the City Engineer and Director of Public Works. These plans will 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 radii, street offsets, sidewalk width and position, etc. and shall be stamped and signed by a Registered Tennessee Professional Engineer. Construction plans shall be approved prior to street construction.

(A) Centerline – The centerline of proposed streets and roadways may be required, to be marked or flagged in the right-of-way of the existing roadway

prior to preliminary approval. All improvements shall be located from the centerline of the right of way.

(B) Notification - The subdivider shall be required to notify the SPWD and the Engineering Department, in writing, at least 48 hours prior to construction in order that a Inspector may be scheduled to inspect the proposed work

AP-1.2 EARTHWORK & ENBANKMENT

The subdivider shall grade or fill horizontally all streets, roads, and alleys to the full width of base construction plus seven feet, which may be located on one side of the roadway. Due to special topographical conditions, deviation from the above will be allowed only with specific approval of the Planning Commission.

Stripping, Stockpiling, and Placing Topsoil

All topsoil shall be stripped within the street right-of-way and from any other areas designated by the enforcing officer. Topsoil shall be stored in stockpiles. All organic matter within the right-of-way shall be stripped and disposed of unless directed otherwise by the enforcing officer.

A two-to-three inch layer of topsoil shall be placed where seeding is required or where required by the enforcing officer.

After the stockpiled topsoil has been placed as specified above, the areas where the topsoil was stockpiled shall be neatly graded and dressed.

Topsoil stockpiles shall be protected with erosion control devices to prevent soil erosion.

Clearing & Grubbing

Before grading is started the entire right-of-way area shall be cleared and grubbed of all trees, stumps, roots, brush, and other objectionable materials. Do not disturb any trees and other vegetation that are not in conflict with improvements..

Excavation

Excavation for roadways includes the removal of pavements; root mat; stripping of topsoil; cutting ditches; storing suitable material for incorporation on the job at a later date; widening cuts and shaping slopes necessary for preparation of the roadbed, channels, waterways, intersections, approaches, entrances; disposal of

unsuitable and surplus materials; and other incidental work within the limits of construction.

Where the location is on a section of old road, the Developer shall be required to scarify or break the old surface and remove or spread the material there from uniformly over the roadbed as directed.

When required, cut surface ditches on the top of slopes for excavation, or at the foot of slopes of embankments, and at such other points not necessarily confined to the right-of-way, or shown on the approved plans. Surface ditches shall be of such dimensions and grads as necessary to provide proper drainage. Side ditches may be changed from time to time as to slope and depth according to the amount of drainage.

Excavation for roadways shall include the disposal of materials unsuitable for reuse in the embankment (referred to as "unsuitable material") as directed by the SPWD.

When the material encountered is not suitable for the foundation of the subbase or for finished grade, excavate the unsuitable material below the grade shown on the profile, backfill with suitable material as approved by SPWD and shape to conform to the section of the road surface as shown on the approved plans.

All tree stumps, boulders, and other obstructions shall be removed to a depth of two (2) feet below the subgrade. Solid shall be scarified to the subgrade one (1) foot below subgrade. All areas excavated below subgrade shall be backfilled and compacted with materials approved by the SPWD and shape to conform to the section of road surface as shown on the approved plans.

All construction shall be in accordance with Division II – Part I Earthwork, TDOT STANDARD SPECIFICATIONS unless otherwise directed by the SPWD.

Embankment

Embankment shall consist of the placing and compaction of approved material within the construction area and shall include the preparation of the area upon which the embankment is to be placed.

Construct embankment with approved material and place so as to provide uniform compaction throughout. The embankment shall contain no mud, frozen material, roots, sod or other deleterious matter.

Do not place embankment on frozen ground or areas covered with ice or snow.

The area of original ground surface on which embankments of less than ten feet in depth are to be constructed shall be denuded of all vegetation.

Where existing highways are to be widened and fills extended, denude existing slopes of all vegetation. Where the width of the fill to be added is sufficient to accommodate the compacting equipment, bench the existing sloped in horizontal and vertical planes to obtain the proper width.

Construct embankments of approved material and build in layers not exceeding 8 inches of loose material, except in cases of rock, where layers of 2 feet may be used. Rock over 4 inches in diameter shall not be placed with the top 12 inches of subgrade. Each layer shall be compacted at optimum moisture content and the embankment shall have the required maximum density of 95 percent as compared to the density of the same material when tested in accordance with AASHTO, T-99. Save the best material for finishing and dressing the surface.

Where such areas will support the compacting equipment, compact the original ground to a depth of 8 inches prior to the placing of any fill material. Embankments to be place over swampy areas may be deposited by end-dumping the original course. This course shall be the minimum depth required to support the equipment. The use of compacting equipment shall not be required on the original course. Upon the completion of the original course, construct the remainder of the embankment in layers and compact in accordance with these specifications.

On embankments constructed on slopes of more than 30 degrees with the horizontal, the slopes shall be benched to a width sufficient to carry the compacting equipment and the fill constructed as hereinbefore specified.

Surplus material and unsuitable material may be disposed of by using the material to widen and flatten sloped embankments where sufficient right-of-way exists.

Shape, compact, slopes and dress in such a manner as to yield the grades and slopes shown on the approved plans.

All construction shall be in accordance with Division II – Part I Earthwork, TDOT STANDARD SPECIFICATIONS unless otherwise directed by the SPWD.

ROCK EXCAVATION

The developer shall use utmost care not to endanger life or property. The contractor must provide the SPWD a Certificate of Insurance in an amount satisfactory to the Director of Public Works and written proof of personnel licensed by the State of Tennessee to perform this work..

The developer shall obtain all permits required for the transportation, handling , storage and use of explosives and drilling equipment. Blasting permits shall be obtained from the appropriate agency and no blasting is to occur without informing the SPED.

All Blasting shall be in accordance with the Underground Utility Damage Prevention Act of the State of Tennessee as well as other state and federal regulations and ordinance relating to explosives. Blasters shall have a State of Tennessee approved license available for examination at all times on the work site.

Cover areas to be blasted with mats or other approved material to stop flying, during explosions. Give sufficient warning to all persons in the vicinity of the work before a charge is exploded.

Employ flagmen to stop or direct traffic as required.

In addition all rock excavation shall be in accordance to section 203, TDOT STANDARD SPECIFICATIONS.

DUST PREVENTION

The developer shall sprinkle the grade with water or apply a dust-allaying material when in accordance with Section 104.09 TDOT STANDARD SPECIFICATIONS, as may be to prevent a dust nuisance to the public or as directed by SPWD.

SUBGRADE RESTORATION AND STABILIZATION

All underground utilities, including water, sewer, gas, telephone, or other, shall be installed completely throughout the length and width of all roadways, including individual service connections to each and every lot. All individual service connections shall be stubbed out from the main line to the street right-of-way.

Where the subgrade is required to be cut for the installation of underground utilities, or service connections, the backfill shall be a crushed limestone placed in layers not to exceed eight (8) inches in thickness and shall be compacted by a pneumatic tamper to a density equal that of the original compacted subgrade.

On previously approved subgrade which have been disturbed by installation of utilities, additional testing of the density may be required before any base stone is applied. The finished subgrade shall provide for super-elevation and crown of the roadway where required.

TRIMMING OF TREES

Trees may be trimmed to remove branches or roots, which interfere with construction with the approval of SPWD. Do not cut tree roots unnecessarily, but if cutting is required backfill immediately after construction in the area is complete.

DISPOSAL

Dispose of all trees, shrubs and other waste materials at an area shown on the plans, or at the Robertson County Transfer Station or an area approved by the SPWD. *Burning of wood waste is not allowed.* However, the Fire Department may consider granting a waiver from the open burning restrictions. The responsibility for obtaining all waivers shall be the Developer's or permit holder's.

ROADWAY PAVEMENT

AP 1.3 BASE CONSTRUCTION:

This work shall consist of furnishing and placing one (1) or more courses of crushed lime base materials , pug mill mix, on a prepared subgrade in accordance with Division II, Part II , Base and Subgrade Treatments and Part III, Flexible Surfaces, TDOT STANDARD SPECIFICATIONS and in reasonably close conformity with the lines, grades and typical sections shown in the construction plans or as directed by the SPWD. **Local streets** shall have a compacted base course of a minimum of six (6) inches thick (eight (8) inches for a collector) and a width four (4) feet wider than the final application of asphalt pavement. **Non-residential streets** shall have a compacted base course of a minimum of ten (10) inches thick and a width six (6) feet wider than the final application of asphalt pavement. The type of base stone to be placed on roads and streets shall be a crushed limestone TDOT, Type A, Grading "D" as specified under Section 303, TDOT STANDARD SPECIFICATIONS. See Detail.

- (A) The centerline of the roadway shall coincide with the centerline of the right-of-way dedicated for such road or street.
- (C) The subdivider shall submit all subgrade tests for approval to the City Engineer or Public Works Engineer prior to placing stone in the right-of-way.
- (D) After preparation of the subgrade, the roadbed shall be surfaced with crushed limestone. The crushed stone shall be a TDOT Type "A", grading "D", Pug Mill mix as specified in Sections 303 & 903, TDOT STANDARD SPECIFICATIONS.
- (E) Spreading of the stone shall be done uniformly over the area to be covered in a maximum of three (3) inch lifts and shall not be dumped in piles
- (F) After spreading, the stone shall be rolled until thoroughly compacted. The compacted thickness of the stone shall be no less than the minimum for that particular street classification.
- (G) Upon completion of the base stone, the subdivider shall contact the SPWD and request core samples, proof-rolling, etc. test be performed and receive written approval before commencing and further construction.

AP- 1.4 PRIME COAT

This construction shall consist of an application of bituminous material at a rate of 0.30 gallons per square yard, and a cover material, if required, on a crushed limestone base in accordance with Section 402, TDOT STANDARD SPECIFICATIONS, and in reasonable close conformity with the lines shown on the plans or as directed by the SPWD.

AP 1.5 BINDER (Sections AP 1.5, AP 1.6 and AP 1.7 as amended on February 1, 2007)

After a thoroughly compacted base has been established and approved by SPWD, and the prime coat, or tack coat has been applied, a minimum of two (2) inch or otherwise indicated on the plans, compacted thickness, hot mix asphaltic binder, Grading "B-M" shall be applied. *The hot mix asphalt binder shall may consist of a portion of recycled asphalt materials, if approved by the Public Works Department, but shall conform to materials, construction methods and equipment as specified in section 307 and other applicable sections, TDOT STANDARD SPECIFICATIONS. The minimum AC content in this mix shall be as specified in the Public Works Department "Annual Street Repair & Maintenance" contract for the year in which the asphalt pavement is be installed.*

See Detail

- (A) Prior to applying the binder, the base shall be sprinkled with water to create a dustless environment.
- (B) A bituminous prime coat shall be applied uniformly over the surface of the . base by use of an approved bituminous distributor.
- (C) In the event that the bituminous material fails to penetrate the base, crushed stone chips (size 7 and 8) shall be applied at a rate of between eight (8) and twelve (12) pounds per square yard before the roadway will be open for traffic. The stone chips shall be applied in such a manner as to prevent traffic from tracking over fresh bituminous material.
- (D) Reference is made to Section 307, latest edition of the TDOT STANDARD SPECIFICATIONS, for accepted materials, equipment and construction requirements.

AP 1.6 TACK COAT

The subdivider shall be responsible for removal and disposal of any foreign material and sweeping of the existing pavement, immediately before paving or resurfacing. A tack coat shall be applied to old or existing pavement surfaces or to a previously installed asphalt pavement or surface to provide bond for an overlaid course. The tack coat shall be applied at the rate of 0.05 gallon per square yard, using materials, construction methods and installation as specified in TDOT STANDARD SPECIFICATIONS, Section 402 or as directed by SPWD.

AP 1.7 SURFACE LAYER

Upon completion of the application of the tack coat, a minimum of an one and one half (1.5) inches or unless otherwise designated on the plans, compacted thickness, hot mix asphaltic wearing surface, Grading "D" or "E" shall be applied. The hot mix wearing surface shall consist of all virgin materials and shall conform to Section 411 and any other applicable sections of TDOT STANDARD SPECIFICATIONS. *The minimum AC content in this mix shall be as specified in the Public Works Department "Annual Street Repair & Maintenance" contract for the year in which the asphalt pavement is be installed.*

The final asphalt surface layer shall be placed when:

- (A) Eighty percent (80%) of the residences or buildings for construction within the platted subdivision are completed and certificates of occupancy have been issued by the City, or the City of Springfield Board of Mayor and Aldermen requests that the paving be performed, or eighteen (18) months after the binder layer has been placed.
- (B) The asphaltic concrete pavement shall consist of a binder course as defined in Section 307, Grade B-M, latest edition of the TDOT STANDARD SPECIFICATIONS, for accepted materials, equipment and construction requirements. Recycled asphalt pavement aggregate shall not be allowed and the minimum Asphalt Cement content is 5.2 percent.
- (C) The asphaltic concrete surface pavement shall consist of a surface course as defined in Section 411, Grade D or E, latest edition of the TDOT STANDARD SPECIFICATIONS, for accepted materials, equipment and construction requirements. Minimum Asphalt Cement content is 6.0 percent.
- (D) Reference is made to the latest edition of the Standard Specifications for Road and Bridge Construction, Tennessee Department of Transportation, for accepted materials, equipment and construction requirements.

Final surface layer shall not be placed without prior written approval of the SPWD.

AP 1.8 TESTING

- (A) Testing of the sub-grade, crushed limestone stone base and asphaltic concrete installed shall be performed according to the latest procedures adopted by the SPWD.
- (B) It shall be the responsibility of the subdivider to contact the Public Works Department and Engineering Department at least 48 hours prior to construction of each of the following phases of construction:
 - 1. Earthwork
 - 2. Placing of the crushed stone base
 - 3. Placing of the asphalt binder or surface
 - 4. Bedding and backfilling of culverts.
- (C) All testing shall be performed by a laboratory approved by the Tennessee Department of Transportation at the time the road is constructed. The developer shall pay all costs associated with testing requirements. The selection of test points shall be determined by the SPWD.
- (D) All testing and certifications on concrete and reinforcement steel shall be performed by a TDOT certified testing personnel and all data supplied to the SPWD before acceptance of the project in accordance with section 501, TDOT STANDARD SPECIFICATIONS..

AP- 1.9 Testing Procedures**(A) General**

All tests to determine quality of materials shall be representative of the actual material to be used on the project. Previous tests of materials are acceptable only if performed within twelve (12) months after the adoption of these regulations.

(B) Soil

- 1. Proof-roll with loaded tandem dump truck in presence of the construction inspector. The selection of test points shall be determined by the Public Works Engineer or City Engineer
- 2. One (1) Standard Proctor Compaction Test shall be taken every six-hundred (600) feet. There shall be a minimum of two (2) of these tests taken on all streets.

3. One (1) In-place field density test shall be taken every three hundred (300) linear feet of roadway constructed. There shall be a minimum of two (2) of these tests taken on all streets. Minimum density required is 95% within 3% of optimum moisture content according to ASTM D 698.

(C) Crushed Stone Base

1. One (1) Standard Proctor Compaction Test shall be taken every six-hundred (600) feet. There shall be a minimum of two (2) of these tests taken on all streets.
2. One (1) In-place field density test shall be taken every three hundred (300) linear feet of roadway constructed. There shall be a minimum of two (2) of these tests taken on all streets. Minimum density required is 80% of solid volume, as defined in Section 303 of TDOT STANDARD SPECIFICATIONS.

(D) Asphalt

1. Submit asphalt mix design for review and approval by the SPWD.
2. One core test to determine final compacted thickness and density every three hundred (300) linear feet of roadway constructed for each layer of hot mixed asphalt pavement. There shall be a minimum of two (2) of these tests taken on all streets. Any section of street not meeting the minimum thickness as required by these specifications shall be resurfaced or repaired as deemed necessary by the SPWD.
3. Perform at least one (1) extraction test per day or a minimum of one test per 500 tons or portion thereof asphalt mix placed. Asphalt mixes that do not conform with the minimum asphalt content required in these specifications and the approved asphalt mix design shall be rejected. This test shall be performed by a technician currently certified by TDOT as a Certified Asphalt Plant Technician.

CONCRETE

AP-2.0 Curbs and Curb & Gutter

When concrete curbs are installed on both sides of all new streets, the curbs shall be backfilled and the fill shall slope into the storm drainage system. Where access streets to adjoining properties are provided and they provide no frontage for lots, they shall be curbed to the property line. Where a temporary turnaround is provided, curbs shall end at the transition curve. In all cases the curbs shall be

of no lower classification than machine formed concrete extruded curbs twelve (12) inches wide at the base and eight (8) inches high and shall be installed and inspected to the specification of the SPWD.

Concrete curb shall be constructed with a TDOT Class "A" concrete mix.

Construction joints shall be at 10 foot intervals and expansion joints shall be at no greater than 100 foot intervals unless directed otherwise by the SPWD. Joint filler shall be $\frac{3}{4}$ inch preformed asphalt expansion joint material conforming to ASTM D994 or ASTM D1751.

The subdivider will be responsible to provide curing for the concrete using a curing compound spray or plastic cover approved by the SPWD. Further he must prevent any damage or freezing of the poured concrete using methods approved by SPWD.

Concrete curb and Curb & Gutter shall be constructed in accordance with Section 702, TDOT STANDARD SPECIFICATIONS unless directed otherwise by the SPWD. (See Appendix B)

AP- 2.1 SIDEWALKS , DRIVEWAYS AND FLAT CONCRETE WORK

Concrete sidewalks shall be installed as required by these regulations or the City of Springfield Planning Commission and shall be installed per the lines, grades and specifications show on the construction plans and typical drawing or as directed by the SPWD.) Sidewalks shall be located in public rights-of-ways adjoining property lines and generally shall be four (4) inches thick , (six (6) thick at driveway crossings), with a minimum of four (4) inch compacted crushed limestone leveling base, and reinforced with welded wire fabric mesh.

Concrete sidewalks shall be constructed with a TDOT Class "A" concrete mix.

Construction joints shall be at 5 foot intervals and expansion joints shall be at no greater than 100 foot intervals unless directed otherwise by the SPWD. Joint filler shall be $\frac{1}{2}$ inch preformed asphalt expansion joint material conforming to ASTM D994 or ASTM D1751.

The subdivider will be responsible to provide curing for the concrete utilizing a liquid curing compound, or plastic cover or other methods approved by the SPWD. Further care must be taken to prevent any damage or freezing of the poured concrete using methods approved by SPWD

Handicap accessible ramps are required at all intersections and constructed per TDOT Standard Drawing Book and ADA regulations.

In a dead end street, sidewalks shall end at the transition curve of the cul-de-sac.

Sidewalks may be bonded as with other subdivision improvements

Sidewalks measuring four feet in width are required on at least one side of all new Residential streets and five feet in width on Collector and Commercial streets with the following exceptions:

1. Sidewalks are not required in proposed minor subdivisions with existing streets not having sidewalks.
2. Residential alleys shall not require sidewalks.
3. The developer shall install all required sidewalks within the platted subdivision upon eighty percent (80%) of the residences or buildings for construction within the platted subdivision having been completed and certificates of occupancy have been issued by the City, or the City of Springfield Board of Mayor and Aldermen requests that the sidewalk construction be done, or eighteen (18) months after the street binder layer has been placed.

Sidewalks, driveways and other flat concrete work shall be constructed in accordance with Section 701, TDOT STANDARD SPECIFICATIONS unless directed otherwise by SPWD.

AP-2.2 STREET SIGN AND TRAFFIC CONTROL SIGNS

Street signs and traffic control signs shall be provided by the SPWD and purchased by the subdivider for subdivisions within the City. The installation of these signs shall be coordinated with the SPWD. If the subdivider chooses to use other than City standard street signs they must be approved by the Director of Public Works. 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 for subdivisions developed within the Planning Region.

STORMWATER

AP-3.0 STORMWATER DRAINAGE SYSTEM

AP-3.1 Adequate drainage systems shall have the hydraulic capacity to accommodate the maximum expected storm water discharge for a specified tributary drainage area and precipitation duration and intensity.

Adequate drainage systems shall be designed to accomplish the following:

- A. Account for both offsite and onsite storm water.
- B. Maintain natural drainage divides.
- C. Convey storm water to a stream, channel, natural drainageway, or other existing facility.
- D. Discharge storm water into the natural drainageway by connecting the drainageway at natural elevations, or by discharging the storm water into an existing facility of sufficient capacity to receive it, or by discharging into an approved drainage well.

Determination of the size and capacity of an adequate drainage system shall take into account the future development in the watershed or affected portions thereof. The design must not adversely affect adjacent or neighboring properties.

Concrete curbs or curb and gutter with storm water drainage systems are required on all public ways serving an area with a density of two (2) or more dwelling units.

It is the responsibility of the developer or property owner to pick up or acceptably handle the runoff as it flows onto his property from the watershed above, and conduct it through his property to an adequate outfall at his lower property line or beyond. The outfall must be sufficient to receive the runoff without deterioration of the downstream drainageway.

AP-3.2 MINOR SYSTEMS (SUBDIVISION, STREET WITHOUT MAJOR DRAINAGE WAY OR STREAM CROSSING)

The design of the minor storm drainage system shall be based on a storm frequency of 25 years. This criterion shall be applied to both closed conduit and open channel systems. However, if the 25 year design flow for an open channel system is greater than 100 cubic feet per second (cfs), then the open or closed system shall be capable of passing the 100-year design flow within the drainage easement. **Systems relying on sinkholes or drainage wells for discharge shall be capable of passing the 100-year design flow within the drainage easement.**

In residential subdivision developments where the average lot size is less than 20,000 square feet, the following general guidelines shall be observed in the design of the minor system:

- A. Design surface runoff across lots shall not have erosive velocities.
- B. Quantities of surface runoff greater than 4 cfs that flow through lots shall be collected and conveyed in a system of open channels, closed conduits, or a combination of both.
- C. Lots should generally be graded in such a manner that surface runoff does not cross more than three lots before it is collected in a system of open channels, closed conduits, or a combination of both.

Design flows may be determined by the methods identified in this manual.

AP- 3.3 MAJOR SYSTEMS (DRAINAGE BASINS i.e. BLACK BRANCH, SULPHUR FORK CREEK BASIN, PAWNEE DRIVE BASIN, CARR'S CREEK, ETC.)

Wherever possible, natural waterways serving the major system should remain undisturbed, with proposed development situated wisely accordingly. However, due to the insufficient capacity of most natural drains, improvements to the channel may be necessary to properly utilize the adjacent property. Improvements to natural open channels that are to function primarily as the major system shall be designed to pass the 100-year design flow without damage to the channel. Man-made channels designed to function, as the major system (trunk line system) shall be capable of carrying a 100-year design flow. Where man-made channels are

necessary, the channels should be located as far away from buildings or structures as possible and preferably in established greenbelts.

The onsite major storm drainage system for most developments is the natural backup system and consists of the less obvious drainageways. Ideally, this major system should provide drainage relief such that no building will be flooded with a 100-year design flow even if the minor system capacity is exceeded. The 100-year frequency storm shall be used to compute runoff for the design of the onsite major drainage system. This system shall be designed to provide relief for flow in excess of the 25-year design flow.

The following guidelines pertain to design of the onsite major drainage system:

- A. Areas should be graded in such a manner or buildings located or constructed in such a manner that if the capacity of the minor system is exceeded, no building will be flooded by the design flow.
- B. Critical areas to consider are sumps, relatively flat areas, and areas where buildings are located below street or parking lots.
- C. The 100-year frequency storm shall be used to compute runoff for the major drainage system
- D. For the first trial, the same time of concentration values shall be used that were used in designing the minor drainage system and the minor system assumed to be completely inoperable. If no building will be flooded based on these assumptions, then the analysis can be considered complete.
- E. If buildings will be flooded based on the assumptions used in the preceding item, more precise hydrologic and hydraulic computations are required. The minor system, overland relief swales, or surface storage should be designed so that no building will be damaged by flooding.
- F. In general, the minor storm drainage system should not be oversized as a basis for providing major system capacity. The major drainage system should be in the form of area grading or the location and construction of buildings in such a manner that overland relief swales or surface storage will provide adequate flood protection.

The major drainage system should be evident on the drainage plan, including overland relief swales and areas that may be affected by surface storage for a 100-year design storm. Calculations performed for major system design should be submitted with the construction and drainage plan.

AP- 3.4 OPEN CHANNELS

A. CHANNEL CAPACITY

Open channel capacity shall be determined by Manning's equation. Appropriate Manning's n values as presented shall be utilized for design and are subject to approval from the City of Springfield

B. LINED CHANNELS

Open channels may be designed as lined channels. Acceptable lining materials must be placed in accordance with applicable subdivision regulations. Approval of lining materials is subject to review by the City of Springfield.

Channel lining shall be required when the design velocity exceeds the allowable, non-erosive velocity for a given channel reach and no other erosion control measures provide adequate protection. Allowable, non-erosive velocities for various soil types are presented in Table AP-3.4 B

Table AP-3.4 B
MAXIMUM VELOCITIES FOR
COMPARING LINING MATERIALS

MAXIMUM VELOCITY <u>MATERIAL</u>	<u>FEET/SECOND</u>
Bare soil	
Silt or fine sand	1.50
Sandy loam	1.75
Silt loam	2.00
Stiff clay	3.75
Sod	4.0
Lapped sod	5.5
Vegetation	Use Table AP-3.5 B
Rigid	10

Higher velocities may be acceptable for rigid linings if appropriate protection is provided.

AP-3.5 GRASSED CHANNELS

The design of grassed channels shall consider the variable degree of retardance generated by different types of cover.

Temporary erosion control matting or other approved systems shall be utilized during grass cover establishment. The engineer shall note on the drawings or in the specifications that "All grassed channels must be in a well-stabilized condition and show no sign of erosion at the time of final acceptance by the maintaining authority."

Table AP-3.5 B
MAXIMUM VELOCITIES FOR VEGETATIVE CHANNEL LININGS

<u>Vegetation Type</u>	<u>Slope Range (%)</u>	<u>Velocity (feet per second)</u>	Maximum
Bermuda grass	0-5	6	
	5-10	5	
Kentucky bluegrass Buffalo grass	0-5	5	
	5-10	4	
Grass mixture	0-5	4	
	5-10	3	
Lespedeza sericea Alfalfa	0-5	2.5	
Annuals	0-5	2.5	

Based on erosive soils.

Reference: USDA, TP-61 (1947).

AP-3.6 EASEMENT WIDTH

All open channels shall be located within the right-of-way of a drainage easement. Minimum easement width shall be determined from Table AP-3.6 B.

Table AP-3.6 B
MINIMUM EASEMENT WIDTH FOR OPEN CHANNELS

<u>Top Width of Channel</u>	<u>Easement Width</u>
Less than 10 feet	20 feet minimum
10 - 20 feet	10 feet greater than top width of channel, with minimum of 5 feet on one side
Greater than 20 feet	15 feet greater than top width of channel, with minimum of 5 feet on one side

AP-3.7 STORM DRAINS

(A) CONDUIT CAPACITY

Closed conduits shall be designed for the total flow intercepted by the inlets during the design storm event, but in no case shall they be designed for a storm event less than 25 Year.

(B) PRESSURE FLOW

Storm drain systems should generally be designed as non-pressure systems. However, pressure flow systems if coordinated with the SDPW during the preliminary design phase, may be allowed. The hydraulic gradient for pressure flow systems shall not exceed the following criteria:

1. An elevation greater than one foot below the established ground surface, or
2. More than five feet above the crown of the conduit.

(C) EASEMENT WIDTH

Minimum allowable easement width for storm drains shall be determined from Tablet AP-3.7 B., or as required by the City of Springfield.

Table AP-3.7 B

MINIMUM EASEMENT WIDTH FOR STORM DRAINS

<u>Conduit Size</u>	<u>Easement Width</u>
15 - 18 inches	20 feet
21 - 33 inches	20 feet
36 - 48 inches	30 feet
54 - 72 inches	30 feet

(D) INLETS

Since curb and gutter inlets shall not be used as components of a major drainage system, the 100-year frequency storm shall not be considered. See detail

(E) CULVERTS

The design flow for culverts shall be based on the following return frequencies:

1. 50-year for residential collector and commercial road crossings or as directed by the SPWD.
2. 25-year for residential roads and crossings.

In addition, building elevations shall be checked for flooding caused by the 100-year, 24-hour storm.

(F) OUTLET PROTECTION

Concrete headwalls on the outlet end shall be constructed with concrete energy dissipators. The design discharge at the outlet of drainage systems shall not result in velocities that equal or exceed the erosive velocity of the receiving channel, unless energy dissipation and erosion protection measures are placed at the outlet. Energy dissipation and erosion control devices shall have no overfall at the terminal end and shall discharge onto a stable section. The terminal section shall be considered stable if the terminal section design velocity is less than the erosive velocity. Concrete dissipators are required on the outlet end of all headwalls as well as rip-rap, if deemed necessary by the design velocity or as directed by SPWD.

(G) BRIDGES

All bridges with spans of 20 feet or greater shall be designed for the 100-year, 24-hour storm event. The design flow shall consider runoff from the total tributary area and will require stream channel routing, as appropriate.

(H) STORMWATER DETENTION/RETENTION

Storm water detention is mandated for all new subdivision developments unless waived by the Director of Public Works or City Engineer.

1. RELEASE RATE

The release rate from any detention facility should approximate that of the developed site prior to the proposed development for the 2, 5, and 10-year through 25-year storms, with emergency overflow capable of handling the 100-year discharge except where waived or altered by the Springfield Department of Public Works. Adequate alternate drainage must be provided to accommodate major storm flows. **Detention systems must be constructed during the first phase of major developments to eliminate damage to adjacent properties during construction.** If siltation has occurred, detention systems must be restored to their design dimensions after construction is complete and certified as part of the as-built submittal.

2. DETENTION VOLUME

The required detention volume shall be that volume necessary to attenuate the post-development peak discharge to a level not to exceed the pre-development peak discharge. This volume may be minimized by careful attention to outlet structure design. Generally a detention control structure is required that is capable of passing the 100 year storm without overtopping berm, however in small or shallow detention ponds other structures may be allowed as directed by the Director of Public Works.

3 DRAWDOWN

Detention storage volume shall be drained within 72 hours. This requirement includes that volume above permanent pool in retention systems. Drawdown may be accomplished by a small orifice or notched weir. Other methods may be approved subject to SDPW review.

4 MAINTENANCE

Care must be taken to ensure that any required detention facilities do not become nuisances or health hazards. Detention facilities should be designed to require minimal maintenance, and maintenance responsibility must be clearly stated on the plans. Where dual purpose facilities are provided, or where flat grades or poorly draining soils encountered, provisions for adequate low flow drainage may be required. Where the retention/detention facility is planned to be used as a lake or pond with a permanent pool, water budget calculations shall be performed to demonstrate that an adequate pool is expected during dry summer months.

All detention facilities located in residential developments shall be within public storm drainage easements and shall be maintained by the Springfield Department of Public Works. Detention facilities located in condominium developments, apartment or townhouse complexes, single family PUDs, industrial, commercial, or

institutional developments shall be within public storm drainage easements and maintained by the property owner or homeowners association. *A maintenance agreement must be executed before the development plan is approved.*

AP-3.8 SINKHOLES AND DRAINAGE WELLS

All drainage systems discharging to sinkholes or drainage wells shall be designed using the 100-year storm for the critical duration of the watershed tributary to the sinkhole or drainage well. A geologic investigation and report is required, along with a demonstration that development will not occur within the area flooded by the 100-year storm and that all state and federal permitting requirements are complied with.

An erosion control plan shall identify the erosion control practices and sediment trapping facilities, which are, appropriate for the site conditions in question. In addition, the appropriate schedule of implementation shall be identified. Particular attention is required for concentrated storm water flows. Either concentrated storm water flows shall be avoided or the conveyance system shall be protected sufficiently to prevent significant erosion. Sediment trapping devices are generally required at all points where storm water leaves a site laden with sediment. The plan shall identify permanent storm water conveyance structures, final stabilized conditions of the site, provision for removing temporary control measures stabilization of the site where temporary measures are removed, and maintenance requirements for any permanent measures.

AP-3.9 STABILIZATION OF DENUDED AREAS AND SOIL STOCKPILES

Permanent or temporary soil stabilization shall be applied to denuded areas within 15 days after final grade is reached on any portion of the site. Soil stabilization shall also be applied within 15 days to denuded areas which may not be at final grade, but will remain dormant (undisturbed) for longer than 60 days.

Soil stabilization refers to measures that protect soil from the erosive forces of raindrop impact and flowing water. Applicable practices include vegetative establishment, mulching, and the early application of gravel base on areas appropriate for the time of year, site conditions, and estimated duration of use.

Soil stockpiles shall be stabilized or protected with sediment trapping measures to prevent soil loss.

AP-3.10 ESTABLISHMENT OF PERMANENT VEGETATION

A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved which, in the opinion of the SDPW and City Engineer, is mature enough to control soil erosion satisfactorily and to survive severe weather conditions.

AP-3.11 PROTECTION OF ADJACENT PROPERTIES

Properties adjacent to the site of a land disturbance shall be protected from sediment deposition. This may be accomplished by preserving a well-vegetated buffer strip around the lower perimeter of the land disturbance; by installing perimeter controls such as sediment barriers, filters or dikes, or sediment basins; or by a combination of such measures.

Vegetated buffer strips may be used alone only where runoff in sheet flow is expected. Buffer strips should be at least 20 feet in width. If at any time it is found that a vegetated buffer strip alone is ineffective in stopping sediment movement onto adjacent property, additional perimeter controls shall be provided.

AP-3.12 TIMING AND STABILIZATION OF SEDIMENT TRAPPING MEASURES

Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment onsite shall be constructed as a first step in grading, and be made functional before upslope land disturbance takes place. Earthen structures such as dams, dikes, and diversions shall be seeded and mulched within 15 days of installation.

AP-3.13 SEDIMENT BASINS

Storm water runoff from drainage areas with 5 acres or greater disturbed area shall pass through a sediment basin or other suitable sediment trapping facility.

AP-3.14 CUT AND FILL SLOPES

Cut and fill slopes shall be designed and constructed in a manner, which will minimize erosion. Consideration must be given to the length and steepness of the slope, the soil type, upslope drainage area, groundwater conditions, and other applicable factors. As a minimum, all slopes at 2 to 1 or greater shall be stabilized with rock riprap, or other method approved by the SDPW.

AP- 3.15 CONSTRUCTION EXITS

A stabilized stone pad shall be placed at any point where traffic will be leaving a construction site to a public right-of-way, street, alley, sidewalk, or parking lot. Stone pads shall contain TDOT #2 stone, six (6) inches thick and be a minimum of one-hundred (100) feet long.

3.16 STORM SEWERS & DRAIN SYSTEMS

A. Concrete Storm Sewer Pipe

Concrete storm sewer pipe, shall be reinforced concrete pipe. Reinforced concrete pipe shall be Class III unless otherwise stipulated on the plans and shall conform to the specifications of ASTM C-76. Pipe shall have ends sealed inside and outside of pipe with bitumastic joints and shall be accepted on the basis of

plant load bearing tests, material tests and inspection of pipe for visual defects and imperfections.

B. Mortar

Mortar used in manhole construction shall be one part of Portland cement conforming to ASTM C-150, Type II, and two parts of sand conforming to ASTM C-144, with enough water added to produce mortar of the property consistency for the type of joint.

C. Manhole and Inlet Frames and Covers

Manhole frames and covers shall be constructed of gray or ductile iron conforming to ASTM A-48 Class 30 and A-536 Grade 65-45-12. Frames and covers shall have ground bearing surfaces to prevent rocking and rattling under traffic. Manhole covers shall be as shown on the Construction Standards and as indicated on the Plant. *Castings shall be cleaned and painted with bituminous coating.*

D. Manhole Steps

Manhole steps shall be a composite of a No. 4 grade 60 deformed steel bar encased in copolymer polypropylene plastic of the "press-fit" design, rubber or aluminum.

E. Box or Pipe Culvert Width

Where the use of box culverts is required, they shall be designed at a width to allow future construction of sidewalks if not included in the initial project.

F. Installation

Maintain a minimum 10-foot horizontal distance between storm sewer and water mains.

Temporary support, protect and maintain all underground and surface structures and utilities encountered in the process of the work. Where the grade or alignment of the pipe is obstructed by existing utilities, such as conduits, pipes or drains, the obstruction shall be permanently relocated by the Contractor in cooperation with the Owners of said utilities.

Install piping in such a manner as to obtain sufficient flexibility and to prevent excessive stresses in materials and excessive bending moments at joints. Conduct work in strict conformance with the procedures established by the manufacturers of the various types of pipe.

In no case shall the type or size of pipe change between drainage structures.

Lay pipe to a true uniform line and grade from elevations indicated on the drawings with continuous bearing of barrel on cradle or bedding material.

Lay pipe up-grade with the bell and pointing in the upstream direction and the spigot end pointing in the downstream direction. Lay each section of pipe in such a manner as to form a close concentric joint with the adjoining section and to prevent any sudden offsets in the flow line.

Insure that pipe is well bedded on a solid foundation. Correct any defects due to settlement. Excavate bell holes sufficiently large to insure proper jointing and pipe support. Exercise precautions to include the furnishing and placing of bedding to prevent any pipe from resting directly on rock.

Plug and regrout lift holes left in the pipe prior to backfilling operations.

As the work progresses, clear the interior of the pipe of all dirt and superfluous materials of every description.

Keep trenches and excavations free of water during construction and until final inspection. Do not lay pipe in water or in a frozen bedding condition. Prevent flotation and re-lay pipe that has floated.

G. Manhole, Junction and Inlet Box Construction

Construct manholes and inlet boxes in accordance with the specifications, the plans and typical drawings. Boxes and manholes maybe poured in place, brick or pre-cast as approved by the SPWD..

Construct appropriate flow channels in the bottom of manholes and inlet boxes as shown in these specifications and on the plans. Flow channel construction shall provide a smooth transition between adjacent sections.

Cast-in-place concrete for manholes and inlet boxes shall be placed monolithically. Concrete shall be allowed to drop freely up to five-feet in height; where greater drops are required, a tremie or other device may be used.

Joints for brickwork shall be completely filled and shall be smooth and free from surplus mortar on the inside of the structure. Brick shall be laid radially with every sixth course laid as a stretcher course. Brick manholes and inlet boxes shall be parged over the entire inside surface of the walls.

Cut the pipe flush with the inside wall of the structure. Tightly mortar in pipe with quick-setting non-shrink grout.

Firmly anchor manhole steps, where required, to wall according to manufacturer's recommendations. Steps shall project not less than five-inches

from the inner surface of the wall. Manhole steps set in vertical alignment shall be not less than 12-inches wide.

Adjust the frame and castings to finished grade by brick or concrete adjusting ring construction.

AP 3.17 SEEDING, SODDING & MATTING

Description of Work

Provide all labor, materials, tools and equipment as required to have topsoil, fertilizer, lime, mulch, seed and/or sod applied on all areas disturbed by construction and all areas called for on the approved plans

Protection

Streets, road, adjacent property and other work to remain shall be protected throughout the work by suitable fences or barricades. Concrete surfaced areas shall be planked before loaded vehicles are allowed.

Erosion Control Matting

Description: The worked covered by this item consists of preparing the ground surface, seeding as herein specified, and furnishing and installing erosion control mats in drainage ways and as an alternative to sodding for establishment of grass on banks and in swales. Use of erosion control mats in lieu of sodding will require approval by SPWD on a case by case basis.

Materials and Installation: Erosion control mat may be North American Green C125 or equal, or other acceptable material as specified or as approved by SPWD. Wire staples shall be provided consisting of 12-inch lengths of No. 11 gauge wire, bent to form a U, firmly driven into the ground so as to hold the erosion control mat tightly to the soil. Staples shall be spaced not mote than three (3) feet apart along the sides of the mat, not more than one (1) foot apart at roll ends, and one (1) foot apart transversely at intervals not to exceed fifty (50) feet or as specified by the manufacturer.

Care and Repair: The Contractor shall care for the areas of erosion control mat installation until acceptance of the work and repair any damage due to traffic, erosion or other causes, before such acceptance.

Grading and Dressing

This work shall consist of dressing all slopes and areas to within reasonable close conformity to the lines and grades indicated on the plans, or as directed by the enforcing officer. Final dressing shall be performed by hand or machine to produce a uniform finish to all parts of

the roadway including embankments, ditches, etc. Rock cuts shall be cleaned of all loose fragments; side slopes shall be laid back to a three-to-one (3:1) slope and seeded as described in these specifications.

It shall be the responsibility of the Developer to finish (fine) grade all areas to be seeded or sodded, eliminating all bumps, depressions, sticks, stones and other debris to the satisfaction of SPWD. Developer shall remove all undesirable vegetation and rocks larger than one (1") inch in diameter from area to be seeded. After the topsoil has been spread and compacted to the required depth, no seeding or sodding shall be commenced until the depth of soil has been approved.

The entire right-of-way shall be cleaned of all weeds and brush and all structures, both old and new, shall be cleared of all brush, rubbish, sediment, or other objectionable material

Hydroseeding

All seeding must be performed by hydroseeding utilizing the materials and equipment specified in section 801 TDOT STANDARD SPECIFICATIONS.

All hydroseeded areas that do not show satisfactory growth within 30 days after hydroseeding shall be scarified and rehydroseeded as directed until a satisfactory cover is established . The areas shall be considered established when they are reasonable free from weeds, green in appearance, and the specified grass mixture is vigorous and well growing, and no bare spots bigger than 4 square feet are apparent. Full coverage is required in thirty (30) days.

The application rate and type of seed, mulch, lime, fertilizer, etc. shall be in accordance to section 918, TDOT STANDARD SPECIFICATIONS. Unless directed otherwise by the SPWD. Bermuda grass seed shall be used in any of the TDOT seed mixtures.

Preparation – Sodding

Developer shall remove all undesirable vegetation and rocks larger than one (1") inch in diameter from areas to be sodded. Prior to the time any sod is placed, fertilizer shall be applied as per the manufacturer's recommendations, and the finished soil surface shall be raked until it is smooth, uniform, and a consistent texture.

Scattered bare spots, none of which is larger than one square foot, will be allowed up to a maximum of three (3%) of any lawn area.

New planting shall be protected and maintained until the end of the lawn maintenance period or, if installed after the lawn maintenance period, until installation of the planning is complete. Maintenance period shall include watering, weeding, cultivating.

Erosion Control

The establishment of grass on banks and in swales and all other disturbed areas shall be the responsibility of the Developer. Seed with erosion matting or sod shall be used for this purpose as determined by the Developer, except for those areas indicated on the drawings and herein specifically specified to be solid sodded or strip sodded. Sodding shall be done on a smooth, even surface conforming with finished grade requirements after sodding is completed. Sod shall be tamped or rolled immediately after it is laid and shall be even and equally firm at all points on the finished surface. Protection of banks and swales shall be the responsibility of the Developer.

Maintenance

Maintenance shall begin immediately after each portion of the lawn is completed until such time that final acceptance is granted. Seeded or sodded areas shall continue in accordance with the following guidelines:

The sod and seeded areas shall be watered as directed by the SPWD for a minimum period of 30 days, mowed, and replanted as necessary, as long as is necessary, to establish a uniform stand of the specified grass and until acceptance.

The subdivider shall not permit any equipment or materials to be placed on any planted area and shall erect suitable barricades and guards to prevent equipment, labor, the public from traveling on or over any area planted with sod.

Lawns shall be protected and maintained by watering

All seeding, sodding and erosion control matting shall be in accordance with section 801 thru 805, TDOT STANDARD SPECIFICATIONS.

STANDARD DRAWINGS

The attached standard drawing and The TDOT Standard Drawing Book is made a part of this document.

AP 1.15 Compliance with Minimum Standards

The above described standards for the design and construction of streets and drainage improvements, contained in Section 4 and Appendix A, shall be in accordance with the Standards of the Springfield Public Works Department (SPWD). If a conflict occurs between Section AP-1 and the standards of the SPWD, the latest version of the SPWD standards for design and construction shall govern. If above described standards for design and construction and of streets and drainage does not address an item of construction or design, then the TDOT STANDARD SPECIFICATIONS shall govern.

Appendix B