

SUBDIVISION REGULATIONS

CITY OF LEBANON, TENNESSEE

ARTICLE I: PURPOSE, AUTHORITY AND JURISDICTION

A. Purpose

Land subdivision is the first step in the process of community development. Once land has been cut up into streets, lots, and blocks and publicly recorded, the correction of defects is costly and difficult. Subdivision of land sooner or later becomes a public responsibility, in that roads and streets must be maintained and various public services customary to urban areas must be provided. The welfare of the entire community is thereby affected in many important respects. It is therefore in the interest of the public, the developer and the future owners that subdivisions be conceived, designed, and developed in accordance with sound rules and proper minimum standards.

The Major Thoroughfare Plan, of which certified copies were initially filed in the office of the Register of Wilson County, Tennessee on June 9, 1954 (Latest revision April 2, 2009) and the following standards guiding the City of Lebanon Planning Commission are designed to provide for the harmonious development of the area; to secure a coordinated layout and adequate provision for traffic and also to secure adequate provision for light, air, recreation, transportation, water, drainage, sewer and other sanitary facilities.

B. Authority

These subdivision regulations were adopted under the authority granted by Sections 13-4-301 through 13-4-309, Tennessee Code Annotated. The Planning Commission has fulfilled the requirements set forth in these acts as prerequisite to the adoption of such regulations.

C. Jurisdiction

These regulations shall govern all subdivision of land within the corporate limits of Lebanon as now or hereafter established, and within the Lebanon Planning Region as established by resolution of the Tennessee State Planning Commission. Within these regulations the term “subdivision” shall mean the division of a tract or parcel of land into two or more lots, sites, or divisions 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 subdividing or to the land or area subdivided. Any owner of land within this area wishing to subdivide land shall submit to the Lebanon Planning Commission, a plat of the subdivision according to the procedures outlined in Article II, which plat shall conform to the minimum requirements set forth in Article III. Improvements shall be installed as required by Article IV of these regulations.

The planning commission shall not require an owner of private property to dedicate real property to the public or pay money to a public entity in an amount that is determined on an individual and discretionary basis, unless there is an essential nexus between the dedication or payment and a legitimate local governmental interest (see *Nollan v. California Coastal Commission*) and the dedication or payment is roughly proportional both in nature and extent to the impact of the proposed use or development of the property (see *Dolan v. City of Tigard*). An owner of private property required to make dedication or pay money in violation of this subdivision may seek relief through a common law writ of certiorari in chancery court.

When a subdivision is presented that involves a minor adjustment to a property line, combining lots, divides a single tract into no more than two lots, or which involves adjusting building lines, easements or other similar changes and does not involve any streets or public utility construction to serve such lot(s), the approval may be endorsed in writing on the plat by the Secretary of the Planning Commission upon certification by members of the Planning and Engineering Staff that the plat complies in all respects with these regulations and all other adopted ordinances and policies of the governing body. No plat may be approved under this provision if such plat involves a request for a deviation from these regulations or if such plat is not in total compliance with all ordinances and/or policies of the city as determined by the Planning and Engineering Staff. Any person authorized to endorse approval in writing on the final plat may refuse to provide such approval and request consideration of the plat by the Planning Commission at their next regularly scheduled meeting. Review for compliance with these regulations and all other adopted ordinances and policies of the governing body will follow the final routing policy employed by the Planning and Engineering Staff and thus will take approximately one week.

Planning Staff shall report to the Planning Commission at their regularly scheduled meeting any and all minor plats that have been approved since the last report.

ARTICLE II: PROCEDURE FOR PLAT APPROVAL

The procedure for review and approval of a subdivision plat consists of two separate steps. The initial step is the preparation and submission to the Planning Commission of a Preliminary Plat of the proposed subdivision. The second step is the preparation and submission to Engineering Staff construction drawings (2 sets) for review. The third step is the preparation and submission to the Planning Commission of a Final Plat with certificates for Staff review. This Final Plat becomes the instrument to be recorded in the office of the County Register when duly signed by the Commissioner of Public Works or his/her designee and the Secretary of the Planning Commission.

The applicant should consult early and informally with the Planning Commission and its technical staff for advice and assistance before preparation of the Preliminary Plat and its formal application for approval. This will enable the applicant to become familiar with these regulations, the Major Thoroughfare Plan and other official plans or public improvements which might affect the area. Such informal review should prevent unnecessary and costly revisions. Along with any submittal, proof of ownership or a contract for purchase shall be provided.

A. General

1. Any owner of land lying within the area of jurisdiction of the Planning Commission wishing to divide such land into two or more lots, sites, or divisions, for the purpose, either immediate or future, of sale or building development, or wishing to resubdivide for this purpose, shall submit a plan of such proposed subdivision to the Lebanon Planning Commission for approval and shall obtain such approval prior to the filing of his subdivision plat for record. Any such plat of subdivision shall conform to the minimum standards of design for the subdivision of land as set forth in Article III of these regulations and shall be presented in the manner specified in the following section of this article. No plat of a subdivision of land within the Lebanon, Tennessee Region shall be filed or recorded by the Register of Wilson County without the approval of the Planning Commission as specified herein.
2. In order to secure review and approval by the Planning Commission of a proposed subdivision, the applicant shall, prior to the making of any street improvements or installations of utilities submit to the Planning Commission a Preliminary Plat as provided in Section B below. On approval of said Preliminary Plat, the applicant may proceed with the preparation of the Final Plat and other documents required in connections therewith as specified in Section C and the improvements set forth in Article IV.

B. Preliminary Plat

1. In accordance with the meeting calendar submission deadline, the applicant shall submit to the Planning Commission an electronic or digital copy of the Preliminary Plat of the proposed subdivision drawn to a scale of not less than one-inch equals

one hundred (100) feet.

2. The Preliminary Plat shall meet the minimum standards of design and the general requirements for the construction of public improvements as set forth in Article III and shall give the following information:
 - a. The proposed subdivision name and location, the name and address of the owner or owners including the name, address and telephone number of a trustee or contact person, and the name of the designer of the plat who shall be a *licensed* surveyor as recognized by the State of Tennessee licensing board.
 - b. Date, approximate north point, and graphic scale.
 - c. The location of existing and platted property lines, streets, buildings, water courses, railroads, sewers, bridges, culverts, drainpipes, water mains, gas lines, electric transmission lines, and any public utility easements, the present zoning classification, both on the land to be subdivided and on the adjoining land, and the names of adjoining property owners and/or subdivisions. Existing features shall be distinguished from those that are proposed.
 - d. Plans of proposed utility layouts (sewers, water, etc.) showing feasible connections to the existing or any proposed utility systems. When such connections are not considered practical, any proposed individual water supply and/or sewage collection and disposal system must be approved by the City/Utilities Engineer and the appropriate State of Tennessee Departments. For additional requirements see Article IV, A, Sections 7 and 8.
 - e. The names, locations, widths and other dimensions of proposed streets, alleys, easements, parks, and other open spaces, reservations, lot lines, building setback lines, and utilities.
 - f. Contours at vertical intervals of not more than two (2) feet for those areas appearing on the Lebanon topographic maps. For other areas contours shall be at vertical intervals of not more than five (5) feet.
 - g. The acreage of the land to be subdivided and bearings and dimensions of property boundary.
 - h. Location sketch map showing relationship of subdivision site to area.
 - i. Present tract designation according to official records in the office of the appropriate recorder.
 - j. Location and elevation of the 100-year floodplain; location of the floodway.
 - k. The following notes shall also appear:

“Streets shall be built to the road specifications in force at the time of construction.”

“Road construction shall not begin without approval of the City of Lebanon Department of Public Works.”

“This property is not (is) in an area designated as a special flood area, as shown on Community Map/Panel Number _____/_____, Effective date _____.”

If a stream appears as a blue line on a USGS 7½ minute quadrangle map, the following note shall appear: “No alterations of this (these) stream(s) shown will occur prior to written approval being granted by the appropriate authorities.”

1. Items on the Preliminary Subdivision Plat Checklist shall be shown on the plat upon submittal. The owner/developer or authorized agent shall complete and attach the checklist to the submittal. (See Appendix A)
- m. At a minimum, preliminary drainage calculations, conceptual design layout of site drainage and storm water quality provisions and identification of at least two downstream structures.
3. Within sixty (60) days of the date of the Planning Commission meeting at which the Preliminary Plat is first considered, unless a deferral is agreed to by the applicant, the Planning Commission will review the plat and indicate its approval, disapproval, or approval subject to modifications as a basis for the preparation of the Final Plat. If a plat is disapproved, reasons for such disapproval shall be stated in writing. If approved subject to modifications, the nature of the required modifications will be indicated.
4. The approval of the Preliminary Plat by the Planning Commission will not constitute acceptance of the Final Plat and shall not be indicated on the Preliminary Plat.
5. Failure of the Planning Commission to act on the Preliminary Plat within sixty (60) days of the Planning Commission meeting at which it is first considered will be deemed approval of this plat unless a longer time frame is agreed to by the applicant.
6. A revised, according to any conditions of the Planning Commission’s approval, Preliminary Plat shall be submitted to staff prior to the Planning Commission considering approval of any Final Plats. One (1) copy of the approved Preliminary Plat will be retained in the Planning Commission files; the other will be returned to the applicant.
7. The approval of the Preliminary Plat shall lapse unless a Final Plat based thereon is submitted within one (1) year from the date of such approval unless an extension of time is applied for and granted by the Planning Commission. Approval of any time extension is at the discretion of the Planning Commission. When considering approval

of a time extension, the Planning Commission may require the Preliminary Plat comply with any regulations adopted since it was originally approved.

8. Approval of a Preliminary Plat shall not constitute approval of roads, grading and/or drainage plans.

C. Final Plat

1. The Final Plat shall conform substantially to the Preliminary Plat as approved, and, if desired by the applicant, it may constitute only that portion of the approved Preliminary Plat which is proposed to be recorded and developed at the present time, provided, however, that such portion conforms to all requirements of these regulations.
2. In accordance with the meeting calendar submission deadline, the applicant shall submit the required number of Final Plats as noted on the application and other plans that may be required by the Planning Commission and/or Staff, including at least one digital or electronic copy, and a Shape (.shp) or CAD (.dwg) file.

The plat shall be drawn to a scale of not less than one (1) inch equals one hundred (100) feet on sheets not larger than twenty-four (24) inches by thirty-six (36) inches. When more than one sheet is required, an index sheet of the same size shall be filed showing the entire subdivision with the sheets lettered in alphabetical order as a key.

After the plat has been approved by the Planning Commission one copy will be submitted to staff for execution of signatures then returned to the applicant, for filing with the County Register as the official plat of record.

One copy of the approved and duly recorded plat shall then be submitted to the Planning Staff for inclusion in the file.

3. The Planning Commission shall approve or disapprove the Final Plat within sixty (60) days of the date of the Planning Commission meeting at which the Final Plat is first considered, unless a deferral is agreed to by the applicant. Failure of the Planning Commission to act on the Final Plat within sixty (60) days shall be deemed approval of it. If the plat is disapproved the grounds for disapproval shall be stated in the minutes of the Planning Commission.
4. Approval of the Final Plat by the Planning Commission shall not constitute the acceptance by the public of the dedication of any streets or other public way or ground.
5. A Final Plat must be recorded within twenty-four (24) months after approval by the Planning Commission or it becomes void.

6. The Final Plat shall show:

- a. The lines of all streets and roads, alley lines, lot lines, building setback lines, lots numbered in numerical order, reservations, easements, and any areas to be dedicated to public use or sites for other than residential use with notes stating their purpose and any limitations.
- b. Sufficient data to determine readily and reproduce on the ground the location, bearing and length of every street line, lot line, boundary line, block line and building line whether curved or straight, and including true north point. This shall include the radius, central angle, and tangent distance for the centerline of curved streets and curved property lines that are not the boundary of curved streets.
- c. All dimensions to the nearest one hundredth (100th) of a foot and angles to the nearest minute.
- d. Locations and descriptions of monuments, pins, etc.
- e. The names and locations of adjoining subdivisions and streets and the location and ownership of adjoining un-subdivided property.
- f. Date, title, name and location of subdivision, graphic scale, and true north point.
- g. Location sketch map showing site in relation to surrounding area.
- h. Certification showing that applicant is the landowner and dedicates streets, rights-of-way and any sites for public use. (Appendix A, Form 1)
- i. Certification by surveyor or engineer to accuracy of survey and plat and placement of monuments. (Appendix A, Form 2)
- j. Certification by the County Health Officer when individual sewage disposal or water systems are to be installed. (Appendix A, Form 3)
- k. Certification by local approving agent (city engineer) (Appendix A, Form 4) that the subdivider has complied with one of the following alternatives:
 1. All improvements have been installed in accordance with the requirements of the regulations, or
 2. A Letter of Credit has been posted in sufficient amount to ensure completion of all such required improvements. The Letter of Credit shall be from a local bank located within one-hour drive of the City of Lebanon.)
- l. Certification of approval to be signed by the Secretary of the Planning Commission (Appendix A, Form 5).
- m. Total acreage of entire development, acreage of this phase and road frontage of any remaining acreage to be developed.
 - n. Location of the 100-year floodplain; location of the floodway; descriptions of monuments to locate floodplain/floodway boundary; 100-year flood elevation; minimum finished floor elevations two feet above the 100-year flood elevation, one foot for garages/carports, for lots in the floodplain (or subject to local flood hazard).
- o. Size and location of culverts; location and description of proposed erosion controls.
- p. Location, description, and elevation of benchmark(s) within the subdivision.
- q. The following notes shall appear:

“Streets will be built to the road specifications in force at the time of

construction.”

“Road construction shall not begin without approval of the City of Lebanon Department of Public Works.”

“This property is not (is) in an area designated as a special flood area, as shown on Community Map/Panel Number_____/_____, Effective date_____.”

If a stream appears as a blue line on a USGS 7½ minute quadrangle map, the following note shall appear: “No alteration of this (these) stream(s) shown will occur prior to written approval being granted by the appropriate authorities.”

When a development is located within the 100-year floodplain and fill is proposed to elevate building sites, the following note shall appear, “Certification that proposed fill is in place to the specified elevation shall be provided to the Building Official prior to issuance of a building permit.”

Natural drainage and sinkhole note (if applicable). When a natural drainage channel (or sinkhole/depression) exists on a property, sufficient data must be provided to show that any disturbance of the natural drainage channel (or sinkhole/depression) can be accomplished with a minimal impact on the performance of the storm water drainage system in the area. (Otherwise, the above-mentioned note “If a stream appears as ----- “must appear.)

“Drainage easements outside dedicated R OW’s are not the responsibility of Wilson County or the City of Lebanon.”

- r. All items on the Final Subdivision Plat Checklist shall be shown on the plat upon submittal. The owner/developer or authorized agent shall complete and attach the checklist to the submittal. (See Appendix B).

D. Requirements for Townhouse Subdivisions

1. Purpose of this Article A. The development of townhouse units to be sold in fee simple, each with its own small lot, requires special regulations not provided elsewhere within the "Lebanon, Tennessee, Subdivision Regulations."

2. Townhouse Subdivision Relationship to Zoning Ordinance

Townhouse subdivisions are allowed in Lebanon in the zoning districts indicated for multi-family dwellings in the zoning ordinance. These townhouse subdivision regulations modify certain requirements of the zoning district, e.g., setbacks, as specifically allowed by the zoning ordinance. Nothing herein is to be construed as allowing an increase in density or impervious area above what is otherwise allowed in the zoning district. Common open space, driveway access, drainage and stormwater facilities, dumpster or garbage can storage areas (if cans are approved for the development), and any site

amenities and extra guest parking chosen by the developer are to be designed into the subdivision. Density and impervious area are to be calculated for the whole subdivision area including any common areas. Common areas and amenities are to be shown on the site plan and plat for the development.

3. Definition of a Townhouse

Townhouse. A one-family dwelling in a row of at least two (2) such units, in which each unit has its own front and rear access to the outside, no unit is located over another unit, and each is separated from any other unit by one or more common fire rated wall(s), and each unit is located on a fee simple, platted lot. A two (2) unit townhome subdivision may be staff approved if no city services need to be extended to a parcel created by the plat and if no variances are needed.

4. Approval Procedure

Nothing herein is to be construed to exempt a project from the City's requirement for a site plan or a plat.

5. Area and Dimensional Requirements for Townhouse Lots

- a. Minimum Lot Area: Determined by the density allowed in the zoning district and required setbacks.
- b. Minimum Lot Width and street frontage: 20 feet
- c. Minimum Building Setback Lines:

Front: The same as the zoning district where the development is located. If the project is in an existing neighborhood, then the front of the development can be in line with the front of the buildings in the surrounding developments. In no case shall a front setback be reduced so as to impair adequate site distance for drivers in or adjacent to the townhouse subdivision.

Rear: The same as the zoning district where the development is located. However, an attached covered parking structure, or an uncovered deck or patio, may extend into a rear setback. A common area for developments may be counted as part of the rear setback as long as the rear of the townhome building is no closer to the outside edge of the common development than would be allowed by the setbacks for the zoning district.

Side: None, except end units shall be the same as the zoning district where the development is located.

- d. Maximum height for townhouse development is three (3) stories.

- e. Electric underground electrical service is mandatory.

6. Conversion of Apartments or Condos

Conversion of existing apartment/condo/HPRs (horizontal property regime) structures to fee simple townhouse complexes shall not be allowed unless all fire, utility or other public service concerns are addressed, at the developer/owners' expense, to the satisfaction of each service provider. This will be done through the City's site plan and plat review process.

- a. All Units shall be separated by a Fire Wall in accordance with the Building Code.
- b. The property line shall be on the center of the wall. To accomplish this a subdivision plat may be needed after the construction if the structure did not get built on the platted property line. An As-Built may be asked for to verify the correct location of the building and property line.

Refer to the Zoning Code for Parking Requirements.

E. Conservation Developments

1) Residential Conservation Developments

- a) Purpose: Provide the legal means to build detached, single-family dwelling units on properties with natural or manmade features that add value to the City and are worth preserving while allowing the number of units allowed in the zoning code.
- b) Minimum Lot Area:
 - RS20 – 13,000 sq. ft.
 - RS12 – 10,000 sq. ft.
 - RS9 – 7,000 sq. ft.
 - RD9 – Single Family – 7,000 sq. ft.
 - Duplex – 10,000 sq. ft.
 - RS6 – 4,000 sq. ft. (Corner Lots 6,000 sq. ft.)
- c) Minimum Number of Lots: Five (5) buildable lots.
- d) Minimum Lot Width at Front Building Line: Forty (40) feet.
- e) Minimum Setbacks (unless provided for elsewhere in the code):
 - i) Front; Twenty (20) feet.
 - ii) Side; Five (5) feet except when adjoining a lot in any other zoning district or lot not a part of the conservation development, in this case the side yard shall be a minimum of ten (10) feet in all cases.
 - iii) Rear; Twenty (20) feet.
 - iv) Corner Street; Twenty (20) feet.

- v) Alternative Setback; The Planning Commission may approve alternative setbacks for specific lots in the subdivision based upon an individual review and recommendations for a deviation.
- f) Maximum Building Coverage: 50%
- g) Corner Lot Width Requirement: All lots that are located at intersecting streets shall in all cases be a minimum of sixty (60) feet in width without exception.
- h) Subdivision Plat Approval Required:

All conservation developments are subject to meet the platting requirements of a typical residential subdivision. The Lebanon Regional Planning Commission is responsible for review of all conservation plats.
- i) Bordering Lower Density Zones: Developments that border a lower density residential zone shall not use any lot reduction on the parcels that touch the lower density zone.
- j) Underground Utilities Required:
 - i) All private utilities, including service connections for cable TV and the like, shall be installed underground.
 - ii) All electrical service connections shall be installed underground and shall be approved by Middle Tennessee Electric (or the electrical provider). Each housing unit shall be metered individually.
- k) Minimum Open Space: A conservation subdivision shall have an area of common open space within the subdivision. Common open space shall be indicated as permanently reserved for that purpose on the final plat. Common open space shall consist of anything that is covered in Article III.E.2 “Critical Lot” section of the Subdivision Regulations. Other Public features including but not limited to: public trails, parks, large stands of trees or art maybe considered on a case-by case basis as qualifying open space by the Planning Commission. Open space is not intended to be, otherwise buildable land that is void of environmental services, hardships, or public destinations. The minimum common open space within conservation subdivisions shall be equal to 20% of the total area of all buildable lots in the subdivision. Except as otherwise provided for stormwater detention facilities, the common open space in the conservation subdivision shall be in one or more separate lots and these lots are not required to meet standards for size, width, etc. that apply to a building lot.
- l) Building Envelope: The building envelope for each buildable lot in a conservation subdivision is to be shown on the preliminary and final plat. The building envelope is the polygon formed by the intersection of the front, side and rear setback lines for the principal structure.

- m) Common Open Space Maintenance Agreement: The following conservation subdivision open space maintenance agreement shall be recorded for all conservation subdivisions approved by the City of Lebanon Regional Planning Commission. All conservation subdivisions shall contain this statement: The developer and all owners of lots in this subdivision are bound by the Perpetual Conservation Subdivision Maintenance Agreement recorded in Miscellaneous Book 1737 Pages 1356-1357 Records of Wilson County, TN.”

Perpetual Conservation Subdivision Open Space Maintenance Agreement

The Perpetual Conservation Subdivision Open Space Maintenance Agreement applies to all conservation subdivisions for which a final plat is approved by the Lebanon Regional Planning Commission. The conservation subdivision final plats incorporated in this agreement contain open space for common use for all owners of the platted lots in the conservation subdivision and/or the general public. With regard to future maintenance and upkeep, it is expressly understood and agreed by the developer and by the owner of any specific lot and/or tract within the platted conservation subdivision that the developer and/or owner of the lots or tracts shall be responsible for the maintenance and upkeep of all open space shown on the plat. For purposes of this agreement, “maintenance and upkeep” shall mean keeping the common open space clear of all litter and man-made debris and otherwise maintaining the common open space in a manner consistent with any applicable laws, ordinances or regulations of the State of Tennessee and the City of Lebanon. “Maintenance and Upkeep” shall also mean that the common open space shall be perpetually kept predominantly as greenspace with vegetative cover of some type or approved public improvements. Specifically, the developer and owner of real property in the subdivision shall be responsible for maintenance and upkeep during site development. The developers’ responsibility will terminate after the sell or transfer of ownership of 51% of all those lots, tracts and/or parcels in the platted conservation subdivision. All individual lot, parcel, tract owners in the platted conservation subdivision shall have an easement interest in the open space from all lots in the conservation subdivision. The future maintenance and upkeep of the open space areas shall be the responsibility of all conservation subdivision lot owners of record of those lots shown on the recorded plat. In the event, a conservation subdivision is developed in phases, then all subsequently developed lots in the conservation subdivision including all future phases of the conservation subdivision shall share the same easement as those lots owners shown in the initial plat and/or plats. It being the intent that all lot owners in any parcel conservation subdivision, whether in the initial or any later phase, shall share equally in the easement rights in and to the open space areas as well as share equally in the future maintenance and upkeep of the open space areas. There shall be and is an open space easement as to any conservation subdivision plat containing common open space areas. Maintenance of this common open space serving multiple parcels shall be the cumulative responsibility of every lot and/or tract owner of record of any plotted lot or tract in the conservation subdivision who shall have easement rights for use of these open space areas as shown on the recorded plat in the conservation subdivision. Each lot owner in the conservation subdivision shall share equally in the cost of all maintenance, upkeep and/or repair, taxation of all common open space areas. However, in the event of damage to common

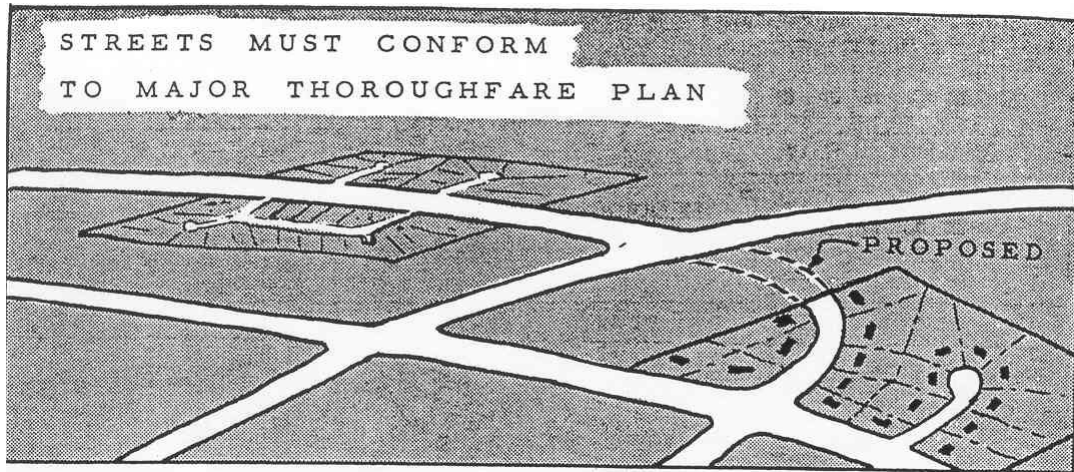
open space area is caused by the sole negligence of any one individual lot and or tract owner, then the individually negligent lot or tract owner shall be solely responsible for the repair of the damage caused by his or her negligence and/or the acts of his or her agents. In the event, open space areas are not properly maintained as set out herein, any aggrieved party may require the conservation subdivision/parcel owners of record to perform the maintenance and the repair at the expense of the parcel owners of the subdivision. Any aggrieved party may file suit against the lot and/or tract owners seeking relief from a court of proper jurisdiction to require said lot and/or tract owners to pay for said maintenance and upkeep of these common open space areas as set out herein. In the event it shall be necessary to file suit, then the party or parties found to be in violation of the ordinance and /or in violation of this maintenance agreement shall be responsible to pay the court costs paid and any attorney fees incurred by any aggrieved party in having the ordinance and/or this maintenance agreement enforced.

ARTICLE III: GENERAL REQUIREMENTS & MINIMUM STANDARDS OF DESIGN

A. Streets

1. Conformity to the Major Thoroughfare Plan

The location and width of all streets and roads shall conform to the official Major Thoroughfare Plan, which may include a Major Street Plan within a municipality and/or a Major Road Plan within an unincorporated area.



2. Relation to Adjoining Street System

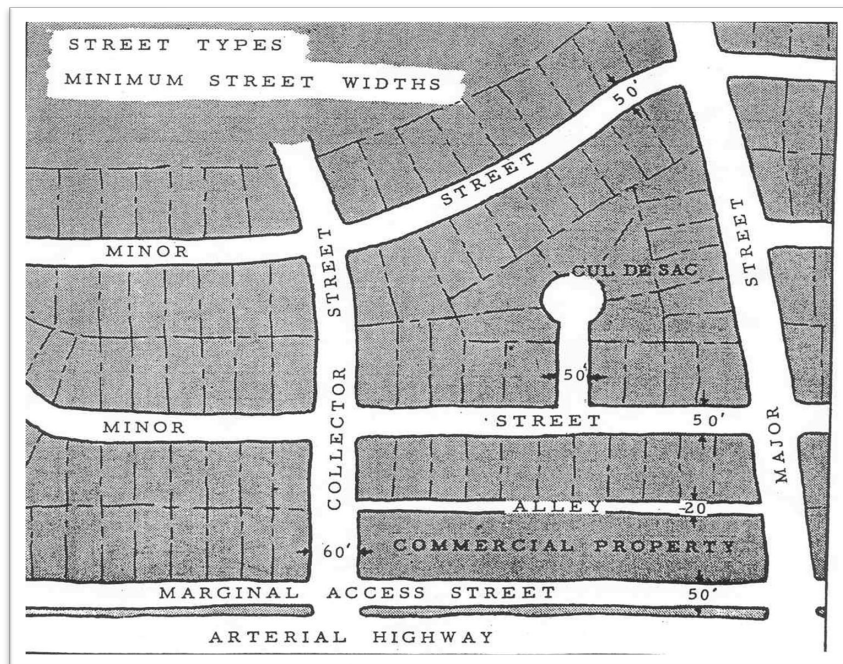
The proposed street system shall extend existing streets or projects at the same or greater width, but in no case less than the required minimum width.

3. Street Widths

The minimum width of right-of-way, measured from lot line to lot line, shall be as shown on the Major Thoroughfare plan, or if not shown on such plan, shall be not less than as follows:

- a. Arterial Streets and Highways - 80- 160 feet may be required.
Arterial streets and highways are those to be used primarily for fast or heavy traffic and will be located on the Major Thoroughfare Plan.
- b. Collector Streets - 60 feet
Collector streets are those which carry traffic from minor streets to the major system of arterial streets and highways and include the principal entrance streets of a residential development and streets for major circulation within such a development.

- c. Minor Streets - 50 feet
Minor streets are those, which are used primarily for access to the abutting properties and designed to discourage their use by through traffic.
- d. Dead-end Streets (cul-de-sac) - 50 feet
Cul-de-sacs are permanent dead-end streets or courts designed so that they cannot be extended in the future.
- e. Alleys - 20 feet
Alleys are minor public ways used primarily for service access to the back or side of properties otherwise abutting on a street.



In cases where topography or other physical conditions make a street of the required minimum width impractical, the Planning Commission may modify the above requirements. If on-street parking is proposed and approved, the street widths shall be increased ten (10) feet on each side to provide parking without interference of normal passing traffic.

4. Additional Width on Existing Streets

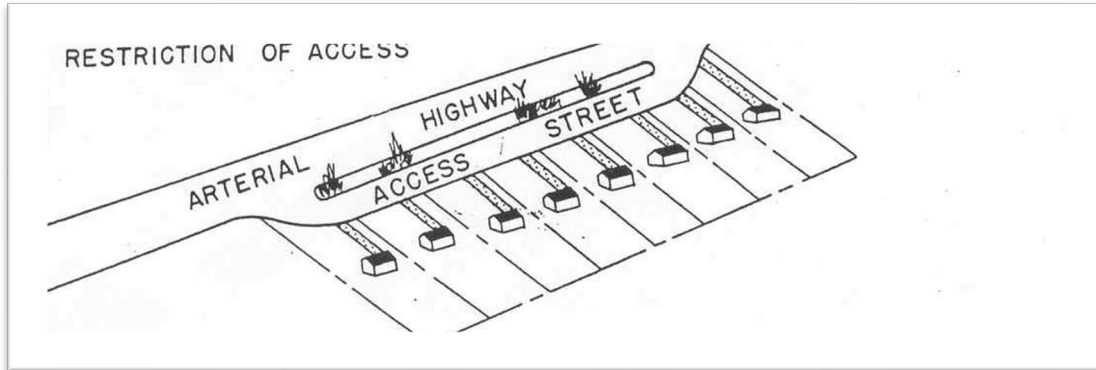
Subdivisions that adjoin existing streets shall dedicate additional right-of-way to meet the minimum street width requirements.

- a. The entire right-of-way shall be provided where any part of the subdivision is on both sides of the existing street.
- b. When the subdivision is located on only one side of an existing street, one-half of the required right-of-way, measured from the centerline of the existing roadway, shall

be provided. In no case shall the resulting right-of-way width be less than fifty (50) feet. At a minimum, one-half of the required right-of-way shall be dedicated.

5. Restriction of Access

When a tract fronts on an arterial street or highway, the Planning Commission may require such lots to be provided with frontage on a marginal access street.



6. Access to Existing Public Roads

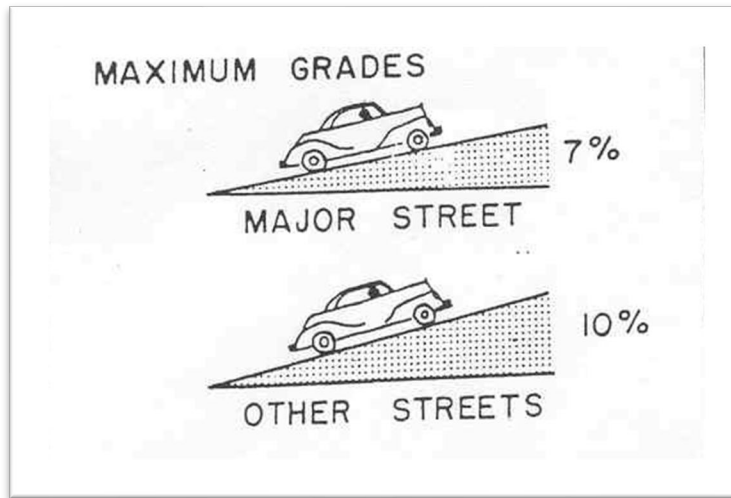
Two points of access to an arterial or collector street shall be required for all residential developments consisting of 125 or more lots (and or units). The second point of access may connect to adjacent developments as long as the adjacent development had direct access to an arterial or collector street. In certain limited instances where the second point of access cannot be reasonably provided, a traffic study is required to demonstrate that an adequate level of service can be met. All traffic studies are subject to review by Staff and an independent professional to determine if recommendations are consistent with all transportation programs and needs.

Additionally, traffic studies may be required to be completed by the developer or individual proposing the subdivision at the request of either Staff or Planning Commission. The traffic study is intended to provide information as to current and proposed or projected traffic levels along streets touching, immediately abutting or directly impacted by the subdivision.

When a street stubs to the subject property, such stub shall be extended through the subject property.

7. Street Grades

The minimum grade for a street with curbs shall be one (1) percent. Grades on major streets shall not exceed seven (7) percent. Grades on other streets may exceed seven (7) percent but not ten (10) percent.



8. Horizontal Curves

See <http://www.lebanontn.org/DocumentCenter/View/3918/Subdivision-Regulations-Table-1-1-Rev-6-2021>

9. Vertical Curves

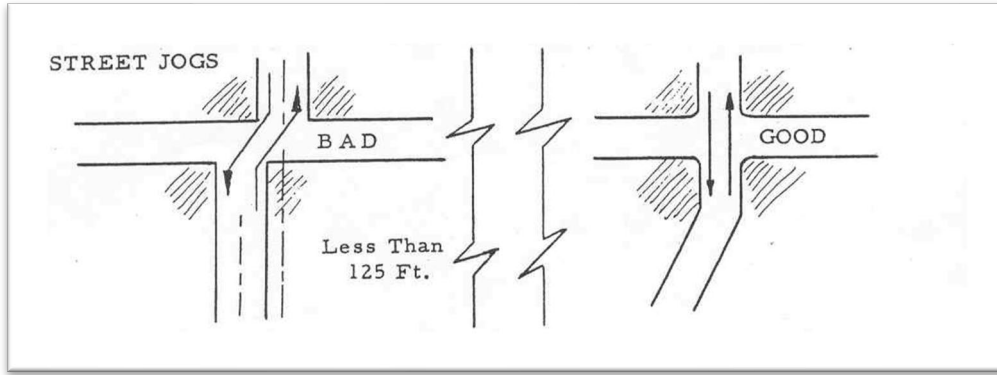
See <http://www.lebanontn.org/DocumentCenter/View/3918/Subdivision-Regulations-Table-1-1-Rev-6-2021>

10. Intersections

Street intersections shall be as nearly to right angles as is possible, no intersection shall be at an angle of less than sixty (60) degrees. At street intersections in residential areas, the minimum radius of the curb return shall be twenty-five (25) feet. In commercial and industrial areas, and when a residential street intersects with a non-residential street, the minimum curb return radius shall be thirty (30) feet. (Appendix C, ST-327)

- a. Should the expected right-turning truck volume exceed ten (10) vehicles per hour in the design hour, then the designer shall use larger radii or three-centered compound curves to provide for the turning movement of the larger vehicles.
- b. Where the angle of the street intersection is less than ninety (90) degrees, the Street Department may require greater radii.
- c. Intersections with arterial and major collector streets shall be at least 800 feet apart.
- d. Street jogs and/or intersections on minor collector and local streets of less than 200 feet shall not be allowed, except where both intersection streets are cul-de-sacs in which case the street jogs with centerline offsets of less than 125 feet shall not be allowed.

- e. All intersections of two or more streets shall have a grade that does not exceed four (4) percent for the following distances from the intersection:
- Arterial Streets – 150 feet
 - Collector Streets – 100 feet
 - Local Streets – 60 feet



11. Tangents

Reverse curves in streets shall be corrected by minimum tangents of 150 feet for arterial and major collector streets. A 100-foot minimum tangent distance is required between reverse curves for minor collector and local streets.

12. Dead End Streets

- a. Minor terminal streets or courts designed to have one end permanently closed shall be no more than five hundred (500) feet but not less than one hundred fifty (150) feet in length (measured along the centerline, from centerline of the intersection to center of the turn-around), unless necessitated by topography. They shall be provided at the closed end with a turn-around having an outside roadway diameter of at least ninety (90) feet and a street right-of-way diameter of at least one hundred (100) feet.
- b. Where, in the opinion of the Planning Commission, it is desirable to provide for street access to adjoining property, proposed streets shall be extended by dedication to the boundary of such property. Such dead end streets shall be provided with a temporary turn-around easement of at least ninety (90) feet. At all temporary turnarounds, a sign shall be placed stating, "Street to be extended by authority of the City of Lebanon". The sign shall be similar in size to a speed limit sign. The developer who extends a street that has been provided with a temporary turnaround shall remove the temporary turnaround and restore the area of the temporary turnaround.

13. Private Streets and Reserve Strips

Private streets may be allowed in a residential subdivision subject to meeting the requirements of this development code, the conditions set forth below and any other applicable City regulations.

A. General

1. Private streets are not appropriate and shall not be approved when a street is identified in the Major Thoroughfare Plan or in any Transportation Plan adopted by City Council or Planning Commission and are not appropriate to prohibit connection from adjoining properties.
2. Private streets shall be the principal access between a public street and platted lots that do not abut a public street. Such private streets are not dedicated to the public and shall not be publicly maintained. The term “private street” may include both the pavement and areas of streets, alleys or service roads within a development.
3. The private streets shall be owned and maintained by a property owner’s association organized and upon approval of the Planning Director, may be transferred to a land conservancy or land trust. Any such conveyance must adequately guarantee the protection and maintenance of the private streets in accordance with the provisions of this Chapter.
4. All private streets shall be constructed to equal or exceed the base materials, compaction, and final surfacing standards for public streets and must be certified as such by the City Engineer. If curb, gutter, and sidewalk are not provided, drainage swales adjacent to the roadway shall be required.

B. Access

1. A private street shall be labeled on the final plat as a “Private Street”, “Public Utility and Access Easement” and be assigned a lot number.
2. Private streets shall be reserved for use by owners and residents served by such private streets and all governmental and utility entities providing services and regulatory enforcement, as well as private service entities.
3. Access to subdivisions containing private streets may be controlled by 24-hour security guard or a self-activated gate at the entrance. All gates and security barriers shall be approved and meet the standards of Tenn. Code Ann. §§ 13-8-101, et seq. and any applicable City Codes.
4. If a gate or security barrier is installed at the entrance, queueing spaces shall be provided out of the public right-of-way. Gates that serve residential units shall provide queueing spaces at the standard of one (1) space for 30 units or less and two (2) spaces for more than 30 units. Queueing spaces shall measure 10 feet by 20 feet.

C. Front Setbacks and Lot Widths

All private streets shall be treated as public street rights-of-way for purposes of determining required front setbacks and lot widths.

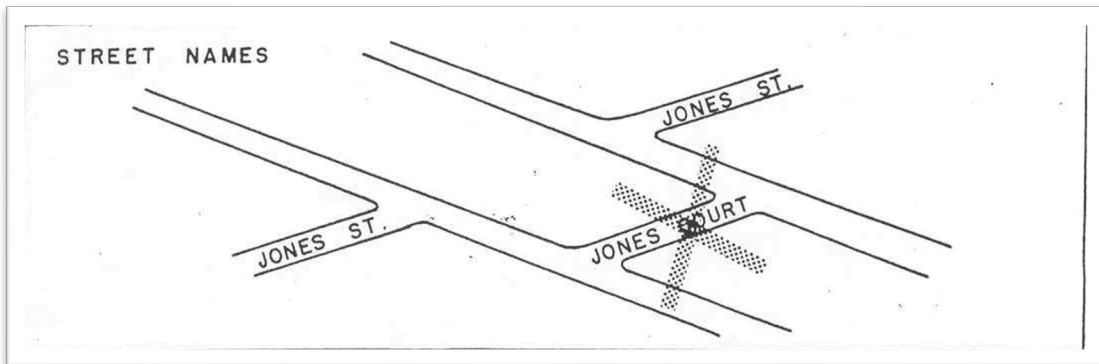
D. Maintenance

The final plat shall be conditioned as follows and include the following notes:

1. Require perpetual maintenance of private streets by a property owner's association to the same standards as connecting public streets for the safe use of persons using the streets; and
2. State that the City or County has absolutely no obligation or intention to ever accept such streets as public right-of-way.

14. Street Names

Proposed streets, which are obviously in alignment with others already existing and named, shall bear the names of existing streets. In no case shall the name for proposed streets duplicate existing street names, irrespective of the use of the suffix street, avenue, boulevard, driveway, place, or court.



15. Alleys

Alleys may be provided to the rear of lots used for business purposes to provide access for loading/unloading or other service uses. Alleys may also be provided in residential blocks, as approved by the Planning Commission, especially where small lots are proposed, in order to provide access to rear-loaded garages and for garbage collection.

16. Drainage

All streets shall be designed as to provide for the discharge of surface water from the right-of-way of the streets by grading and drainage and shall be approved by the City Engineer. Where water cannot be adequately discharged by surface drainage, storm sewers shall be required. Public streets are not to be used to collect and convey storm water runoff other than that which falls on a lot fronting that street. In addition, the street and drainage design shall be such that storm water runoff shall not be allowed to flow across street intersections. For construction standards and specifications for storm drainage see the Nashville Stormwater Management Manual.

Specific drainage design requirements relating to the design of streets are as follows:

- a. A street shall not carry storm water runoff for a distance greater than 300 feet from the beginning point of runoff.
- b. Gutter spread shall not exceed one-half (1/2) the travel lane. Gutter spread

calculations are required and must be based on the same storm event as used to design all other portions of the storm system. An exception is made for minor local residential streets as follows: Gutter spread can exceed one-half (1/ 2) the lane width, maximum being 7 feet on 11-foot lanes, cross slopes of a maximum of 3% are allowed on local residential streets.

- c. Discharge from the street shall be handled by means of a catch basin/curb inlet; the number, size, and location to be determined by the design engineer as approved by the City Engineer. The type of catch basin/curb inlet shall be the City's standard for the particular application.
 - d. Culverts (pipe) within the street right-of-way shall be reinforced concrete pipe (RCP) as per ASTM C76, Table III or Table IV, with a minimum inside diameter of fifteen (15) inches.
 - e. Catch basins/curb inlets at low points along the roadways and at the end of cul-de-sacs are to be as a minimum double inlet catch basins/curb inlets.
 - f. All localized storm drainage systems shall be designed for a minimum 10-year storm event with the exception of bridges, which shall be designed for a minimum 25-year storm event. Conveyance systems through a development shall be designed for a minimum 25-year storm event, unless otherwise required by the City Engineer.
 - g. 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 assuming conditions of maximum potential development within the watershed.
 - h. The design engineer shall prepare and submit to the City Engineer a study of the effect of each subdivision on existing downstream properties and drainage facilities outside the area of the proposed subdivision.
 - i. All new storm drains shall be required to be marked "No Dumping Drains to River."
17. Driveways, both residential and non-residential, shall be concrete paved within the right-of-way of the street or to the back of the sidewalk, whichever is farthest from the curb. Residential drives shall be twelve (12) to eighteen (18) feet wide. Non-residential drives without islands shall be a minimum of twenty (20) feet wide and a maximum of thirty-five (35) feet wide. Non-residential drives with islands shall have, as a minimum, sixteen (16) feet wide entrance and exit lanes.

18. Lighting

All industrial, commercial, and residential subdivisions shall be required to install street lighting. Lighting plans shall be submitted to the City of Lebanon Engineering Department for review and approval. Subdivision lighting plans shall be reviewed per the following requirements:

- a. Spacing shall not be greater than 400 feet, or no greater than every four side yard lines whichever is less.
- b. At all entrances, intersections, and other potentially dangerous traffic areas, as determined by the City Engineer.
- c. Ends of all cul-de-sacs.

This spacing may vary slightly based on lot configurations and practical locations of MTEMC poles. Lighting shall be installed and functional upon issuance of the first certificate of occupancy for that particular phase, subsequent certificates may be withheld until lighting is complete.

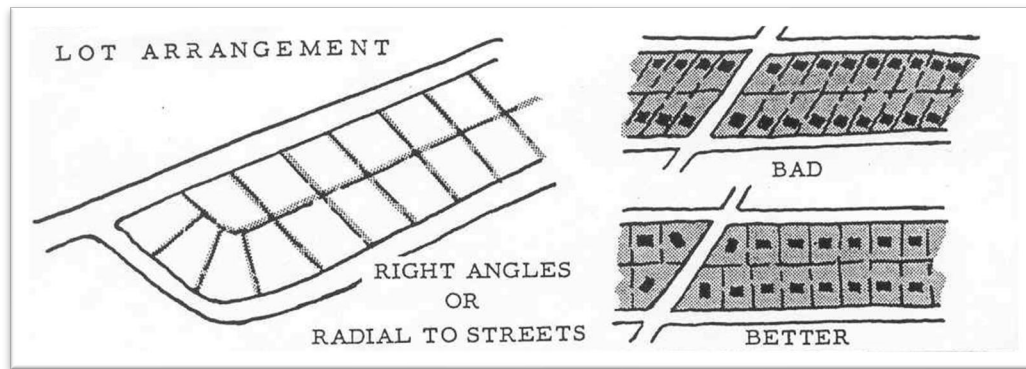
B. Blocks

Subdivisions shall meet the minimum Circulation and Mobility requirements as specified in the zoning ordinance.

C. Lots

1. Arrangement

Insofar as practical, side lot lines shall be at right angles to straight street lines or radial to curved street lines.



2. Minimum Size

The size, shape and orientation of lots shall be such, as the Planning Commission deems appropriate for the type of development and use contemplated. Minimum lot sizes and other bulk regulations are specified in the Zoning Ordinance.

3. Corner Lots

Corner lots shall be sufficiently wider and larger to permit the additional side yard requirements of the Zoning Ordinance. Information shall be provided on the Final Plat showing which direction a house located on a corner lot will face.

- a. Developer shall provide appropriate drainage calculations/study indicating existing limits of the 100-year flood event that must be prepared by a licensed Civil Engineer. This drainage calculation/study must provide a grading plan that provides alternate storage for fill placed in the regulated 100-year floodplain.

When circumstances (such as a one or two-lot subdivision) are evident that a detailed study is not necessary as determined by the City Engineer, the developer or owners may provide a letter of recommendation from a licensed Civil Engineer regarding drainage and floor elevations.

- b. The final subdivision plat shall indicate minimum floor elevations – including garages. Minimum floor elevations shall be not less than two (2) feet above the 100-year flood. Appropriate notes may also be required on the plat to advise future property owners of drainage issues and concerns.
- c. The final subdivision plat shall indicate proposed fill requirements for each lot as required by the drainage calculations/study.
- d. All building pads must be filled to not less than the 100-year flood elevation when affected by the regulated 100-year floodplain. All building pads not affected by the regulated 100-year floodplain must be filled to not less than the elevation required by the drainage calculation/study required in Section a. above.
- e. Developer must post bond or Letter of Credit for all improvements from a local bank located within one-hour drive of the City of Lebanon.
- f. Developer shall provide certification to the City Engineer prior to request for building permit, that all lots have been filled and graded per the approved grading/drainage calculation/study. This certification shall be by a licensed surveyor or engineer prior to issuance of a building permit. Certification from a qualified geotechnical firm or individual regarding compaction of fill must be provided to the City Engineer prior to issuance of a building permit.
- g. Once final foundation elevation is complete the builder shall provide certification, through his surveyor or engineer, to the proposed floor elevation by completion of a standard letter as developed by the City Engineer and provided by the City Building Official.
- h. All plats must indicate the location and elevation of at least one on-site City approved benchmark, which shall be installed by the surveyor unless otherwise approved by the City Engineer.
- i. The City of Lebanon Building Official or authorized staff shall make a site field investigation of all lots prior to issuance of the building permit. This site visit shall be coordinated with the driveway permit review by the Engineering Department.
- j. Lot corners must be marked as shown on the approved recorded plat and building footprint staked prior to site field investigation by the Building Official or authorized staff.
- k. The City of Lebanon Building Official in conjunction with the Engineering Department reserves the right to require detailed site grading and drainage plans prior to issuance of any building permit if deemed necessary to evaluate and insure drainage characteristics/features are adequately addressed by the builder for the benefit of future homeowners.

D. Public Use and Service Areas

Due consideration shall be given to the allocation of areas suitably located and of adequate

size for playgrounds and parks for local or neighborhood use as well as public service areas.

1. Public Open Spaces

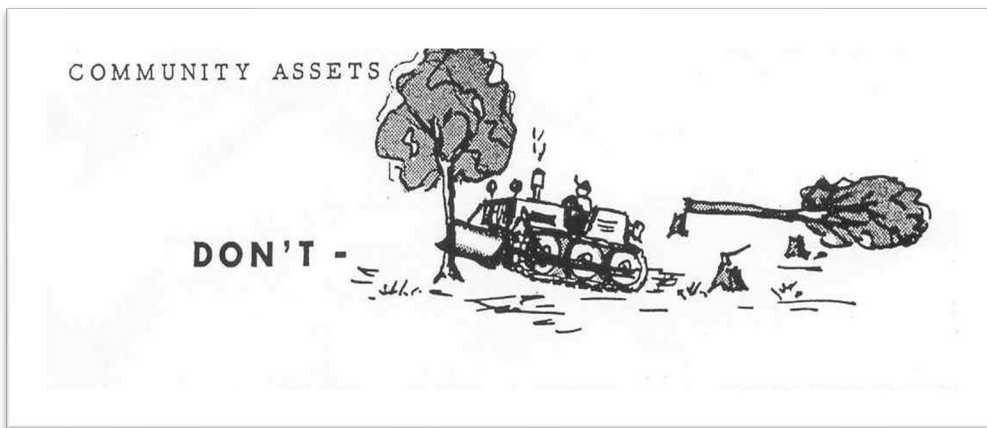
Where a school, neighborhood park or recreation area or public access to water frontage, shown on an official map or in a plan made and adopted by the Planning Commission, is located in whole or in part in the applicant's subdivision, the Planning Commission may require the dedication or reservation of such open space within the subdivision up to a total of ten (10) per cent of the gross area or water frontage of the plot, for park, school or recreation purposes.

2. Easements for Utilities

Except where alleys are permitted for the purpose, the Planning Commission may require public and infrastructure easements, typically twenty (20) feet in width, for poles, wires, conduits, storm and sanitary sewers, gas and water, mains or other utility lines, and sidewalks along all front lot lines. A similar ten (10) foot easement may be required along the side and rear property lines. Easements of the same or greater width may be required across lots, where necessary for the extension of existing or planned utilities.

3. Community Assets

In all subdivisions, due regard shall be shown for all natural features such as large trees, water courses, historical spots and similar community assets which, if preserved, will add attractiveness and value to the property.

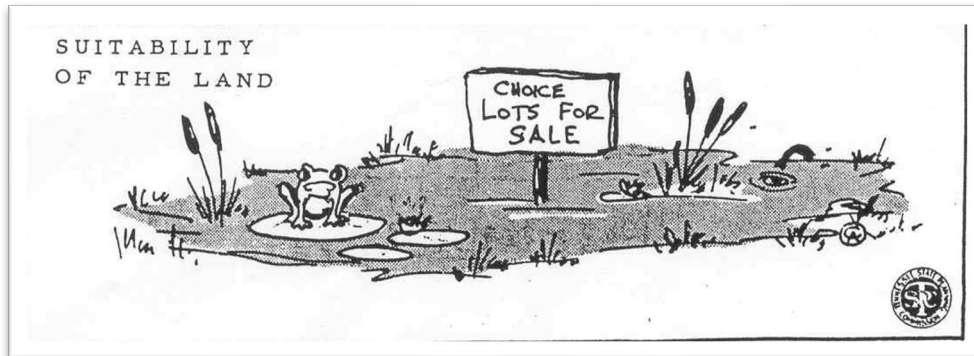


E. Suitability of the Land

1. Suitability of the Land

The Planning Commission shall not approve the subdivision of land if from adequate investigations conducted by all public agencies concerned, it has been determined that in the best interest of the public the site is not suitable for platting and development purposes of the kind proposed.

Land subject to flooding and land deemed to be topographically unsuitable shall not be platted for residential occupancy, nor for such other uses as may increase danger to health, life or property or aggravate erosion or flood hazard. Such land within the plat shall be set aside for such uses as shall not be endangered by periodic or occasional inundation of shall not produce unsatisfactory living conditions.



2. Critical Lots

When a proposed lot contains natural or manmade features that affect the feasibility of construction, it shall be designated a critical lot. Lots are designated critical during the preliminary plan review process and/or subsequent subdivision submittals based on soil conditions, degree of slope, flooding, or other lot features.

- i. A lot shall be designated as critical when the lot is created on a natural slope of 15% to 20%. Any lot/area with a slope exceeding 20% shall be set aside and noted on the plat as a No Disturbance Area that is not to be disturbed by grading operations. The Planning Commission has the right to grant variances for construction/disturbance of areas of slope exceeding 20%.
- ii. A lot shall be designated as critical when it contains natural floodplain.
- iii. A lot shall be designated as critical if it is adjacent to a large/significant drainage channel, blue line stream, sinkhole, and/or otherwise low-lying area with the potential for flooding as determined by the City of Lebanon Engineering Department.
- iv. A lot shall be designated as critical if it contains problem soils, sinkholes, dropouts, or other adverse earth formations or topography. Lots or parcels identified as containing Agee silty clay loam, Dowellton silt loam, Eagleville silty clay loam, Lindell silt loam, Norene silt loam, Tupelo silt loam or Woodmont silt loam soils will be considered problem soils.
- v. Lots in floodplains shall be subject to the floodplain/floodway development standards of the City's current floodplain ordinance.
- vi. A star symbol (*) shall be used to identify critical lots on the face of the preliminary plat, development plan, and final plat.
- vii. A critical lot designation can be removed if evidence has been presented to the Engineering Staff that the lot no longer fits the definition of a critical lot.

3. New Critical Lots

Any lot that will be created as a result of the grading process that meets the definition of a critical lot shall also be identified as such on the final plat.

4. Prior to Preliminary Plat or Plan Approval

Prior to approval of a preliminary plat or plan for a subdivision that includes lots designated as critical, the applicant shall provide the City Engineer with a preliminary grading study and a description of the measures to be taken:

- a. To protect the natural features of the critical lots.
- b. To minimize changes in grade, cleared area, and volume of cut or fill, and to control adverse impacts on the critical lots during and following the period of site disturbance.
- c. To align streets to minimize disturbance of slopes.
- d. To identify easements along property lines to meet future drainage needs.

5. Zoning Code Requirements

All critical lots shall meet the applicable requirements of the Zoning Code.

6. Critical Lot Plan Required

Prior to application for a building permit on a lot designated as “critical”, a surveyed plan shall be submitted to the City Engineer for approval drawn at a scale of 1” = 20’. Said plan shall be stamped by a State of Tennessee licensed professional civil engineer specializing in geotechnical, soils, hydrology, and/or structures with a note of certification as to the soundness and stability of proposed structures on the property. The plan shall provide a survey of existing conditions, details of the proposed development, and address any concerns in relation to the feasibility of construction (all shown to a point 10 feet outside the lot boundaries) on the lot as is described in Appendix E.

The City of Lebanon Engineering Department shall require the developer to prepare an overall grading and drainage plan as part of the subdivisions construction drawings to be constructed by the developer addressing all potential critical lot issues. Post-construction certification by a State of Tennessee licensed civil engineer specializing in all applicable areas is required to verify site has been built per the approved plans.

7. Critical Lot Plan Review

Three copies of the critical lot plan shall be submitted to the City Engineer to initiate a staff review. The critical lot plan shall include the name and phone number of the person responsible for the preparation of the plan and the number for a contact person. Within 14 days of the submittal date, the staff person responsible for the review shall notify the applicant of the approval or disapproval of the plan or the plan changes necessary to gain approval.

8. Basis for Critical Lot Plan Approval

Critical lot plan approval shall be based on the care taken to minimize the lot area subject to grading, the cut/fill required to prepare the lot for construction, and the effectiveness of the plan to preserve the natural features of the lot and stormwater flow management details.

9. General Guides for the Critical Lot Plan

The following are typical review items, but not all inclusive:

- a. Driveways crossing sidewalks in compliance with the Public Works Department and ADA accessibility standards.
- b. The diversion of runoff away from foundations. A five percent (5%) grade over a minimum of 5ft from the structure on all sides with the exception of the garage entrance is required. The garage entrance requires a minimum one percent (1%) grade.
- c. Grading near lot boundaries that does not undercut trees on adjacent lots or concentrate stormwater flow to adjacent lots and structures.
- d. Grading at the minimum necessary to allow for building construction.
- e. Avoidance of excessive foundation and retaining wall heights.
- f. Design details of any retaining walls subject to structural loading.
- g. All information described on the Critical Lot Checklist available from the City Engineer.

10. Issuance of Building Permits

No building permit shall be issued at any time prior to approval of the critical lot plan. For lots that require a minimum pad, certification from a registered surveyor listing actual pad elevation is also required prior to issuance of a building permit.

11. Issuance of a Certificate of Occupancy

No Certificate of Occupancy will be issued for any lot designated as critical until certification from the design engineer has been provided to the City Engineer stating that the site was constructed in reasonable accordance with the approved Critical Lot Plan. For lots that required a minimum finished floor elevation, certification from a registered surveyor is required stating the exact elevations of all structures including garages.

F. Large Tracts or Parcels

When land is subdivided into larger parcels than ordinary building lots, such parcels shall be arranged so as to allow for the opening of future streets and logical further re-subdivision.

G. Variances

Where the applicant can show that a provision of these standards would cause unnecessary hardship if strictly adhered to, and where, because of topographical or other conditions peculiar to the site, in the opinion of the Planning Commission a departure may be made without destroying the intent of such provisions, the Planning Commission may authorize a variance. Any variance thus authorized is to be stated in writing in the minutes of the Planning Commission with the reasoning on which the departure was

justifiably set forth.

H. Zoning or Other Regulations

No final plat of land within the force and effect of an existing zoning ordinance will be approved unless it conforms to such ordinance.

Whenever there is a discrepancy between minimum standards or dimensions noted herein and those contained in zoning regulations, building code, or other official regulations, the most restrictive standard shall apply.

I. South Hartmann Drive Access Management Plan

1. Purpose

South Hartmann Drive is the primary north-south arterial serving travelers on the west side of the City of Lebanon. The purpose of the South Hartmann Drive Access Management Plan is to allow access to land development in a manner that preserves the safety and efficiency of the transportation system, promotes economic development, and protects environmental resources along South Hartmann Drive between Interstate 40 (I-40) and W. Main Street in the City of Lebanon.

2. General

The access management plan includes guidelines and standards where the intent is either advisory (guidelines) or mandatory (standards).

- i. Guidelines provide direction on more subjective or qualitative objectives, such as the location of new streets and the spacing of traffic signals. Guidelines are open to interpretation and admit a variety of solutions that support the general intent of the access management plan. They are expressed with terms like “should” and “encouraged”.
- ii. Standards are specific development and design controls that govern quantitative and measurable objectives, such as the location and spacing of driveways. They are expressed with terms like “shall” and “must”, and are often described in tables, and;
- iii. Diagrams that show precise dimensions or fixed limits within which a proposed design must fall.

Many guidelines and standards are dependent upon site specific conditions, including topography, property lines, prior site development, and sight distances, that may prevent the strict application of the guidelines and standards. In such cases, the City of Lebanon Engineering Department will evaluate the options and determine the appropriate application of the guideline or standard in question. The following access management guidelines and standards apply to all properties abutting and street intersections along South Hartmann Drive between I-40 and W. Main Street in the City of Lebanon.

3. Street Network

Providing combined arterial and collector street spacing at closer intervals improves access opportunities, reduces traffic where streets meet, and allows for reduced cross sections. Although north-south street connectivity in the corridor area is generally sufficient with approximately ½ mile spacing of arterials and collectors, east-west connectivity is poor, particularly between Hickory Ridge Road and Leeville Pike.

Street Spacing

The minimum of combined arterial and collector spacing should be ½ mile. Accordingly, spacing of arterials and collectors at multiples of adopted signal spacing (see below, “Signalized Intersection Spacing”) will facilitate arterial-to-arterial and arterial-to-collector intersections.

A new collector road should be constructed between Hickory Ridge Road and Leeville Pike to improve east-west connectivity and provide the recommended ½ mile arterial/collector spacing.

Sidewalks

For all new developments, abutting a collector or arterial street, on-site sidewalk installation will be required. A continuous, all-weather sidewalk, constructed to a minimum of five feet, shall run parallel to the roadway at the front of the parcel. A buffer zone of 24 inches must separate the sidewalk from the edge of pavement, allowing for an appropriate buffer from vehicular and bicycle traffic as well as future sidewalk connections to adjacent parcels.

When built, new sidewalks shall comply with the standards of the city government; however, a design compatible with existing conditions may be considered and approved by the City Engineering Department upon the advice of the appropriate city government agencies, provided constructing such design would cost no more than would full compliance with public sidewalk standards.

Auxiliary Lanes

Right turn deceleration lanes are required when the outside lane has an expected volume of greater than 250 vph and the right turn volume is greater than 55 vph. Left turn deceleration lanes are required at all median openings where left turns are expected to occur. Deceleration lanes shall be designed in accordance with City and TDOT standards, with left turn and right turn storage lengths determined through a traffic analysis.

4. Traffic Signal Systems

Long and uniform spacing of traffic signals allows for coordinated signals that reduce delays and improve safety. Currently, there are six signalized intersections on the study segment of South Hartmann Drive (including the northern limit at W. Main Street), with an average signal spacing of 0.46 miles. The shortest signalized intersection spacing within the study limits is 0.20 miles (approximately 1,050 feet) between Franklin Road and the Shopping Center Entrance/future Crowell Lane.

Signal Spacing

- i. Ideally, traffic signals should be spaced ½ mile apart for efficient signal progression at speeds of 30 mph to 45 mph, maximizing flow rates while minimizing fuel consumption and emissions. Distances between signals should not vary by more than 10% in order that good progression of traffic may be maintained in both directions.
- ii. ½ mile spacing of signalized intersections typically allows efficient traffic progression at speeds of 40 mph using a common 90 second cycle length. In off-peak conditions a shorter cycle may allow efficient progression at higher speeds, while in peak periods a longer cycle up to 120 seconds may be used for 30 mph progression. Table 10 shows optimal signal spacing for efficient progression at various speeds/cycle lengths.

Table 10: Optimum signal spacing for efficient progression at various speeds/cycle lengths (TRB 1996)

Cycle Length (sec)	Speed (mph)						
	25	30	35	40	45	50	55
	Distance in Feet						
60	1,100	1,320	1,540	1,760	1,980	2,200	2,430
70	1,280	1,540	1,800	2,050	2,310	2,500	2,820
80	1,470	1,760	2,050	2,350	2,640	2,930	3,220
90	1,630	1,980	2,310	2,640	2,970	3,300	3,630
120	2,200	2,640	3,080	3,520	3,960	4,400	4,840
150*	2,750	3,300	3,850	4,400	4,950	5,500	6,050
*Represents maximum cycle length for actuated signal if all phases are fully used							

5. Unsignalized Access

Unsignalized street and driveway connections introduce conflicts and friction into the traffic stream as vehicles enter and leave through-traffic lanes. The 28 existing access points on South Hartmann Drive between I-40 and West Main Street, or approximately 11 access points per mile, plus future connections will present both operational and safety issues.

Number of Driveways

The maximum number of driveways is established in Table 11.

Table 11. Maximum Number of Driveways

Lot Frontage	Number of Driveways
Up to 150 feet	1
150 feet to 299 feet	2
Each additional 300 feet	1

Unsignalized Street and Driveway Spacing

The minimum spacing for unsignalized streets and driveways shall be as shown in Table 12. The required spacing between unsignalized street and/or commercial driveways is based on the minimum separation of driveways to reduce crash potential due to right-turn conflict overlap. Each driveway presents the driver with a minimum of two conflict points as they must be alert for a right-turning vehicle entering mainline traffic or a vehicle making a right-turn into a driveway. The recommended spacing requires each driver to monitor a single driveway at a time, improving safety and traffic operations. All driveways serving properties other than single-family/duplex residential, or farming are considered commercial. Spacing between driveways is measured from near edge to near edge of adjacent driveways.

Table 12. Minimum Connection Spacing

Connection	Distance (ft.)
Unsignalized Street and	350
Non-Commercial Driveway	50

The City Engineering Department may allow two one-way driveways to serve a commercial property. Distances between adjacent one-way commercial driveways with inbound traffic upstream from the outbound drive must have a minimum separation distance of 25 feet. Islands having a minimum length of 25 feet measured parallel to the highway must be built between the closely spaced driveways to form definite entrances and exits.

Joint Access and Cross Access

Joint and cross access are methods of allowing adjacent properties to share driveways and

parking facilities. Joint access is where two adjacent property owners share a driveway along their common property line. Cross access is where traffic moves between adjacent properties without re-entering the public roadway.

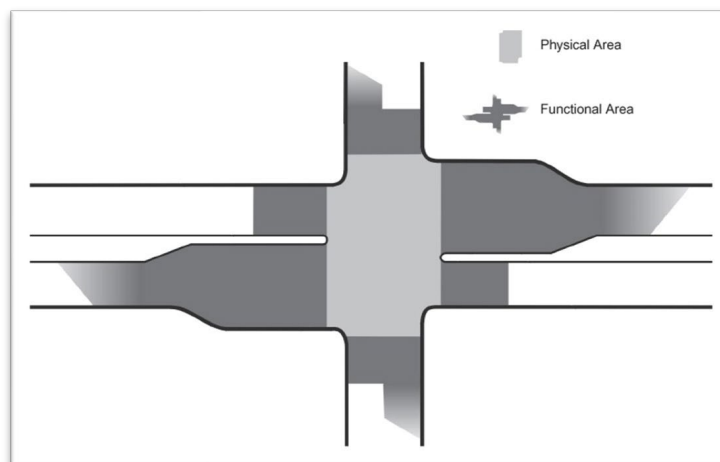
If an (access) applicant is unable to comply with the driveway spacing standards listed above, the applicant must attempt to obtain an access or mutual driveway easement from the adjacent property as to allow for one egress to serve two properties. If located all or partially on the applicant's property, then the adjacent property owner(s) must agree to relocate any existing access to the proposed access and the relocation must be performed in conjunction with the applicant's development of the property.

If the applicant is unable to obtain an access or mutual driveway easement from an adjacent property owner, then the access of the applicant's property shall be located on its own property in an area acceptable to the City Engineering Department.

Corner Clearance

Important considerations in the safety and operation of intersections are the concepts of functional intersection area and corner clearance. Corner clearance is minimum distance required between an intersection and an upstream or downstream driveway, extending beyond the physical area of the intersection to include the portions of the roadway that are influenced by the intersection (Figure 10). Upstream from the intersection the corner clearance provides room for vehicles to navigate the intersection, including turn lanes and queues. Downstream, the functional distance extends from the far side of the intersection to provide guidance and tracking to vehicles passing through, or turning from, the intersection. The purpose of corner clearance is to physically separate the functional area of an intersection from the conflicting movements in the area of influence of an adjacent driveway and provide sufficient stacking space for queued vehicles at the intersection so that the driveway is not obstructed by traffic backed up from the intersection.

Figure 10: Functional Intersection Area (Transportation Research Board, 2003)



Corner clearance is measured like driveway separation, from the closest edge of the driveway connection to the closest edge of the parallel roadway. Unless an exception is granted, the minimum corner clearance for driveways on all four legs of an intersection will be established by an intersection queuing analysis or 200 feet, whichever is larger and applicable. Exceptions may be approved if as a result of the access management standards the property would become landlocked. If an exception to the minimum corner clearance is requested and approved, the access will be right-in/right-out only, and under no circumstances will any part of a driveway be permitted to connect with either the major street or intersecting side street within 50 feet from the near edge of the adjacent street.

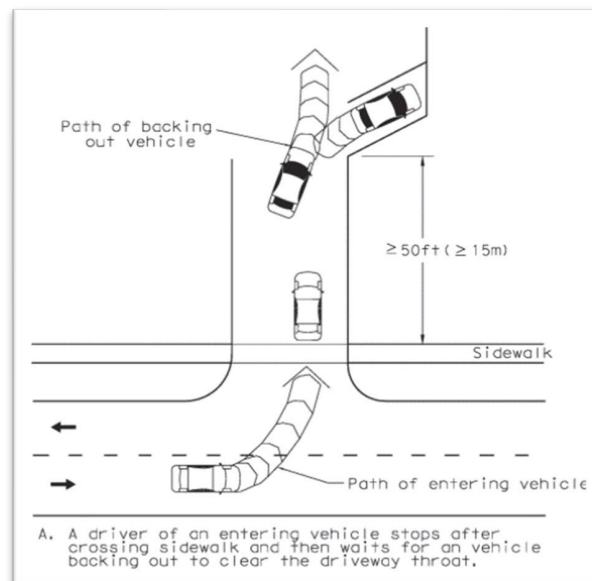
Throat Length Distances

The connection depth of a driveway (throat length) as measured from the edge of the abutting roadway to the near edge of the internal circulation road or buffer area shall be of sufficient length to allow a driver to enter the site without interfering with the mainline of traffic (Figure 11). Table 13 shows the minimum throat lengths based on the site activities. City staff will assist the applicant in determining the appropriate site activity category.

Table 13: Minimum Throat Length

Site Activity	Throat Lengths
Regional shopping centers (malls)	250'
Community shopping center (supermarket,	80'
Small strip shopping center	30'
Regional office complex	250'
Office center	80'
Small commercial developments	30'

Figure 11: Throat Length (source TxDOT).



6. Medians

Median treatments are one of the most effective ways to regulate access and reduce crashes. National Cooperative Highway Research Program (NCHRP) Report 420, "Impacts of Access Management Techniques," found that raised medians reduce crashes by over 40 percent in urban areas and over 60 percent in rural areas, based on crash data in seven states. In the divided portion of South Hartmann Drive, northbound and southbound traffic are separated by two foot inside shoulders and a fourteen (14) foot wide raised median consisting of concrete curb surrounding a grass plot (concrete on the Barton's Creek Bridge). There are median openings at intersecting roadways, existing access points to adjacent properties, and planned future access points. The median openings are flush pavement, which continues as a striped flush median on either side of the intersecting roadway or driveway to the start of the left turn lanes (if applicable), with an average distance of approximately 400 feet between a given access point and resumption of the raised median.

Median Opening Spacing

The unsignalized median opening functions as an intersection. Median openings should be designed with auxiliary lanes that allow left turning vehicles to decelerate without interfering with the through movement of the left-most lane. Full median openings shall be spaced a minimum of 1,320 feet apart. Appropriately spaced median openings have already been constructed on the portion of South Hartmann Drive within the study area and no additional full median openings should be considered.

J. Open Space

Subdivisions shall meet the minimum Open Space requirements as specified in the zoning ordinance.

ARTICLE IV: DEVELOPMENT PREREQUISITE TO FINAL APPROVAL

A perfectly prepared and recorded subdivision or plat means little to a prospective lot buyer until he can see actual physical transformation of raw acreage into lots suitable for building purposes and human habitation. Improvements by the subdivider spare the community of a potential tax liability. The following tangible improvements are required before final plat approval in order to assure the physical reality of a subdivision which approval and recordation will establish legally.

A. Required Improvements

Every subdivision developer shall be required to grade and improve streets and alleys; install sanitary sewers, stormwater systems, fire hydrants, and water mains in accordance with specifications established by the city. The adopted requirements, whether in local regulations or in the following standards, shall govern.

1. General Requirements

- a. No building permit shall be issued until utility construction is underway, all roadway grading is complete, and the initial lift of the stone base is in place per the approved construction plans.
- b. No building permits shall be issued until a gravel driveway to the proposed home measuring at least 50 feet by 10 feet or to the front of the structure, whichever is greater, is in place.
- c. No building permit shall be issued for the final ten percent of lots in a subdivision, or if ten percent is less than two lots, for the final two lots of a subdivision, until all public improvements required by the Planning Commission's resolution of the final plat approval have been fully completed, dedicated, and accepted by the governmental body.
- d. No Certificate of Occupancy will be issued until the As-Built plans for all utilities have been approved and the utility system accepted by the City of Lebanon.
- e. Roadway binder must be down by 25% of the permits pulled or one (1) year from start of construction, whichever comes first. Failure to comply will result in the City of Lebanon drawing on the Letter of Credit to complete through the binder stage of construction.
- f. No final topping until 75% of lots are developed. Final topping will be in place within six (6) months of 75% of lots being developed or at the discretion of the Public Works Commissioner or authorized agent. Written approval from the Public Works Commissioner or authorized agent is required prior to topping.
- g. A reduction of the required Letter of Credit not to exceed 50% for the public utilities will be considered once utilities are installed and with concurrence of the Public Works Commissioner or authorized agent. Once As-Built plans are

received, and the Public Works Commissioner or authorized agent will issue an acceptance letter and start the required one-year warranty period. In this letter, it will state a reduced Letter of Credit amount, which will be equal to 10% of the initial Letter of Credit or initial estimated utility construction cost.

- h. A reduction of the required Letter of Credit in an amount of 125% for work remaining related to the roadways, grading, drainage and lighting may be considered. The developer will provide an acceptable cost estimate for the remaining work for concurrence with the Public Works Commissioner or authorized agent once binder is in place.
- i. Once public improvements are complete, release of the Letter of Credit is subject to a one-year maintenance Letter of Credit being posted for 10% of the initial Letter of Credit or initial estimated roadway construction cost.

2. Grading

All streets, roads and alleys shall be graded to their full width by the developer so that pavements and sidewalks can be constructed on the same level plane. Due to special topographical conditions, deviation to the above will be allowed only with special approval of the Planning Commission.

Refer to Appendix D for road construction criteria/specifications.

3. Storm Drainage

An adequate drainage system, including necessary open ditches, curb and gutter, pipes, culverts, intersectional drains, catch basins, bridges, etc., shall be provided for the proper drainage of all surface water. Cross drains shall be provided to accommodate all- natural water flow and shall be of sufficient length to permit full width roadway and the required slopes. The size openings to be provided shall be determined by acceptable engineering standards as approved by the City/Utilities Engineer, but in no case shall the pipe be less than fifteen (15) inches. Cross drains shall be built on straight line and grade and shall be laid on a firm base but not on rock. Pipes shall be laid with the spigot end pointing in the direction of the flow and with the ends fitted and matched to provide tight joints and a smooth uniform invert. They shall be placed at a sufficient depth below the roadbed to avoid dangerous pressure of impact, and in no case shall the top of the pipe be less than one foot below the roadbed.

4. Roadway Base Stone/Paving

After preparation of the sub-grade, the roadway base/paving shall be constructed in accordance with Appendix D of these regulations.

5. Minimum Pavement Widths

Due to the diversity of development in the planning region ranging from sparsely populated agricultural areas to the densely populated urban areas, required pavement

widths will vary with the character of building development and the amount of traffic encountered. Minimum pavement widths between curbs shall be as follows:

- a. Residential – Minor/Local Typical Section
Extruded curb or modified curb and gutter see detail drawings Appendix C, TDOT RP-MC-2.

Average Daily	Right of Way	Pavement Width	Cross-Section ^c
<- 1000	50 ft.	24 ft. ^b	8 in., 2 in., 1 1/2 in.
>- 1000	50 ft.	24 ft.	10 in., 2 in., 1 1/2 in.

- a - ADT for this requirement – assume 10 trips per day per single family dwelling.
- b -The Planning Commission may permit a pavement width of 22 ft. on local residential and minor residential collectors.
- c - Stone base, asphalt binder, asphalt surface (topping), respectively.

- b. Residential - Collector
Typical Section
Modified curb and gutter (Appendix C, TDOT RP-MC-2, Type B), or standard curb and gutter (Appendix C, ST-100, ST-101 & ST-102) see detail drawings. Subject to Staff recommendation and approval by the Planning Commission.

Right of Way	Pavement Width	Cross-Section ^a
60 ft.	34 ft.	10 in., 2 in., 1 1/2 in.

- a - Stone base, asphalt binder, asphalt surface (topping), respectively.

- c. Cul-de-Sac (permanent)

Length	Right of Way	Pavement Width	Cross-Section ^a
<- 500 ft.	50 ft.	22 ft.	8 in., 2 in., 1 1/2 in.
>- 500 ft.	50 ft.	22 ft.	8 in., 2 in., 1 1/2 in.

- a - Stone base, asphalt binder, asphalt surface (topping), respectively.

6. Sidewalks, Driveway Ramps and Curbs

All sidewalks, driveway ramps and curbs shall comply with all ADA requirements.

- a. Sidewalks
Sidewalks shall be required along existing streets and on both sides of all new streets within subdivision developments. This construction shall be at the cost of the developer. Sidewalks shall be required on any subdivision of property within the City; a payment in lieu of for the sidewalk fund may be option. No Certificate

of Occupancy or recording of a Final Plat shall be granted until sidewalks are installed, or the payment in lieu of is received.

The only exception to the requirement for the installation of sidewalks or the payment in lieu of installation shall be in the following situations:

- residential subdivisions only; and
- on existing roads where the subdivision is for 2 lots or less; and
- where sidewalks do not currently exist in the immediate vicinity; and
- it is not anticipated that sidewalks will extend into the particular area in the near future as determined by the Planning and Engineering Staff, Planning Commission and City Council on a map or similar graphic as the Major Thoroughfare and Land Use Maps.

Payment in lieu of construction of sidewalks may be granted if these conditions are met.

Consideration shall not be given for a waiver from the installation of sidewalks or the payment in lieu of installation for non-residential subdivisions.

The Planning/Engineering Staff shall make a recommendation relative to the installation of sidewalks or the payment in lieu of construction. The Planning Commission may make a recommendation relative to the installation of sidewalks or the payment in lieu of construction. City Council will make the final determination relative to the installation of sidewalks or the payment in lieu of construction. Each decision will be made on a case-by-case basis. The payment in lieu of construction shall be contributed by the developer. The assessment for the installation of sidewalks shall be established by the Commissioner of Public Works on an annual basis. Any additional site work that would be required on the part of the applicant in order to install sidewalks may be an added assessment.

The ability to pay into the sidewalk account includes, but not limited to the following reasons:

- Natural conditions or barriers.
- Impending street and/or utility improvements and/or construction.
- A stormwater drainage ditch or similar public utility facility prevents the construction of a sidewalk, and neither the sidewalk nor the facility can be reasonably relocated to accommodate both the facility and the sidewalk.
- Other unusual circumstances exist that make the construction of sidewalks unreasonable or inappropriate.

Sidewalks shall be a minimum of 5 feet wide. Sidewalks shall be installed at the appropriate time as determined by the Engineering Department. Sidewalk construction shall conform with the lines and grades shown on approved plans and in accordance with detail drawings ST-320, ST-321, ST-321A, ST-326 and ST-327 (Appendix C).”

b. Driveway Ramps

Concrete driveway ramps shall be required on all curbed and/or curb and gutter streets. The ramps shall extend a minimum of five (5) feet behind the curb. Driveway ramp construction to conform with detail drawings ST-322, ST-323 and ST-324 (Appendix C).

Any driveway ramp which is to be placed after initial laying of curb shall require a permit from the City of Lebanon Engineering Department and shall be installed in accordance with TDOT Standard Drawing RP-D-14. Particular notice shall be paid to not alter existing drainage patterns.

Any ramp which does not conform to the foregoing requirements is to be removed and replaced by the developer or contractor at his expense; this will be enforced under provision of the maintenance bond.

c. Curbs

Machine-laid (extruded) curbs in residential developments shall meet the following specifications.

Concrete Specifications

Concrete for curb and gutter, sidewalk and driveway construction shall be Class "A" air entrained concrete as specified in Section 604.03, TDOT Standard Specifications.

1. Concrete – Concrete strength (20 day) 3500
PSI Maximum slump – 1 ½ inch
Gradation of Aggregate (river gravel)

2.

Sieve Size	Percent Passing
#4	96-100
#8	80-100
#16	55-80
#30	45-65
#50	10-25
#100	2-7

Concrete shall be cured by covering with burlap, cotton, or jute mats or sacking, which is kept moist for a period of at least five (5) days, or by the application of a liquid membrane to prevent evaporation losses. In the latter case, the material and method of application shall be approved by the Public Works Department.

Alignment – Curbs shall vary from the specified alignment (on the plans) not more than 0.10 feet.

3. Typical Section – Unless otherwise directed by the Engineering Department, the curbs shall conform to the typical section shown on Standard Drawing ST-100, ST-101, ST-102, or TDOT RP-MC-2 (Appendix C).

Concrete shall be tested in accordance with provisions set forth in A.A.S.H.O. T-22 by a private testing laboratory. The frequency of testing shall be two (2) test specimens for each fifty (50) cubic yards and fraction thereof placed in one day. Test specimens are to be made and cured in accordance with A.A.S.H.O. T-23. The aforesaid test will be conducted at the expense of the developer and copies of test results shall be submitted to the Engineering Division.

7. Installation of Utilities

After grading is completed and approved and before any base is applied, all of the underground work—water mains, gas mains, etc., and all service connections shall be installed completely and approved throughout the length of the road and across the flat section.

8. Water Supply System

Water mains shall be extended from or connected to the City of Lebanon’s water distribution system in such a manner as to adequately serve all lots shown the subdivision plat for both domestic service and fire protection.

The size and location of water mains, the location and types of valves and hydrants are approved by the Planning Commission subject to the detailed review and approval by the City/Utilities Engineer confirming that the design and construction shall be in accordance with City of Lebanon and State of Tennessee Department of Environment Conservation Standards and Specification.

When a subdivision development proposed within the City of Lebanon’s Urban Growth Area and/or within the City of Lebanon’s Planning Jurisdiction is proposed to be served by another Water Distributor, District or Authority the owner/developer shall provide written documentation from the water system Distributor, District or Authority indicating the current and proposed system flow and pressures in the immediate area. Water service provided by other Distributors, Districts or Authorities must be approved by Resolution by the Lebanon City Council.

No subdivision development shall be approved until adequate fire flows and pressures are available or an appropriate plan of services approved. Adequate fire flows shall be based on current State of Tennessee requirements.

9. Sanitary Sewers

Sanitary Sewer Service shall be extended by the owner/developer from existing City of

Lebanon Sewage Collection System facilities. Any extensions of the system shall be at the expense of the developer.

The size and location of sewer mains, services, manholes, pump stations and related sewage facilities are approved by the Planning Commission subject to the detailed review and approval by the City Utilities Director confirming that the design and construction shall be in accordance with City of Lebanon and State of Tennessee Department of Conservation and Environment Standards and Specifications.

Sewer capacity shall be granted based on the City of Lebanon Sanitary Sewer Capacity Management Plan. No individual subdivision shall be approved for sewer connections of more than 15% of the current available capacity for residential developments in any single month. The City Utilities Engineer and the Planning Commission may place limits on the number of consecutive monthly approvals. This limit may be based on actual progress being made on the construction of the project, size of the development, offsite construction costs, and other possible economic and capacity availability factors.

No individual subdivision shall be approved for sewer connections that require the total remaining capacity of a sewer main without improvements to the system. Required improvements will be the responsibility of the owner/developer and shall be at the expense of the developer.

Wherever a subdivision of property cannot be reasonably served, in the opinion of the Lebanon Planning Commission and City Utilities Director, by an extension of the City of Lebanon Sewerage System, the owner/developer shall make application to the City Utilities Director for the installation of alternative sewage collection and disposal facilities.

The Planning Commission shall consider alternative collection and disposal facilities upon recommendation of the City Utilities Director and Mayor.

Alternative collection and disposal systems shall be reviewed and approved by the City Utilities Director and appropriate State of Tennessee Departments. A copy of the approved plan and related documents shall be submitted to the City Utilities Director for reference purposes.

If the City of Lebanon does not install and maintain the alternative sewage collection and disposal facilities, agreements shall be developed between the City of Lebanon and appropriate entities indicating the maintenance responsibility for any approved sewage collection and disposal system that does not connect to the City of Lebanon collection system. The final plat of record shall note such maintenance responsibilities.

The City of Lebanon has the authority in perpetuity to collect, treat and dispose of wastewater within its wastewater service area as described in Exhibit #1.

In all locations within the City's wastewater service area, in the event a decentralized wastewater system or a system utilizing other approved technology is offered by the Water and Wastewater Authority of Wilson County, Tennessee (hereinafter referred to as WWA), and which system is feasible due to a lack of proximity of the location to the conventional wastewater system offered by the City, as determined by the City, the City agrees that upon approval by the Planning Commission the WWA is authorized to provide wastewater services within such location.

In areas the City's wastewater services are outside the city, the City shall provide wastewater services to existing residents and commercial and industrial establishments in general per the Plan of Services adopted at the time of annexation.

WWA and the City do not infringe upon the wastewater service area of the other entity without the consent of the other entity. Consent for the City may be given by the City Council of Lebanon, Tennessee.

As to existing customers, including residential, commercial, and industrial, located within the City's wastewater service area, and presently being served by the WWA, the said customers shall continue to be served by the WWA in compliance with federal, state, and local rules and regulations. In the event the City desires to serve such customers in the future, the City will purchase from the WWA the infrastructure existing at that time, at fair market value, subject however to such purchase and value being agreed to and authorized by the City Council of the City of Lebanon and the Board of Commissioners of the WWA. Developer may be responsible for the cost of purchase.

10. Stop and Street Name Signs

Stop and street name signs shall appear at all intersections. It shall be the responsibility of the developer to install stop and street name signs, as appropriate, on all streets within a proposed subdivision. Street/stop signs shall meet the requirements of and installed in accordance with the most current Manual on Uniform Traffic Control Design (MUTCD), including height, off-set, other dimensional properties, and reflectivity.

11. Fire Hydrants

Fire Hydrants shall be installed at a distance of no greater than 500ft intervals.

B. Recommended Improvements

Although not required by these regulations, the planting of street trees is considered a duty of the developer as well as good business practice.

Street trees are a protection against excessive heat and glare and enhance attractiveness and value of abutting property. The Planning Commission will assist the subdivider in location of trees and species to use under varying conditions.

It is recommended that trees be planted inside the property lines, outside of any easement, where they are less subject to injury, decrease the chance of motor accidents and enjoy more favorable conditions for growth. If trees are to be planted within a planting strip in the right-of-way, their proposed locations and species to be used must be submitted for the Planning Commission's approval since the public inherits the care and maintenance of such trees.

C. Guarantees in Lieu of Completed Improvements

No final subdivision plat shall be approved by the Planning Commission or accepted for record by the County Registrar of Deeds until the improvements listed shall be constructed in satisfactory manner and approved by the Commissioner of Public Works, or his authorized agent, within the City of Lebanon, or in lieu of such prior construction, the Planning Commission may accept a Letter of Credit in an amount equal to the estimated costs of installation of the required improvements, whereby improvements may be made and utilities installed without cost to the city in the event of default of the applicant. See Appendix B for Letter of Credit requirements.

ARTICLE V: ENFORCEMENT AND PENALTIES FOR VIOLATIONS

The enforcement of these regulations and penalties for the unapproved recordation or transfer of land is provided by state law in the authority granted by public acts of the State of Tennessee.

A. Enforcement

1. No plat or plan of a subdivision of land into two or more lots located within the **planning region shall be admitted to the land records of the county or received or** recorded by the County Registrar of Deeds until said plat or plan has received final approval in writing by the Planning Commission as provided in Section 3493.10, Supplement to Code of Tennessee, (1950).
2. No board, public officer, or authority shall light any road, lay or authorize the laying of water mains or sewers, or the construction of other facilities or utilities in any road located within the planning region unless such road shall have been accepted, opened or otherwise received the legal status of a public road prior to the adoption of these regulations, or unless such road corresponds in its location and lines to a road shown on a subdivision plat approved by the Planning Commission, or on a road plan made and adopted by the City Council as provided in Section 3493.14, Supplement to Code of Tennessee, (1950).

B. Penalties

3. No county registrar 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 3407.10 and 3493.10, Supplement to Code of Tennessee, (1950), and any

county registrar so doing shall be deemed guilty of a misdemeanor, punishable as other misdemeanors as provided by law.

4. Section 10, Chapter 222, Public Acts of 1951 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 references 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 Regional Planning Commission and obtained its approval as required by this Act and before such plat be recorded in the office of the appropriate county registrar, 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. PROVIDED HOWEVER, said owner or agent of any land may sell, transfer or agree to sell any lot or lots shown on a plan having been given tentative approval by said Regional Planning Commission; and provided, further, said owner or agent post bond in form and amount and with conditions and surety satisfactory to said Regional Planning Commission, providing for and securing to the public the actual construction and installation of such improvements and utilities within a period specified by the Commission and expressed, in the bond. The City, through its Attorney, or other official designed by the City Council, may enjoin such transfer or sale or agreement by action or injunction.”
5. Within a municipality, the solicitor or other official designated by its chief legislative body may enjoin unapproved transfer or sale of property by action or injunction as provided in Sections 3493.14, Supplement to Code of Tennessee, (1950).
6. Any building or structure erected or to be erected in violation of the Subdivision Regulations shall be deemed an unlawful building or structure, and the Building Commissioner or the Attorney or other official designated by the City Council may bring action to enjoin such erection or cause it to be vacated or removed as provided in Section 11, 222, Public Acts of 1951.

ARTICLE VI: ADOPTION AND EFFECTIVE DATE

- A. Before adoption of these Subdivision Regulations or any amendment thereof, a public hearing thereon shall be held by the Planning Commission; thirty (30) days' notice of the time and place of which shall be given by one publication in a newspaper of general circulation in each county lying wholly or partly in the planning region.
- B. These rules and regulations shall be in full force and effect from and after their adoption and effective date.

Advertised:	February 21, 2005
Public Hearing	March 22, 2005
Adopted:	March 22, 2005
Effective:	April 27, 2005
Amended:	October 25, 2005 (Signs at temporary cul-de-sacs)
Amended:	October 25, 2005 (Certificate of Occupancies and final topping and Dead-End Streets)
Amended:	June 26, 2007 (Sidewalk and Width-new developments)
Amended	November 27, 2007 (Sidewalks in all subdivisions)
Amended	March 25, 2008 (Access to Existing Road)
Amended	March 25, 2008 (Access points for subdivisions)
Amended:	October 28, 2008 (Sidewalks required in subdivisions of 5 lots or more)
Amended	March 20, 2008 (Jurisdiction)
Amended	April 29, 2009 (Drainage-No Dumping Drains to River)
Amended:	March 24, 2009 (Staff review of 2 lots or less)
Amended:	April 28, 2009 (Storm drain labels)
Amended:	October 27, 2009 (Grading, Road Construction, Letter of Credit, Street Design Standards, Roadway Base Stone/Paving, Minimum Pavement Widths, Street Signs Drainage Culverts, Guarantees of Completed Improvements)

Amended: May 25, 2010 (Appendix A - Certificates required on final plats)

Amended May 25, 2010 (Certificate of the Approval of Public Streets)

Amended: January 25, 2011 (Critical Lot Requirements and inclusion of Appendix E)

Amended February 26, 2013 (Article II -Sec D Townhouse Subdivisions)

Amended February 26, 2013 (Article II Section B.1 – Digital Copies)

Amended: April 28, 2015 (South Hartmann Drive Access Management Plan – Section i added to Article III)

Amended: May 26, 2015 (Article IV Letter of Credit)

Amended: May 26, 2015 (Section E.2.g – Article III Suitability of Land)

Amended: May 26, 2015 (Article III A. 16.b-3% Cross Slopes)

Amended December 3, 2015 (Article IV. 500 ft. Fire Hydrants)

Amended: December 03, 2015 (Appendix D - Roadway Construction Criteria and Testing Procedures)

Amended: April 19, 2016 (Article II – E. Conservation Developments)

Amended: March 01, 2017 (Article III Section A.13 – Private Streets)

Amended August 22, 2017 (Article II Construction Drawings)

Amended March 1, 2018 (Article II- RD9 in Conservation Development)

Amended July 12, 2019 (Article III – Section B. Blocks)

Amended March 2021 (D. Requirements for Townhouse Subdivisions Section 7 – Parking removed from document)

Amended July 27, 2021 (Article III – Table 1.1 Street Design Standards removed from document)

Amended April 28, 2022 (Article II: Procedure for Plat Approval, Section C. Final Plat, 2.)

Amended April 28, 2022 (Article IV: Development Prerequisite to Final Approval, Section 9 Sanitary Sewer)

Amended October 25, 2022 (Article I: Purpose, Authority and Jurisdiction, C. Jurisdiction)

Amended June 30, 2023 (Article III: General Requirements & Minimum Standards of Design. Added Open Space)

Amended December 17, 2025 (Article III: Section B. Blocks, Article III: Section J. Open Space, Article IV: Section A. Required Improvements)

Modification: This document has been modified to allow for ease of citation for reference.

Subdivision Regulations
City of Lebanon, Tennessee

Appendix B Letter of Credit Requirements

LETTERS OF CREDIT

The following information must be in *each* Letter of Credit:

Beneficiary: CITY OF LEBANON
ENGINEERING DEPARTMENT
200 North Castle Heights Avenue, Suite 300
Lebanon, TN 37087
ATTN: Mattie Neeley

The following statements are not required to be verbatim; however, verbiage must accurately reflect all significant elements of the statement:

We hereby open our Irrevocable Letter of Credit in your favor for the account of _____
_____ (Developer), _____
(Address) for a sum not to exceed the aggregate amount of \$ _____ available by
your one or more clean drafts drawn at sight on us.

Each draft so honored must be marked "Drawn under _____
(Institution and address), Letter of Credit # _____" and be accompanied by a signed
statement by the City of Lebanon that _____ (Developer) has failed to honor
his/its obligations with the City of Lebanon its subsidiaries and affiliates for the
construction of _____ for _____ (project name &
phase). Partial drawings are permitted.

It is a condition of this Letter of Credit that it shall be deemed automatically extended
without amendment for one year from the expiration date hereof, or any future expiration
date, unless sixty (60) days prior to any expiration date we send notice to you be received
registered mail or receipted overnight courier that we elect not to consider this Letter of
Credit renewed for any such additional period. Upon receipt of such notification, Beneficiary
has the right to draw on the full amount of the Letter of Credit. Letter of Credit non extension
notice shall be sent to the beneficiary at the address as stated above, or as amended.

We hereby agree with you that all drafts drawn under and in compliance with the terms of
this credit will be duly honored if drawn and presented for payment to our (main) office,
located at _____ (address).

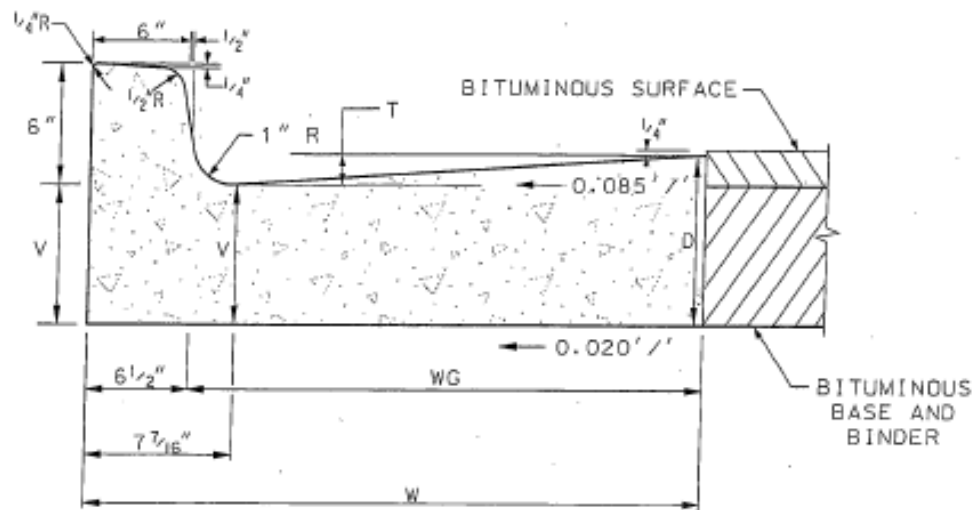
Additional requirements:

- 1. Letter of Credit must be able to be drawn from a local bank (within one hour's driving distance MAXIMUM).**
- 2. Beneficiary information as listed at top must be on the Letter of Credit.**
- 3. The Letter of Credit must clearly state the name, address, and telephone number of the contact person from the bank itself.**

Questions or Comments? Please contact Mattie Neeley at 615-444-3647 ext. 2339.

Subdivision Regulations
City of Lebanon, Tennessee

Appendix C Standard Drawings



6" CONCRETE COMBINED CURB AND GUTTER					
TYPE	TOTAL WIDTH (W) IN INCHES	WIDTH OF GUTTER (WG) IN INCHES	VERTICAL DROP (T) IN INCHES	VERTICAL DEPTH (D) OF GUTTER	VERTICAL DEPTH (V) OF GUTTER AT FLOW LINE
6-30	30	23 1/2	2	AS NOTED ON TYPICAL X-SECTIONS	0 - 1.53"

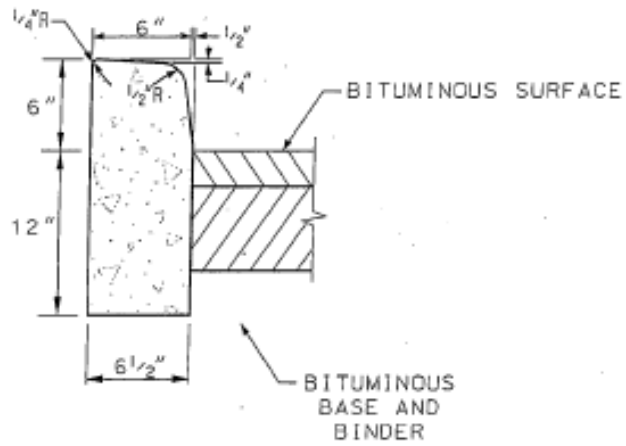
NOT TO SCALE

6" Concrete Combined Curb and Gutter

LEBANON, TN. - DEPARTMENT OF PUBLIC WORKS

STANDARD DETAIL

ST-100



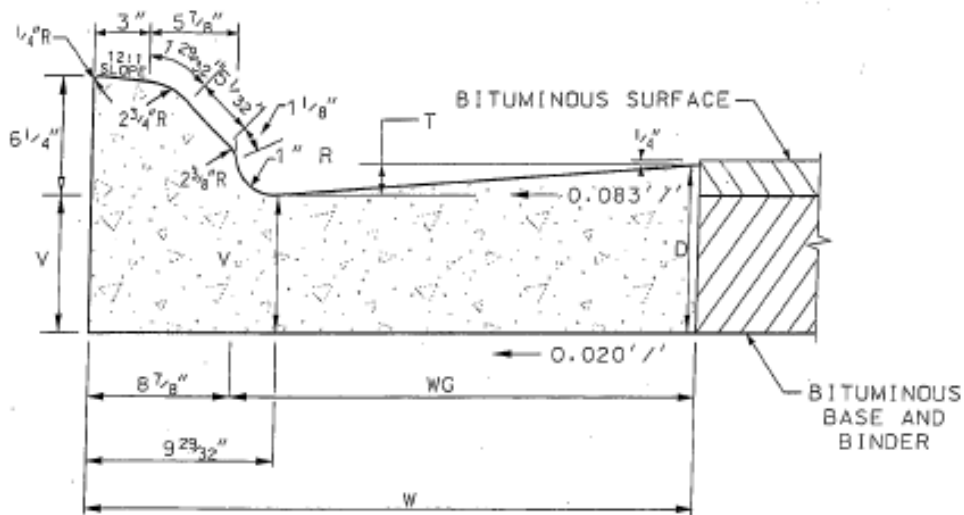
NOT TO SCALE

6" Detached Concrete Curb

LEBANON, TN. - DEPARTMENT OF PUBLIC WORKS

STANDARD DETAIL

ST-101



6" CONCRETE COMBINED CURB AND GUTTER					
TYPE	TOTAL WIDTH (W) IN INCHES	WIDTH OF GUTTER (WG) IN INCHES	VERTICAL DROP (T) IN INCHES	VERTICAL DEPTH (D) OF GUTTER	VERTICAL DEPTH (V) OF GUTTER AT FLOW LINE
6-33	33	24 1/8	2	AS NOTED ON TYPICAL X-SECTIONS	D - 1.52"

NOT TO SCALE

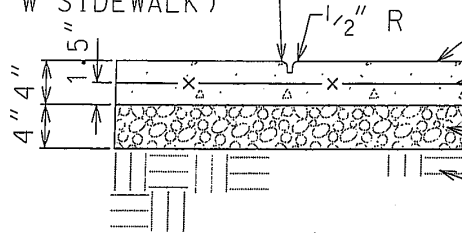
6" Sloping Concrete Combined Curb and Gutter

LEBANON, TN. - DEPARTMENT OF PUBLIC WORKS

STANDARD DETAIL

ST- 102

1/4" W x 1" D TOOLED
SCORE JOINT AT SQ.
POINTS. (i.e. 4' SPA
FOR 4' W SIDEWALK)



BROOM FINISH
3500 PSI CONCRETE

6" x 6" x W2.9 x W2.9
W.W.F.

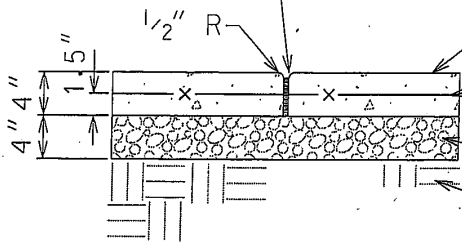
CRUSHED STONE BASE
COMPACT TO 98% MAX.
DRY DENSITY

COMPACT SUGRADE IN
6" LIFTS TO 95% STD
PROCTOR DRY DENSITY

NOT TO SCALE

OR

1/2" EXPANSION JOINT



BROOM FINISH
3500 PSI CONCRETE

6" x 6" x W2.9 x W2.9
W.W.F.

CRUSHED STONE BASE
COMPACT TO 98% MAX.
DRY DENSITY

COMPACT SUGRADE IN
6" LIFTS TO 95% STD
PROCTOR DRY DENSITY

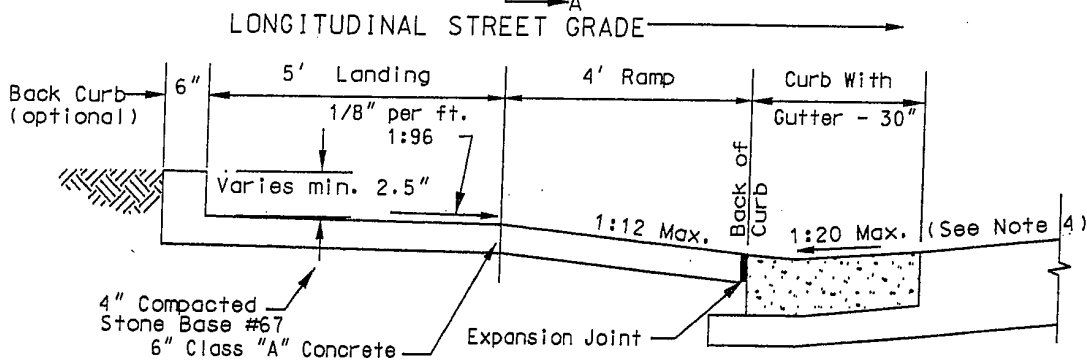
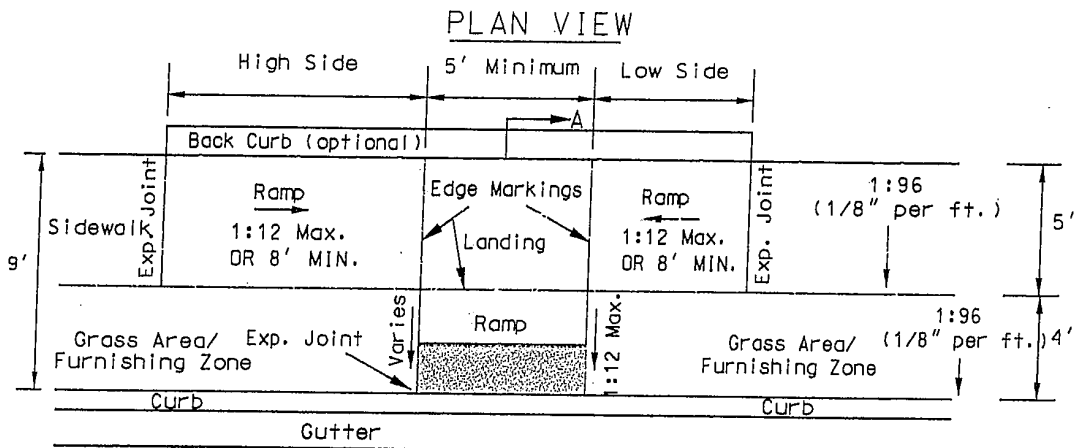
NOT TO SCALE

Concrete Sidewalk Details

LEBANON, TN. - DEPARTMENT OF PUBLIC WORKS

STANDARD DETAIL

ST-103



SECTION A-A

NOT TO SCALE

GENERAL NOTES

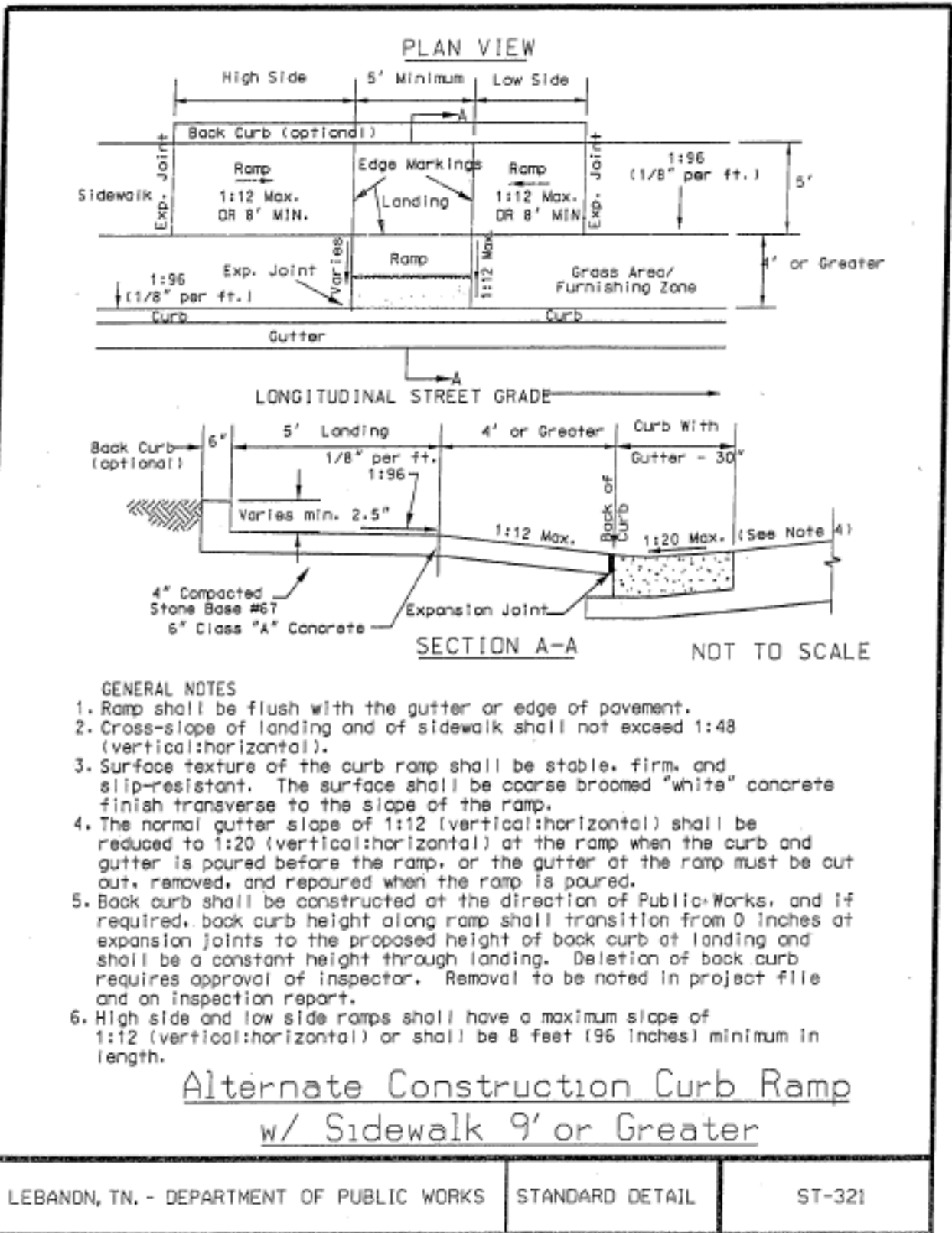
1. Ramp shall be flush with the gutter or edge of pavement.
2. Cross-slope of landing and of sidewalk shall not exceed 1:48 (vertical:horizontal).
3. Surface texture of the curb ramp shall be stable, firm, and slip-resistant. The surface shall be coarse broomed "white" concrete finish transverse to the slope of the ramp.
4. The normal gutter slope of 1:12 (vertical:horizontal) shall be reduced to 1:20 (vertical:horizontal) at the ramp when the curb and gutter is poured before the ramp, or the gutter at the ramp must be cut out, removed, and repoured when the ramp is poured.
5. Back curb shall be constructed at the direction of Public Works, and if required, back curb height along ramp shall transition from 0 inches at expansion joints to the proposed height of back curb at landing and shall be a constant height through landing. Deletion of back curb requires approval of inspector. Removal to be noted in project file and on inspection report.
6. High side and low side ramps shall have a maximum slope of 1:12 (vertical:horizontal) or shall be 8 feet (96 inches) minimum in length.

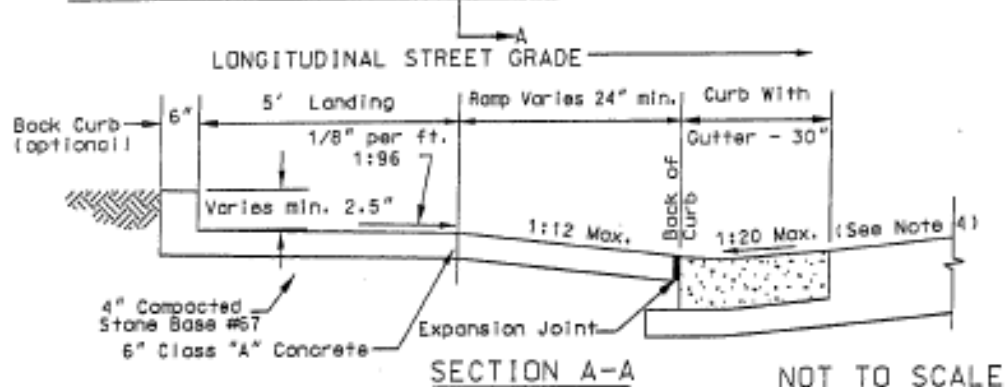
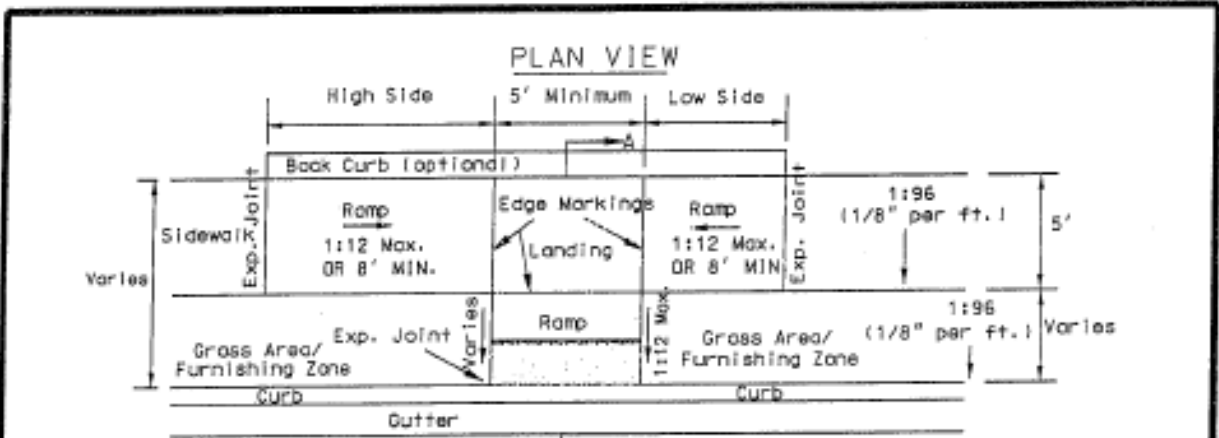
New Construction Curb Ramp

LEBANON, TN. - DEPARTMENT OF PUBLIC WORKS

STANDARD DETAIL

ST-320



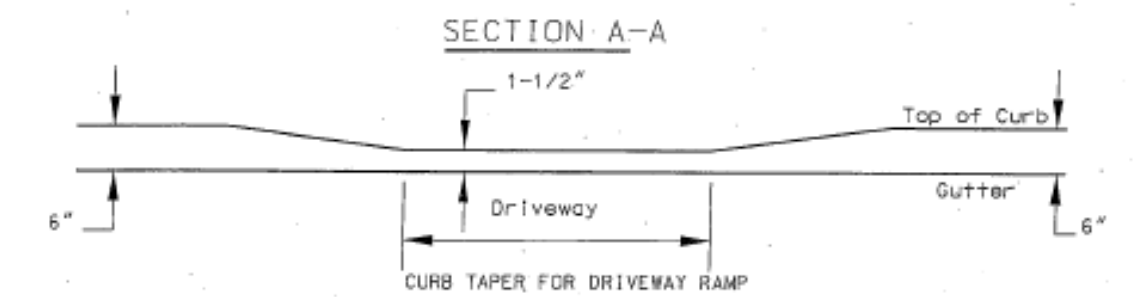
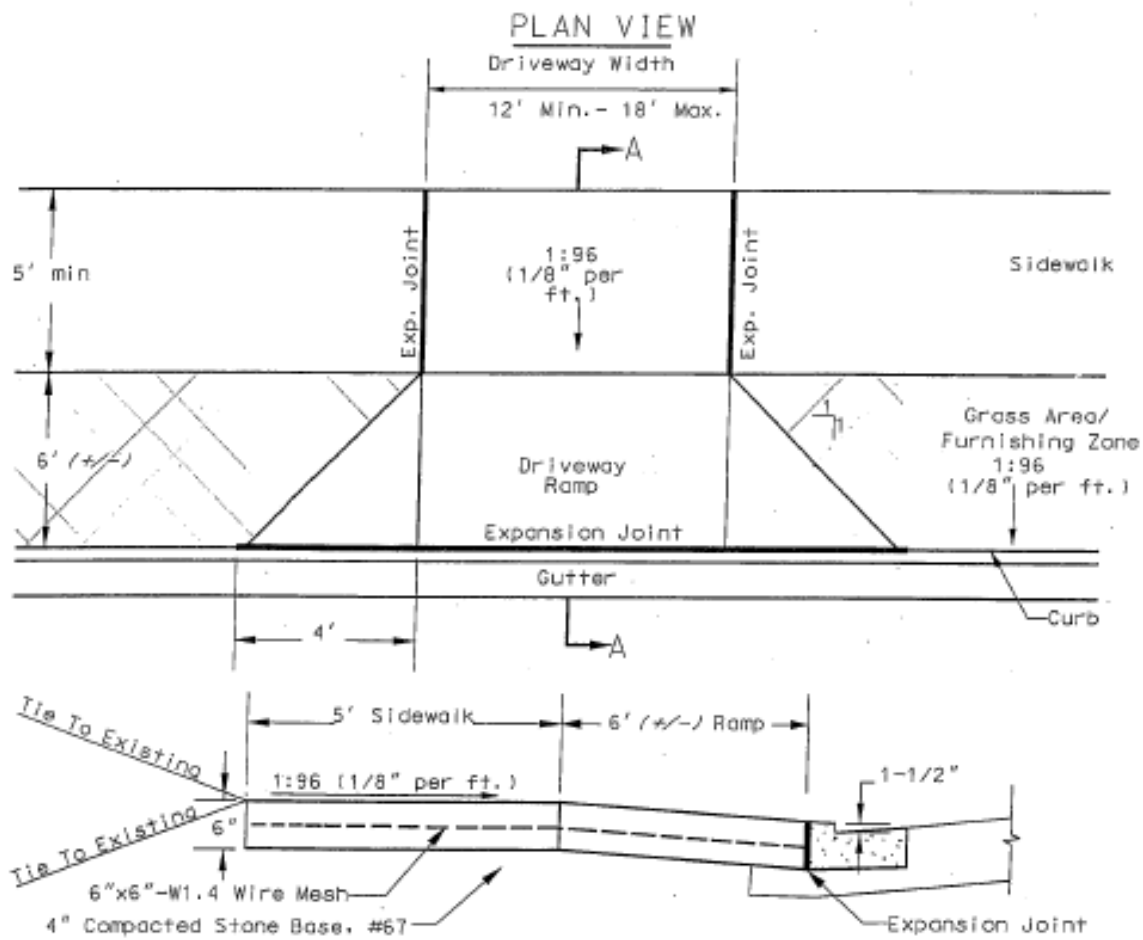


GENERAL NOTES

1. Ramp shall be flush with the gutter or edge of pavement.
2. Cross-slope of landing and of sidewalk shall not exceed 1:48 (vertical:horizontal).
3. Surface texture of the curb ramp shall be stable, firm, and slip-resistant. The surface shall be coarse broomed "white" concrete finish transverse to the slope of the ramp.
4. The normal gutter slope of 1:12 (vertical:horizontal) shall be reduced to 1:20 (vertical:horizontal) at the ramp when the curb and gutter is poured before the ramp, or the gutter at the ramp must be cut out, removed, and repoured when the ramp is poured.
5. Back curb shall be constructed at the direction of Public Works, and if required, back curb height along ramp shall transition from 0 inches at expansion joints to the proposed height of back curb at landing and shall be a constant height through landing. Deletion of back curb requires approval of inspector. Removal to be noted in project file and an inspection report.
6. High side and low side ramps shall have a maximum slope of 1:12 (vertical:horizontal) or shall be 8 feet (96 inches) minimum in length.

Alternate Construction Curb Ramp
w/ Sidewalk 9' or Less

LEBANON, TN. - DEPARTMENT OF PUBLIC WORKS	STANDARD DETAIL	ST-321A
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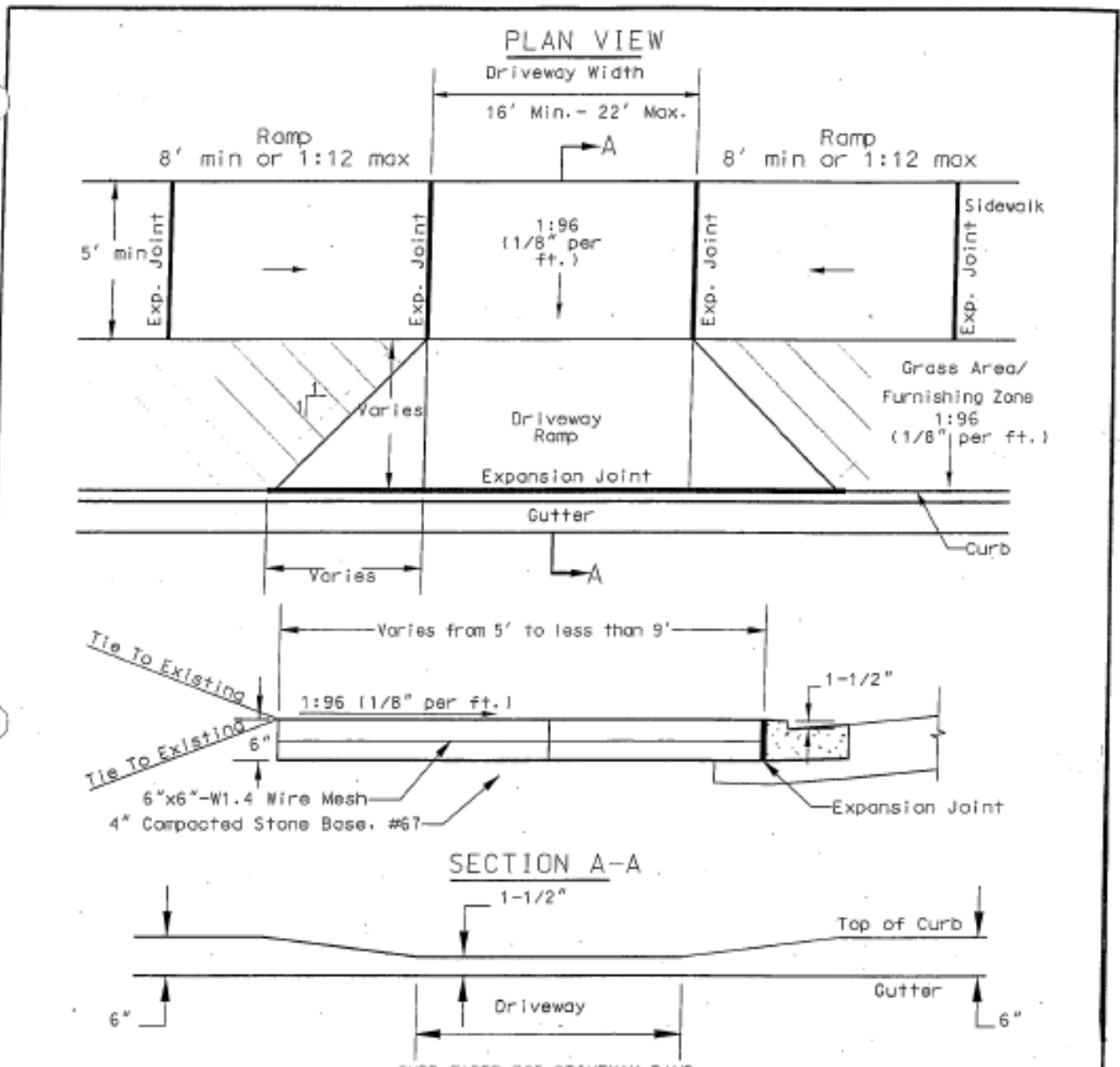


NOTE: 1. Cross-slope of sidewalk shall not exceed 1:48 (vertical:horizontal).
 2. Fiber mesh reinforcement is an approved alternative for the wire mesh. Fiber mesh reinforcement will be added to the concrete at the batch plant at the rate of 1 1/2 pounds per cubic yard.

NOT TO SCALE

New Construction Residential Driveway Ramp

LEBANON, TN. - DEPARTMENT OF PUBLIC WORKS	STANDARD DETAIL	ST-322
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NOTE: 1. Cross-slope of sidewalk shall not exceed 1:48 (vertical:horizontal).
 2. Fiber mesh reinforcement is an approved alternative for the wire mesh. Fiber mesh reinforcement will be added to the concrete at the batch plant at the rate of 1 1/2 pounds per cubic yard.

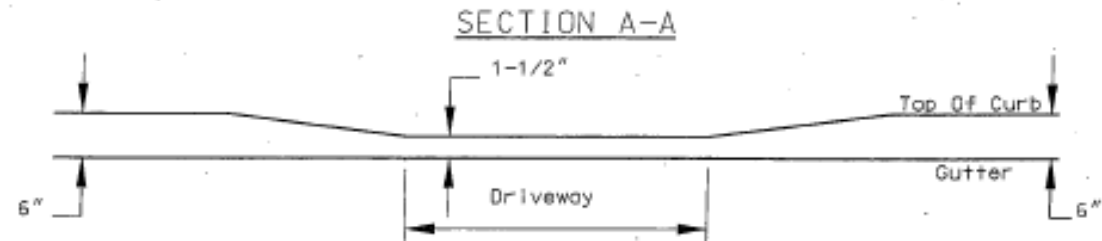
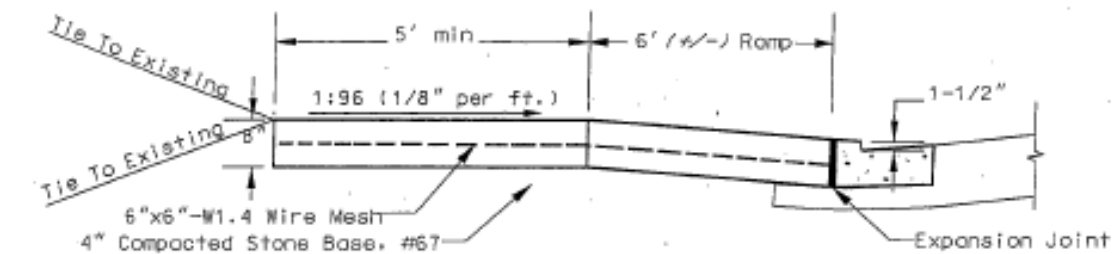
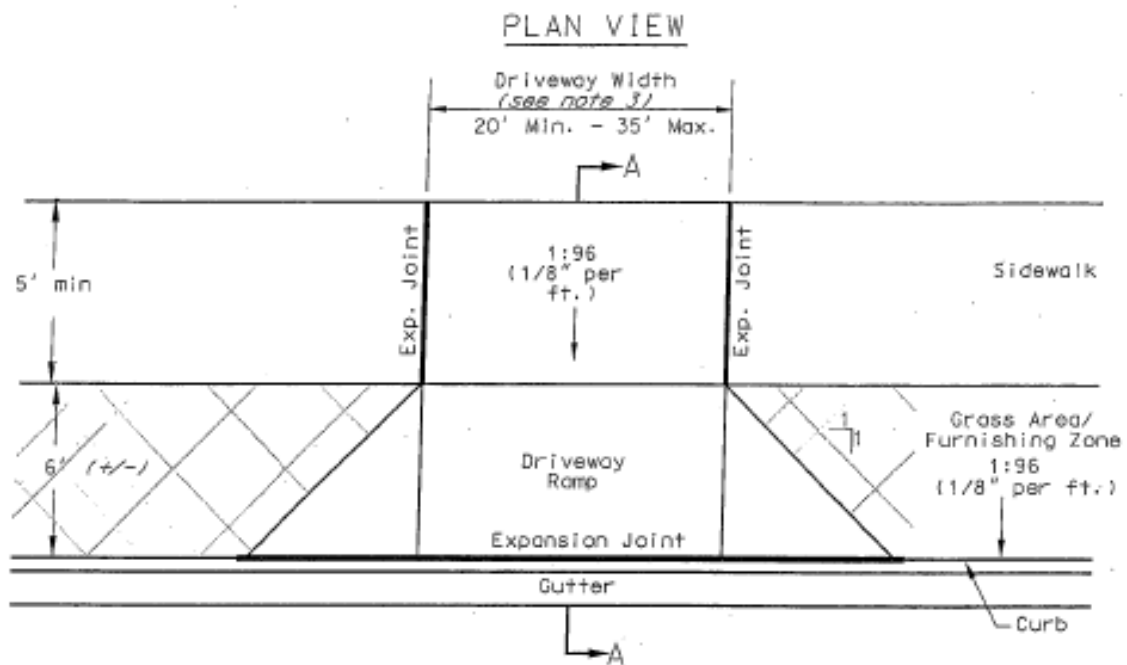
NOT TO SCALE

Alternate Construction Residential Driveway Ramp w/ Sidewalk Less than 9'

LEBANON, TN. - DEPARTMENT OF PUBLIC WORKS

STANDARD DETAIL

ST-323



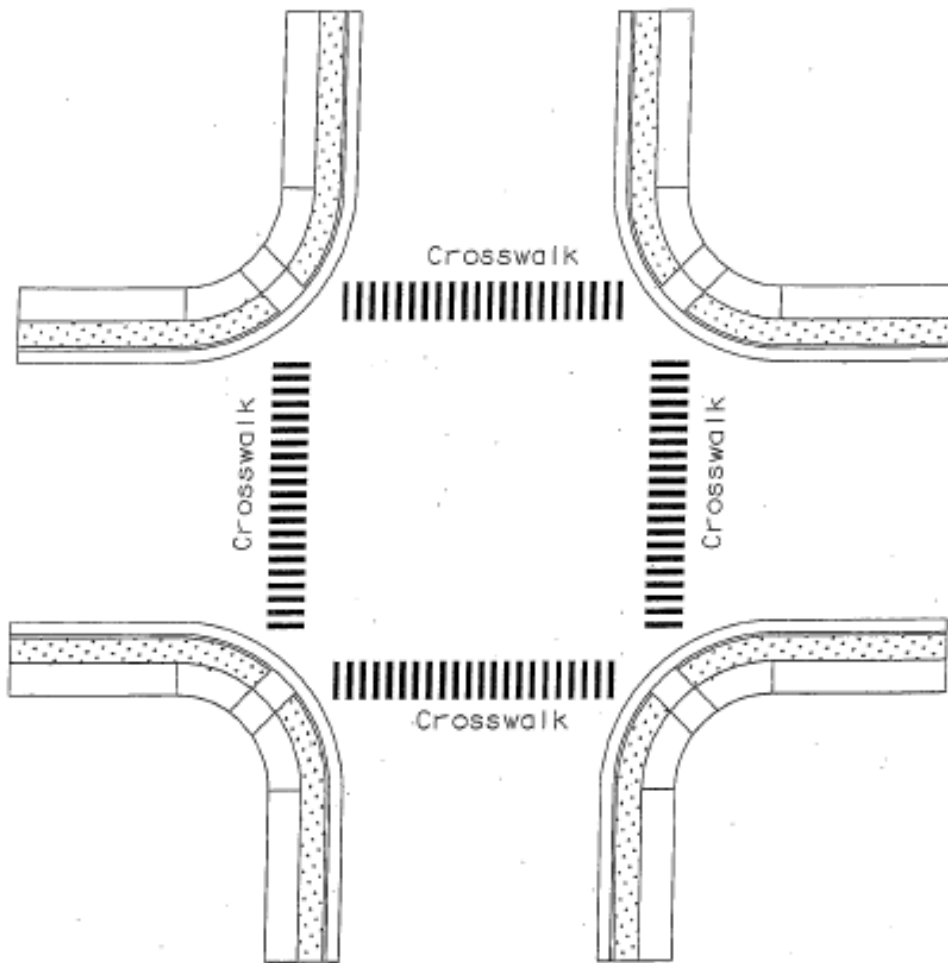
- NOTE:**
1. Cross-slope of sidewalk shall not exceed 1:48 (vertical:horizontal).
 2. Fiber mesh reinforcement is an approved alternative for the wire mesh. Fiber mesh reinforcement will be added to the concrete at the batch plant at the rate of 1½ pounds per cubic yard.
 3. Driveway Widths with Islands shall be 16' minimum each.

New Construction NOT TO SCALE
Commercial Driveway Ramp

LEBANON, TN. - DEPARTMENT OF PUBLIC WORKS

STANDARD DETAIL

ST-324

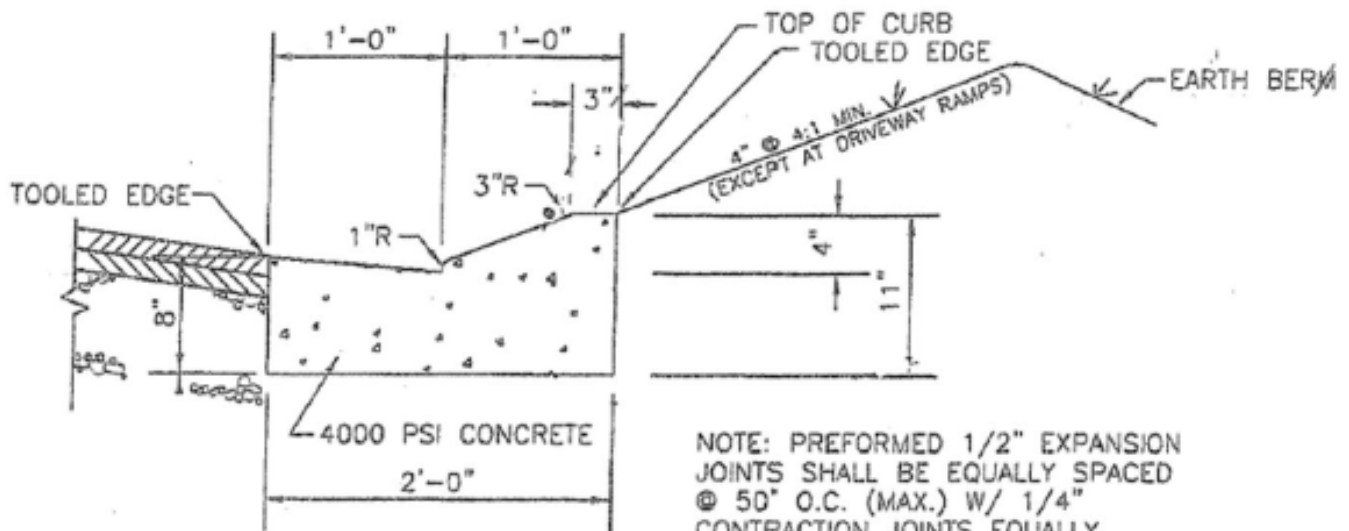


GENERAL NOTES

1. GEOMETRIC LAYOUT IS FOR CURB RADIUS GREATER THAN 25'.
2. SEE CURB RAMP STANDARD DRAWINGS FOR CONSTRUCTION DETAILS.
3. CURB RAMP AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS.
4. ALL MARKINGS TO CONFORM TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

NOT TO SCALE

**Geometric Layout
at Curb Returns w/ Radius \geq 25'**



NOTE: PREFORMED 1/2" EXPANSION JOINTS SHALL BE EQUALLY SPACED @ 50' O.C. (MAX.) W/ 1/4" CONTRACTION JOINTS EQUALLY SPACED AT 5' O.C. BETWEEN EXPANSION JOINTS. CONTRACTION JOINTS SHALL BE 3/4" DEEP AND MAY BE SAWED.

Rollover Curb

Roadway Construction Criteria

- 1) All independent testing firm work required by this appendix shall be performed by firms on the current City of Lebanon approved list. All costs of initial inspection and inspection required to correct faulty work shall be borne by the developer. The testing firm shall provide all specified testing reports outlined in this Appendix to the responsible staff person at the City of Lebanon, this person being designated by the City/Utilities Engineer. Any extraneous or repeated tests required by the City not outlined in these specifications or not due to poor workmanship shall be paid for by the City of Lebanon. The City of Lebanon Engineering Department retains full authority and discretion over the construction or public roadways and acceptance of work.
- 2) A list of approved testing agencies will be maintained on the City of Lebanon Engineering Department website.
- 3) All fill areas within the public Right-of-Way which are greater than 1 ft. in depth shall be constructed under the observation of an independent testing agency as it is being placed. The testing agency shall be responsible for ensuring correct lift thicknesses and density requirements as defined in this Appendix.
- 4) All roadways, after clearing, grubbing and topsoil removal shall be slope staked and/or centerline grade stakes placed prior to grading operations so that the testing firm and/or the City of Lebanon Roadway Inspector can determine the extents of the fill sections.
- 5) All underground pipe/conduit, including but not limited to storm drain, irrigation, sanitary sewer, water, electric, gas, communication and cable TV be installed or casings provided for prior to the proof-rolling of subgrade and initial placement of roadway base stone course. Work of this type performed after placement of base stone/paving will require a repair method reviewed and approved by the City Engineering Department. Extent of repair will be based upon the type/extents of the work and the stage of construction.
- 6) A representative of the City of Lebanon Engineering Department shall be onsite in addition to the independent testing firm to observe the proof-rolling of subgrade, base stone installation/proof-rolling and placement of asphalt as outlined in this Appendix. The developer and/or his representative will be required to notify the City's designated contact a minimum of 48 hours prior to performing the work. This contact information will be provided at the pre-construction conference and/or designated on the plans. The City may decide to allow the independent testing agency to observe the work with only periodic inspection by the City inspector depending on schedule constraints. Every effort will be made by the City to not impact the schedule of construction whenever possible. It is, however, the responsibility of the developer or his representative to maintain good communication with the City.
- 7) A registered surveyor shall provide and stamp a letter certifying that the compacted subgrade (or first lift of base stone) is within +/- 0.10 ft. of design elevation before any base stone (or additional base stone) is placed. This letter is to be received and approved by the

responsible staff person with the City. Elevations should be verified at centerline and face of curb every 50 ft. of roadway. A sheet should be provided with this letter showing design vs. actual subgrade elevations by station.

- 8) The City of Lebanon Roadway Inspector shall be provided copies of all base stone and asphalt truck tickets showing the type of material and tonnage, stamped by a certified weigher. These total tonnages shall be used to ensure that the placed tonnage is reasonably close to calculated expectations.
- 9) Any areas of subgrade, base stone or asphalt that do not meet the specifications/criteria of this appendix or these Subdivision Regulations shall be removed and repaired at the direction of and under the observance of the City Inspector and the testing agency. The extent of the repairs shall be estimated before the repair begins based on observation and test results.
- 10) Failing subgrade areas in either cut or fill areas shall be removed to a depth that the testing agency and City Roadway Inspector concur is necessary and refilled with 6" and down size shot rock/surge stone back to finished subgrade.
- 11) The City of Lebanon Roadway Inspector IS NOT the authority on changing plans, altering testing methods or criteria, making decisions on materials or final acceptance of work. The City/Utilities Engineer and/or his/her designated representative shall concur with all testing and recommendations from the testing firm and make any decisions regarding an alteration in plans. The City Inspector will observe the work in accordance with the guidelines herein and the plans approved by the Engineering Dept. then report findings back to the Engineering Department.
- 12) The testing firm shall record data including: project name/phase, name of observer/engineer, date, time of test/observation, type of fill, observations, location of fill/base stone/asphalt test locations (by roadway station), and other pertinent data to verify the requirements as set forth in this Appendix.
- 13) The City Roadway Inspector shall be made aware immediately of any failing tests and associated work stopped until a solution is determined. All testing reports shall be furnished to the City Engineering designated contact in PDF format via CD or e-mail. Reports are due either at the completion of a scope of work or monthly, whichever occurs first. The City will provide written confirmation that the scope of work is acceptable before proceeding with the next and will do so in as timely a manner as the data submission allows. For example, the subgrade will be accepted before base stone can be placed, etc.
- 14) If the contractor does not have the specified equipment as detailed below for compaction (i.e., a Cat D-8 or equivalent tractor), then the testing company and the City Engineering Dept. shall review the proposed equipment and make adjustments as necessary. Lift thickness, particle size, number of passes and other adjustments can be made to accommodate available equipment. There will be reasonable limits to this exception and any quantifiable compaction standards set forth in this Appendix will remain in force.

Roadway Testing Procedures and Material Specifications

I. Grading/Subgrade Soils

(1) Cut sections shall be cut to grade and proof-rolled by a loaded tri-axle dump truck or equivalent piece of equipment (determined by testing agency and the City Inspector). Areas showing any pumping or rutting under the moving load shall be repaired in accordance with the assessment of the testing firm and the City Inspector. No repair is to be performed that is not inspected by the testing firm and/or the City Inspector. Areas of severe failure may require the opinion of a geotechnical engineer from the testing firm.

(2) Fill areas:

(a) Before the placement of fill material, the areas to receive fill shall be treated as follows;

(i) All topsoil and organic material shall be removed. Topsoil is defined as soil material with a pH between 5.5 and 7.5 and organic content between 5 and 25% by weight.

(ii) The City Inspector and testing firm shall assess the surface where fill is to be placed and any determinations made if undercutting is required. Fill areas which will receive more than 3ft. of material will not necessarily require stripping or undercutting if the City Inspector and testing firm agree that the underlying material can be bridged with the proposed type of fill.

(iii) Swampy and wet areas should be dewatered and rehabilitated based on recommendations from the geotechnical engineer from the testing firm. The City Inspector must concur.

(iv) Any fill placed without observation and documentation by the testing firm is subject to removal and replacement.

(v) No fill is ever to be placed on surfaces with standing water or frozen material.

(vi) Any fill, regardless of the fill material to be placed, which is less than 2 ft. deep, shall be placed in lifts no greater than 8" and the particle size shall not exceed 8".

(b) Soils: Fill material comprised of soils with less than 20% rock content must be placed in 8" compacted lifts, with the compaction effort being made by a sheepsfoot roller, at the direction of and under the observation of the testing firm as follows:

- (i) Soil fill shall consist of a fine-grained soil with a UCS designation of ML, CL or CH. The soil shall consist of no more than 5% by weight of organic material and no rocks larger than 4". The plasticity index shall be less than 35 (ASTM D 4318).
 - (ii) The soils shall be compacted to a minimum of 95% of the maximum density by the standard proctor method (ASTM D 698).
 - (iii) The proctor density test to establish the maximum density will be performed by the testing firm. If the consistency, moisture content or other properties of the soils change within the project, a new standard proctor test value will need to be determined.
 - (iv) Testing of the in-place soil fill shall be performed at a minimum rate of every 150 feet of roadway for each lift of fill. Tests should be made in varying locations along the cross-section of the roadway.
 - (v) Soils with excess moisture, organic materials or phosphates are not acceptable for roadway fills. The testing firm shall evaluate the soils and is responsible for determining suitable soils and obtaining concurrence from the City Engineering Department.
 - (vi) Upon achieving finished subgrade elevation, the roadways will be proof-rolled in accordance with the same procedure as in Section I (1) above.
- (c) Shot Rock: Fill material comprised of shot rock with less than 20% fine particles (limestone rock/dust or soil particles less than ¼" in size) shall be placed in lifts as follows:
- (i) Fill sections greater than 10 ft.: Max particle size is 36", maximum lift thickness is 36". The top 2 feet of fill should be constructed in the same manner as specified for fill sections less than 10 ft.
 - (ii) Fill sections less than 10 ft.: Max particle size is 18" and lift thickness should be no more than 24".
 - (iii) Larger rocks shall be placed flat and not overlap each other.
 - (iv) All shot rock fills shall be placed with at least 6 passes with a Caterpillar D-8 or equivalent size tractor.
 - (v) Fill lifts should be level and smaller size rocks filling voids.
 - (vi) Upon achieving finished subgrade elevation, the roadways will be proof-rolled in accordance with the same procedure as in Section I (1) above.

(d) Soil/rock mixtures: Placement of soil/rock mixtures outside the above proportion criteria shall be placed as follows based on soil/rock ratio:

(i) 20-50% Soil/Fine Material:

1. Maximum particle size should not exceed 12”;
2. Fill shall be placed in lifts no greater than 18”;
3. Upon achieving finished subgrade elevation, the roadways will be proof-rolled in accordance with the same procedure as in Section I (1) above;
4. These fills shall be placed with at least 6 passes with a Caterpillar D-8 or equivalent size tractor.

(ii) 50-70% Soils Fine Material:

1. Maximum particle size should not exceed 6”;
2. Fill shall be placed in lifts no greater than 12”;
3. Upon achieving finished subgrade elevation, the roadways will be proof-rolled in accordance with the same procedure as in Section I (1) above;
4. These shall be placed with at least 6 passes with a Caterpillar 815 or equivalent size compactor.

(3) The testing firm and City of Lebanon Engineering Department may assess soil/rock combination fill material and adjust the maximum particle size and lift thickness based on the condition of the material and size of the fill.

II. Roadway Base Stone

(1) Base stone shall not be placed until all underground utilities are installed and/or applicable casings placed for future installations. Any roadway cuts made after base stone placement shall be approved by the City Engineering Department. These cuts shall be backfilled to subgrade with #57/67 graded stone and mechanically tamped base stone to existing base stone grade. Base stone replaced in trenches shall be tested for compaction to the same standards listed below for roadway.

(2) Materials: The aggregate base course gradation and material composition shall be in accordance with current TDOT specifications for Mineral Aggregate Base Course, Type A, Grading D (Section 903.05)

(3) Local sources of the base stone must have TDOT approved gradation reports and density on file with the City dated no less than 6 months prior to the scheduled work. It is the responsibility of the developer or his/her testing firm to coordinate with the City to ensure these reports are current and use the information contained within to evaluate the base stone gradation/density. The developer, at his/her

option and cost may have the testing firm sample stone from the quarry and run their own density/gradation report and present the results to the City for approval as basis for the work on the project. Testing method shall be AASHTO T99, Method D.

- (4) The density of the base stone will be measured by use of a properly calibrated nuclear gauge. The average density shall not be less than 97% of the maximum density as shown on the TDOT density report or City approved test by the testing firm with no individual test less than 94% of maximum density. Density samples should be taken in a random pattern across the cross-section of the roadway with a frequency of every 100 ft. of roadway. Density tests should be performed on each lift of stone. Areas not meeting the density requirements shall be re-compacted or removed/replaced.
- (5) A gradation sample shall be pulled and tested for every 500 ft. of roadway. A minimum of one gradation sample will be made per day. Material not falling within the gradation limits set for Grading D mineral aggregate base shall be rejected.
- (6) Base stone shall be placed in lifts not exceeding 6” of compacted thickness.
- (7) Base course shall be proof-rolled under the criteria of Section I (1) above. The proof- roll of the base course shall not precede placement of prime coat and aggregate for cover material (“chips”) by more than 3 days. Proof-roll shall be repeated at the discretion of the City Roadway Inspector if inclement weather has occurred between the proof-roll and prime/chip placement.

III. Asphalt

(1) General Guidelines:

- (a) Sources of the asphalt must have approved mix designs on file with the City dated no more than 6 months prior to the scheduled work. It is the responsibility of the developer or his/her testing firm to coordinate with the City to ensure these reports are current and to use the information contained within to evaluate the asphalt.
- (b) All asphalt shall come from TDOT approved plant facilities with personnel and lab facilities as required by current TDOT standards. Application can be made to the City for non-TDOT approved asphalt facilities and the City shall examine the credentials of the facility to determine if they have the necessary experience and equipment to consistently produce asphalt mixes that meet TDOT criteria.
- (c) Anti-strip additive is not required unless specifically stated on plans.

- (d) The independent testing firm may be expected to make periodic checks (at least once for each type of mix to be placed) of the plant facility producing the asphalt to ensure quality control if required by the Engineering Department. These inspections are to be random.
- (e) Upon completion of an acceptable proof-roll of the finished base course and prior to asphalt paving, prime coat and chip course shall be installed on finished base stone in accordance with Sections 402-01 and 402-02, respectively, of the current TDOT specifications.
- (f) Tack coat shall be applied to previously placed asphalt mix before the successive course is placed. Tack coat shall be applied in accordance with Section 403 of the current TDOT specifications.

(2) Asphaltic Binder/Base Course:

- (a) Asphaltic binder course shall be 307-BM in accordance with Section 307 of the current TDOT specifications. Aggregate content/gradation shall be according to Section 903.06 for Grading BM. Asphalt cement shall be PG64-22 unless otherwise specified on plans. Compacted lift thickness for 307-BM shall not exceed 3”.
- (b) Asphaltic black base course, when specified, shall be 307-A in accordance with Section 307 of the current TDOT specifications. Aggregate content/gradation shall be according to Section 903.06 for Grading A. Asphalt cement shall be PG64-22 unless otherwise specified on plans. Compacted lift thickness for 307-A shall not exceed 4”.
- (c) Binder/black base shall be placed, at a minimum, in compacted lift thicknesses as specified on the plans. Compacted thickness shall be measured during placement and certified by the testing firm and cores shall be taken every 250 ft. of roadway. A minimum of one core will be made for every day of paving operations.
- (d) Nuclear gauge density tests will be made and the acceptable density shall be an average of 91% of the theoretical density on the mix design. No test less than 89% of the maximum will be accepted.
- (e) If the City of Lebanon Engineering Department has concerns that property depth, material, etc. has not been installed, cores shall be taken every 250 ft. of roadway.
- (f) Nuclear gauge density tests may be performed in lieu of cores. If this method is employed, at least one core per day or one core every 500 ft. must be made and used to verify thickness. The testing firm must certify that the compacted thickness was measured in the field during placement.

- (g) Samples will be pulled from delivery trucks or asphalt hoppers to be lab tested for gradation. Samples shall be pulled for every 200 tons of asphalt or at least once per paving day. Samples which fail gradation may result in some or all of that day's pavement to be removed and replaced. It shall be at the option of the developer to core that day's paving to perform extraction tests and present the results to the City. The City Engineering Staff will examine the results to determine if the roadway section is acceptable.

(3) Asphaltic Surface Course

- (a) Asphaltic surface course shall be either 411-D or 411-E in accordance with Section 411 of the current TDOT specifications. Aggregate content/gradation shall be according to Section 903.11 for Grading D or E. Asphalt cement shall be PG64-22 unless otherwise specified on plans.
- (b) Surface course shall be placed in lift thicknesses as specified on the plans at or greater than the specified compacted thickness. Compacted thickness shall be measured during placement.
- (c) Samples will be pulled from delivery trucks or asphalt hoppers to be lab tested for gradation. Samples shall be pulled for every 200 tons of asphalt or at least once per paving day. Samples which fail gradation may result in some or all of that day's pavement to be removed and replaced. It shall be at the option of the developer to core that day's paving to perform extraction tests and present the results to the City. The City Engineering Staff will examine the results to determine if the roadway section is acceptable.
- (d) Surface course shall not be placed until:
 - (i) At least 75% of homes in the phase/subdivision are complete or at the discretion of the City Engineering Department;
 - (ii) All sidewalks are installed, or a Letter of Credit is posted to cover the incomplete sidewalks;
 - (iii) All inspections have been made by the City Engineering Dept. and all specified repairs and other "punch list" items completed;
 - (iv) Any and all other requirements as set forth in the Subdivision Regulations are met.

Appendix E. Critical Lots

Critical Lot Plan Requirements: Prior to application for a building permit on a lot designated as “critical”, a surveyed plan shall be submitted to the City Engineer for approval drawn at a scale of 1” = 20’. Said plan shall be stamped by a State of Tennessee licensed professional civil engineer with a note of certification as to the soundness and stability of proposed structures on the property. The plan shall provide a survey of existing conditions, details of the proposed development, and address any concerns in relation to the feasibility of construction (all shown to a point 10 feet outside the lot boundaries) on the lot as follows and/or applicable to the specific lot or parcel:

- i) Existing and proposed contour lines (including driveways) at minimum 2-foot intervals;
- ii) The location and elevation of the curb or edge of pavement fronting the lot and the elevation of the driveway at the house;
- iii) Lot dimensions, easements, setbacks, etc. which are shown on the recorded plat or a note designating setbacks to be determined by the zoning and/or any easements if not shown on the plat;
- iv) Notations of significant features such as blue line streams, drainage ways, wetlands, marshes, springs, rock outcrops, and karst features such as dropouts and/or sinkholes; and, if applicable, the floodplain and/or floodway as shown on the final plat;
- v) Exact proposed building footprint;
- vi) Garage and first floor elevations;
 - (1) For lots in a designated floodplain, the plan shall show minimum finished floor (includes garage), pad, and HVAC unit elevations based on the current floodplain ordinance;
 - (2) For lots not in a designated floodplain, but adjacent to a large drainage channel, blue line stream, sinkhole, and/or otherwise low lying area with the potential for flooding, the plan shall show minimum finished floor (includes garage), pad, and HVAC unit elevations based on the requirements listed in Article III Section C (4) of the City of Lebanon’s Subdivision Regulations;
- vii) Proposed driveway access dimensions and distance from property line;
- viii) Location of other proposed lot improvements;
- ix) Top and bottom elevations of retaining walls and materials of wall construction;

- x) Specified and illustrated methods for stabilization of the lot including temporary measures for construction purposes and permanent stabilization after construction;
- xi) Limits of grading;
- xii) Arrows showing direction of water draining away from structures;
- xiii) Methods of managing storm water runoff;
- xiv) The name, address, and phone number of the professional responsible for the design of the Critical Lot Plan;
- xv) The name, address and phone number of the owner of the lot;
- xvi) The name, address and phone number of the builder that will be working on the site;
- xvii) One of the above three individuals must be designated as the primary contact on the face of the plan;
- xviii) Any other information the City Engineer deems reasonably necessary in the evaluation of such critical lots;
- xix) The City Engineer may request additional technical evaluation and analysis of a proposed critical lot by a professional engineer specializing in geotechnical, soils, hydrology, and/or structures.