

ARTICLE 5

DESIGN & CONSTRUCTION STANDARDS/PRIVATE STREETS

SECTION 5.1 Appendix B and D, 1990

The Planning Commission in the adoption of the revised Boyle County Subdivision Regulation approved on June 8, 2018, repealed the contents of Article 5 and re-titled Article 5 as Design and Construction Standards/ Private Streets. The contents of this Article were unchanged and previously titled as Appendix B and D in the Boyle County Subdivision Regulations of 1990, as amended.

SECTION 5.2 Design and Construction Standards

1. Design Speeds

- Minor – 35 MPH
- Collector – 45 MPH
- Arterial – 55 MPH

2. Traffic Counts (100 EADT Minimum)

Minor – (Actual Units Lot Numbers) X (EADT)

- R1 Zoning EADT = 7 VTD per lot
- R2 Zoning EADT = 5 VTD per unit (Assume Maximum Allowable Units/Lots)
- R3 Zoning EADT = 4 VTD per unit
- C1 Zoning EADT = 100 VTD per lot
- HC Zoning EADT = 190 VTD per acre
- I Zoning EADT = 90 VTD per acre

Collector – (Actual Units Lot Numbers) X (EADT) + Maximum Number of (Units Lots) for adjoining land developments) X (EADT) for recommended zoning

Arterials – Estimated traffic counts at 20 years.

3. Conformity to Major Street Plan

All collector and arterial streets must conform to the major street plan as contained in the Comprehensive Plan. The Planning and Zoning Commission may allow movement of the alignment of the street by 250 feet at its entrance/exit of the development. Provided: (1) the change does not cause serious problems for the alignment of present or future development; (2) the integrity of the master street plan remains intact; (3) the change does not reduce the location of an entrance closer than 1000 feet to another entrance on any arterial.

4. Pavement Design and Soils Conditions for Roads

If deemed necessary by either City or County Engineer, as appropriate, a soil test must be run on each soil type for a development as shown on the soil survey of Boyle and Mercer Counties, Kentucky. The subgrade must be compacted to 95% of maximum density as determined by a certified independent laboratory, paid for by the developer. Test must be run for each soil type with one additional test for each 1000 feet of street constructed on that soil. Test results must be sent to the governing body before acceptance for maintenance. The pavement design will be based on the soils bearing strength, based on tests for each soil, the wheel loads and the VTD data. The soil bearing strength test will conform to the Kentucky CBR (California Bearing Ratio) Method Procedure.

5. Minimum Pavement Design

Minimum pavement design shall be 8 inches compacted DGA, 2 inches bituminous Class I Base and 1-inch Class I surface or material of equal strength. All underground utilities must be in place prior to placement of surface course.

6. Alignment and Grades

Alignment and grades must conform to the basic geometric design criteria for rolling terrain and EADT numbers as contained in the Design Manual for the Commonwealth of Kentucky, Department of Transportation, Drawing No. 61-07.090 (a) (Sheets 1 and 2).

Centerline grades will show and match typical cross slopes at all intersections. Centerline line grades for minor streets intersecting at major streets will match cross slope grades of major streets for a 50-foot minimum tangent, with a 100-foot vertical curve. All vertical alignment curves shall conform to minimum stopping sight distances for vertical alignment, Commonwealth of Kentucky, Department of Transportation, Drawing No. 61-04.0200 (a). For horizontal alignments the minimum radius shall be for:

Arterial	300'	D Max = 19.1
Collector	300'	D Max = 19.1
Minor	100'	D Max = 57.3

D Max – Maximum Degree of Curvature

7. Typical Sections

Typical sections will consist of the complete right-of-way. They will include pavement width, cross slopes, curb and gutter or ditch sections grading slopes and sidewalk (if required). Pavement width minimums will not include gutter section, i.e. feet width is 23 feet curb to curb. .

8. Superelevation and Curve Widening

Superelevation and curve widening will be constructed on all major arterial streets, and on collector streets where the degree of curve exceeds 10 degrees. Maximum rates will conform to Table 61-05.0200 (a).

9. Grading/Drainage Plan

The developer shall submit a grading plan, which contains the same information as the preliminary plat including existing and proposed final contours, to the Drainage Review Committee for subdivisions in the City of Danville or the County Engineer for all others, for further review and approval.

The grading/drainage plan shall include such items as are deemed necessary for review and approval. These items are as follows, but not limited to (1) original and final contours, (2) silt and erosion control measures, (3) flood plain protection, and (4) retention basin details.

10. Grading and Fills

The developer will grade the entire right-of-way section of the street in order to remove topsoil, trees, stumps and other debris. All fills will conform to subgrade requirements and to standard construction practices for the Department of Highways. In areas where fill widths exceed the right-of-way width topsoil and all other suitable materials will be removed before filling operations begin.

11. Roadway Ditches and Culverts or Curb and Gutter and Storm Sewers (applicable to all areas of Boyle County including Perryville and Junction City, excluding Danville)

Roadway ditches and culverts will be designed to handle a ten (10) year, one (1) hour return storm for this area. Roadway ditches will be required to handle only surface water from the pavement and adjoining lot. Roadway ditches will not be used to transfer off-site water. All off-site water will be piped to at least the building line. Also, all culverts will be piped to the building line, except for bridges where the diameter of the pipe is equal to or exceeds four (4) feet. All roadway culverts will have concrete headwalls constructed at each end of the pipe. Bridges will be piped to the right-of-way or as required to maintain uniform typical sections.

Curb and gutter sections must meet typical section geometry. Curb and gutter design shall include drop box inlet designed spacing to drain pavement and adjoining lots only. Inlet spacing and storm sewers will be designed for a 10 year, 1 hour storm. Discharge of all storm sewers will be at least at the building line with headwalls. All bridges will be as required to maintain standard sections.

Driveway culvert pipes must be designed on a 10-year, 1-hour storm for pipes, where required, including sloped headwall on both ends. Driveway culvert pipes must be corrugated metal or concrete and have a diameter of fifteen (15) inches or more. The pipe length shall have twenty (20) feet for a single car width driveway and thirty (30) feet for a double car width (joint entrance) driveway.

All drainage calculations will conform to existing conditions at the time of design. Elevations for minimum floor will be set based on the 100 years, 1-hour storm water elevation. These elevations will be listed on all plats including the grading plan for lots subject to flooding. All hydrologic calculations shall conform to generally accepted engineering principles and the Department of Highway Drainage Design Manual.

Storm sewer materials will conform to the requirements for Department of Highways SSRBC, Section 611. All corrugated metal pipes will be fully coated. Drop box inlets shall conform to LPULG Type "A" or Type "B" depending on design flow and spacing.

Retention basins will be designed where necessary due to constraints in downstream structures or where the 100 years, 1-hour storm cause flood damage downstream. All retention basins will be designed to hold the change in water flow created by the new development for the design storm.

The discharge structure for the retention basin will be designed to improve any flooding occurring at the time of design. This is done by multiple staged discharges, which will reduce discharge below existing conditions prior to development. This will cause the retention basins to fill prior to the design storm, and thereby reduce flooding on storms less than the 100-year design. In order to do this, it will be necessary to determine the flood potential and specifically the return period storm which causes this flooding of the capacity of the structure(s) causing the flooding whichever is less. Retention basins will be protected by easements specified on the final plat. The agency responsible for street maintenance will be responsible for a program of maintenance of the integrity of the drainage structure of the basin. The property owner will be responsible for maintenance of vegetation (i.e. mowing) and removal of trash on that part of the drainage structure, which exists on their lot.

Channels, Culverts, Curbs, Gutters and other Stormwater Facilities (applicable in the City of Danville)

Channels, culverts, curbs, gutters and other stormwater facilities shall be provided by the developer as public improvements in each subdivision in conformance with the requirements of the adopted Stormwater Manual. All easements for the stormwater drainage system, including access to stormwater best management practices shall be shown on the final record plat. Special notes, in conformance with the Stormwater Manual, related to the maintenance of such easements may be required by the Planning Commission. Final subdivision plats which are approved by the Planning Commission and recorded, but not constructed, shall comply with all requirements for channels, culverts, curbs, gutters and other stormwater facilities which are required by law at the time of construction. However, where incorporation of such features would entail complete redesign of the subdivision of site, the Planning Commission may waive the requirements for permanent stormwater features provided the subdivision plat was approved, or the site plan was approved by the Planning Commission not more than three (3) years from the date of the adoption of this ordinance.

12. Materials

Dense Grade Aggregate Base shall conform to requirement of Section 303 KYDOT Standard Specifications for Road and Bridge Construction (SSRBC). Bituminous concrete materials shall conform to Sections 402, 403, 404, 804, 805 and 806 KYDOT SSRBC.

Portland Cement Concrete Materials shall conform to Sections 501, 502, 601, 713, 714, 712 and 901 KYDOT SSRBC.

Steel Materials shall conform to Sections 602, 811 and 812 KYDOT SSRBC.

Pipe and drainage materials shall conform to Sections 610, 611, 612, 703, 705, 706, 707, 708, 709, 710, 711, 712 and 714 KYDOT SSRBC.

13. Sidewalks

Sidewalks shall conform to the geometric of the typical sections. At all times they shall be set one (1) foot from the right-of-way line and shall drain toward the centerline of the street. The minimum width shall be four (4) feet. All sidewalks will have handicap ramps with maximum grade of 1:12.

SECTION 5.3 Subdivisions – Private Streets

Private streets may be permitted by the Commission in AR-1 or R-1 zones only. Subdivision plans containing private streets shall conform to all other subdivision regulations, unless different requirements are listed in the following:

1. No Disruption to Through Movement

Private streets may be permitted only if they meet the definition of “minor” streets; if they provide absolutely no present or future impediment to necessary through traffic movement in the general area; and, if adjoining properties and the general area already have, or are capable of providing a proper, efficient and safe street system that will in no way depend upon the private streets.

2. Right-of-Way and Setback

Private street right-of-ways and building setback lines shall be shown on the plat and shall meet at least the minimum requirements of these Subdivision Regulations and the Zoning Ordinance as required for public streets to assure conformance if such streets are ever accepted for public dedication at a later date.

3. Street Improvement Standards

Any permitted private street also shall conform to, at a minimum, the requirements for public streets and a cross section shall be drawn on the plan. A bond shall be required for the private streets and all improvements. All private street improvements shall be constructed in compliance with the approved subdivision plan and shall be inspected and approved by the City or County Engineer and the Planning and Zoning Enforcement Officer before the bond is released.

4. Future Acceptance by Government

Any plan containing permitted private streets shall have such streets so labeled and shall contain the following signed certification by the owner:

“Private Street Responsibilities of Owners – The owners of this property and any successors in title hereby agree to assume full liability and responsibility for any construction, maintenance, reconstruction, snow removal, cleaning or other needs related to the private streets so designated on this plan and do hereby fully relieve the

City and/or County from any such responsibility. The owners understand that the private streets will not result in any reduction in taxes required by and payable to the City or County.

Furthermore, if the owners in the future should request that the private streets be changed to public streets, the owners do fully agree that, before acceptance of such private streets by the City or County, the owners will bear full expense of reconstruction or any other action necessary to make the streets fully conform to the requirements applicable at that time for public streets prior to dedication and acceptance. Finally, the owners also agree that these streets shall be dedicated to public use without compensation to the owners of the expense incurred in making such streets conform to the requirements applicable at that time for public streets, if at some future date, the City or County Government so requests.” (Signed and dated by owners)

5. Government and Utility Access

Any plan containing permitted private streets shall show and label all other easements normally required; shall conform to all other applicable sections of these Subdivision Regulations and other local Ordinances; and shall contain the owners signed certification:

“Government and Utility Access – The owners of this property hereby agree to grant full rights of access to this property over the designated streets, utility, and other easements for governmental and utility agencies to perform their normal responsibilities.” (Signed and dated by owners)

6. Maintenance Responsibility

A homeowners’ association or other mechanism which provides for equitable common responsibility for private street maintenance and repair shall be required to be established by the developer. The developer’s responsibility to create such a mechanism shall be noted on the final plat of the subdivision. A requirement that each property owner be individually responsible for maintenance and repair of the portion of the street abutting the lot shall not be considered as acceptable for fulfilling the requirements of this section.

The homeowners’ association on other such similar mechanism shall own the private streets. However, police, fire and emergency vehicles shall have immediate access to the private streets.