

SECTION 8

IMPROVEMENTS

8.1 Streets.

- 8.1.1 Street plans, profiles, cross sections, and specifications shall be prepared by a registered professional engineer and approved by the City Engineer, Commission, and Council.
- 8.1.2 The street surface shall be of Portland Cement Concrete or a Flexible Pavement, shall be constructed in accordance with design characteristics at least equal to those required in Plate 2, and approved by the City Engineer.
- 8.1.3 The streets shall be graded, surfaced, and improved to the dimensions required in Plate 1. The work shall be performed in the manner prescribed in the current edition of the Missouri State Highway Department specifications.
- 8.1.4 Streets shall be surfaced to a minimum width of twelve (12) feet for each traffic lane and eight (8) feet in width for each parking lane. Alleys, within the business district, shall be surfaced to a minimum of sixteen (16) feet. Cul-de-sac turnarounds shall be paved to within ten (10) feet of the right-of-way.
- 8.1.5 Street surfacing or pavement type shall be restricted to the following four (4) types (see Plate 2):
- Portland Cement Concrete surface with curb and gutter.
 - Asphalt pavement with curb and gutter.
 - Asphalt pavement without curb and gutter.
 - Gravel or crushed stone constructed to Missouri State Department of Highway specifications.
- 8.1.6 Prior to the placement of street or alley pavements, adequate surface and subsurface (if required) drainage facilities shall be installed by the subdivider. Pipe used for drainage purposes shall be of bituminous-coated corrugated metal, reinforced concrete, or extra-strength vitrified clay of an approved design, size, and strength to meet the

requirements of the specified conditions which may be encountered. Minimum diameters of pipe to be used shall be as follows:

Roadway Cross Drains	15 inches
Property Entrance Culverts	12 inches
Perforated Underdrains	6 inches

8.1.7 All construction shall be completed in accordance with the specific conditions in the agreement for street improvements within the Improvement Plans and in a manner acceptable to the authorities having jurisdiction. When changes from the accepted plans and specifications become necessary during construction, written approval from the authorities having jurisdiction shall be secured prior to the execution of said changes.

8.1.8 Adequate provision for the maintenance of all street improvements shall be made by dedication to and acceptance for maintenance by the local authorities having jurisdiction or by other suitable means.

8.2 Curbs and Gutters.

8.2.1 Curbs and gutters shall be constructed in conjunction with the street pavements on all streets where on-street parking is to be permitted and shall be made of Portland Cement Concrete a minimum of eighteen (18) inches wide and a minimum of six (6) inches thick where the curb abuts the street pavement (see Plate 1).

8.2.2 Curb construction for concrete pavements may be integral, and roll-type curbs may be permitted where the distance between the back of the curb and the nearest sidewalk is a minimum of three (3) feet on Collector and Local Streets.

8.2.3 All plans for the installation of curbs and gutters shall be subject to approval by the City Engineer, Commission, and Council.

8.3 Sidewalks.

8.3.1 The construction of sidewalks is not normally required in subdivisions, but may be required if the subdivision includes, or is within three hundred (300) feet of existing or proposed schools, playgrounds, or other features which would attract children.

8.3.2 The extent of sidewalks within subdivisions shall be determined by the Commission and approved by the Council. In all subdivisions, the space as specified in Plate 1 shall be included in the cross-sectional drawings of streets.

8.3.3 When constructed, sidewalks shall be of Portland Cement Concrete with a minimum thickness of four (4) inches and a minimum width of four (4) feet. "Dummy" control joints shall be placed every five (5) feet and expansion joints shall be placed every twenty (20) feet. Concrete shall contain five (5) sacks of cement per cubic yard and shall have three (3) percent to five (5) percent entrained air. Finish shall be by wood float with all edges and joints tooled. The location of sidewalks shall be as shown in Plate 1.

8.3.4 Where sidewalks are not required, the street grade shall be completed so that additional grading shall not be necessary for any future construction of sidewalks.

8.4 Sewerage Collection System and Water Supply System.

8.4.1 The subdivider shall provide for the disposal of sewage within the subdivision in accordance with Ordinance _____ which regulates the use of public and private sewers within the City, or any future Ordinances which may supercede those now in effect. Where a public sanitary sewer main is reasonably accessible, the subdivider shall provide the subdivision with a complete sanitary sewer system, including a lateral connection for each lot, connected to said sewer main. All necessary construction requirements, such as lift stations, shall be the responsibility of the subdivider and approved by the City Engineer, Commission, and Council and shall comply with the Regulations of the Missouri Clean Water Commission.

8.4.2 Where a public sanitary sewer system is not reasonably accessible, but where plans for the installation of sanitary sewers in the vicinity of the subdivision have been prepared and approved by the Missouri Clean Water Commission, the subdivider shall install sewers in conformity with said plans. Where immediate connection is not possible, and until such connection with the sewer system in the district can be made, the use of private sewage treatment facilities may be permitted,

provided said disposal facilities are installed and maintained in accordance with the Regulations and Requirements of the Missouri Clean Water Commission and approved by the City Engineer, Commission, and Council.

8.4.3 Where no sanitary sewer system is accessible and no plans for a sewer system have been prepared and approved, the developer may, upon approval by the Missouri Clean Water Commission, City Engineer, Commission, and Council, install individual disposal devices on individual lots within the subdivision. All such individual devices shall be constructed and maintained in accordance with the regulations and requirements of the Missouri Clean Water Commission and the City Council.

8.4.4 The subdivider shall provide the subdivision with a complete loop-type water distribution system adequate to serve the area being platted. The system shall include a connection for each lot, water mains a minimum of six (6) inches in diameter, and fire hydrants spaced a minimum of six hundred (600) feet apart. The Commission shall not approve the Final Plan until the Missouri Division of Health certifies to the Commission that said water supply system is in compliance with the applicable regulations of the Missouri Division of Health and is in accordance with City Ordinance _____ or any future amendments thereto.

8.5 Storm Drainage.

8.5.1 Adequate surface and subsurface drainageways for the removal of storm water shall be provided by the subdivider. The extent to which storm drainage facilities shall be required shall be based upon an analysis of need prepared by a registered professional engineer. The analysis shall be based upon a rational method of computing stormwater runoff, using the maximum one (1) hour rainfall to be expected within a ten (10) year period. Times of concentration, soil infiltration rates, and other variable factors to be used in the analysis shall be discussed with and approved by the City Engineer during the preliminary consideration of the subdivision.

- 8.5.2 A storm sewer system, which shall be separate and independent of the sanitary sewer system, with surface inlets, shall be provided by the subdivider in all cases where curb and gutter is to be installed and whenever available evidence indicates that such a system is necessary as a result of natural surface drainage.
- 8.5.3 In the absence of a storm sewer system, a water-retarding grass shall be planted in the strip between the sidewalk and the surfaced edge of the street.
- 8.5.4 Any person proposing to locate a structure or a use within one hundred (100) feet of any stream or main drainage channel shall include a statement by a registered professional engineer, based on a study of the watershed area and the probable runoff, that the structure or use in the location proposed will leave adequate space for the flow of flood water, provided, however, that no building shall be permitted within fifty (50) feet of the top of the bank of any stream or drainage channel.
- 8.5.5 A water-retarding grass shall be planted by the subdivider along any stream or open drainage channel in an area extending a minimum of fifteen (15) feet on either side of the top of the bank of any stream or drainage channel within or adjacent to a proposed subdivision.

8.6 Public Utilities.

- 8.6.1 All electric and telephone utility lines shall be installed underground in accordance with the provisions specified in the Missouri Public Service Commission General Order No. 52 and Amendments thereto.
- 8.6.2 Where gas, telephone, and electric service lines are placed underground throughout the subdivision, the mains, lines, cables, and conduits shall be located within easements or public rights-of-way in separate trenches and in a manner which will not conflict with other underground services. All controls, valves, transformers, and terminal boxes shall be located so as not to be hazardous to the public.

8.6.3 Should the Commission allow electric and telephone lines to be carried on overhead poles, rear and side lot easements shall be provided if necessary.

8.6.4 All excavations for public utilities made under paved areas shall be properly backfilled with approved granular materials thoroughly compacted in place, and street repairs shall be completed to restore the street surface. All such repairs or reconstruction shall be at the expense of the developer or utility involved.

8.7 Street Lighting.

8.7.1 Street lighting shall be installed by the subdivider.

8.7.2 Street lighting shall be installed in accordance with the Missouri Public Service Commission General Order No. 52 and Amendments thereto.

8.8 Street Signs.

8.8.1 Street signs made of aluminum with reflectorized lettering and mounted on aluminum posts shall be installed by the subdivider at all street intersections on diagonally opposite corners. Signs indicating the name of each street shall be erected at each location as close to the corner as practical, facing traffic on the cross street with the nearest portion of each sign not less than one (1) foot nor more than ten (10) feet back from the curb line.

8.8.2 Street names shall be in compliance with Plate 3.

8.9 Landscape Development.

8.9.1 All unpaved or otherwise unimproved areas within the public rights-of-way; or public use areas, shall be landscaped in a manner approved by the Commission.

8.9.2 In informal types of street patterns, informal planting of trees in accordance with an approved landscape development plan may be permitted. In no case shall trees be planted in an area where they may cause damage to underground service utilities.

8.10. Monuments and Markers.

- 8.10.1 Monuments and markers shall be provided by the subdivider and so placed that the center point shall coincide with the intersection of the lines to be marked, with the top of the monument or marker level with the surface of the ground after final grading.
- 8.10.2 Markers shall consist of galvanized steel, wrought iron pipe, or steel bars at least eighteen (18) inches in length and three-quarters ($3/4$) of an inch in diameter.
- 8.10.3 Markers shall be set by the subdivider:
- At the intersection of all lines forming angles in the boundary of the subdivision.
 - At the intersection of street right-of-way lines and at the beginning and end of all curves along street property lines.
 - At all points where lot lines intersect street right-of-way lines.
 - At all angles in the lot property lines.
 - At all other lot corners.