

ORDINANCE NO. 272

AN ORDINANCE TO ESTABLISH A MASTER STREET PLAN
AND FOR RELATED PURPOSES IN THE CITY OF BARLING,
ARKANSAS

BE IT ENACTED AND ORDAINED BY THE BOARD OF DIRECTORS OF THE
CITY OF BARLING, ARKANSAS, that

ARTICLE 1
PURPOSE, AUTHORITY, AND JURISDICTION

Section 1
PURPOSE

The City of Barling, Arkansas wishes to establish a set of policies through the Barling Master Street Plan, that will provide for the sound design and construction of both new and existing streets in the City. The Master Street Plan shall show the general location of proposed streets as well as the location of existing streets. It is the policy of the City of Barling that the location and improvements to all new streets and improvements to existing streets shall conform to the expressed intent and standards of the Plan. Additionally, the City is expressing its policies toward dedication, acceptance, widening, and the vacation of streets within the City.

Section 2
AUTHORITY

Act 186 of 1957, Arkansas Code Annotated 14-56-411 et seq. empowers Arkansas Cities of the first and second class to prepare a Master Street Plan. The statutes empower a city of the first and second class to identify and designate the general location, characteristics, and functions of streets in addition to providing for their improvements, dedications, widening and vacation.

Section 3
JURISDICTION

The Barling Master Street Plan will apply and be utilized within the territorial jurisdiction of Barling as shown on the Planning Area Map.

TABLE 1
MINIMUM GEOMETRIC DESIGN STANDARDS
CITY OF BARLING, ARKANSAS

	<u>Local Residential</u>	<u>Collector Residential</u>	<u>Collector Commercial</u>	<u>Collector Industrial</u>	<u>Minor Arterial</u>	<u>Principal Arterial</u>
GENERAL						
Right-of-Way (Ft)	50	60	70	60	80	90-100
Pavement Width (Ft)	23	33	45	33	53	60
Back to Back of Curb (Ft)	27	37	48	37	57	64
Crown Traverse Slope (%)						
Normal Crown	2.0	2.0	2.0	2.0	2.0	2.0
Tipped Section, Maximum	4.0	4.0	3.0	3.0	--	--
Cul-de-sac, Maximum	4.0	--	--	3.0	--	--
Design Speed (MPH)	25	35	35	40	45	55
Stopping Sight Distance (Ft)	150	240	240	275	310	425
Design Daily Traffic						
Service volume (vpd) (ADT - 2 directions)	750	1,500	3,000	3,000	10,000	15,000
Daily EWL for Pavement Design	5	10	50	100	a	a
HORIZONTAL ALIGNMENT						
Minimum Centerline Radius (Ft)	200	250	300	400	a	a
Curb Return Radius (Ft)	20	25	35	75	a	a
Cul-de-Sac Back Curb Diameter (Ft)	80	--	100	120	--	--
Minimum Intersection Angle (Degrees)	75	75	75	75	75	75
Minimum Length between Reverse Curves (Ft)	--	100	100	100	a	a
VERTICAL ALIGNMENT						
Longitudinal Grade (%)						
Minimum	0.4	0.4	0.4	0.4	0.4	0.4
Maximum	12	10	7	7	7	7
Maximum within 100 feet of intersection	6	6	4	4	2	2
Vertical Curve Coefficient (K) (L=KA)						
Crest	16	40	40	50	65	125
Sag	24	45	45	52	60	90
L = Length of Vertical Curve, (Feet)						
A = Algebraic Difference in Grade, (%)						

a = Requires individual design

ARTICLE II
POLICIES, RULES, REGULATIONS, DESIGN
AND CONSTRUCTION STANDARDS

Section 1
GENERAL PROVISIONS

The arrangement, character, extent, right-of-way width, improvements, grade, and location of all streets shall conform to all elements of the Master Street Plan and shall be designed and constructed in accordance with the provisions set forth hereafter.

The design and construction of new street improvements and reconstruction of existing streets shall be in accordance with the Standards and Specifications set forth in this Ordinance and other ordinances adopted by the City. Where there is a conflict between this Ordinance and other ordinances adopted by the City, the more stringent provision shall apply. Where a Design or Construction is not specifically set forth in this Ordinance or other ordinances standard, or specifications adopted by the City, the prevailing Design or Construction standard or specification as adopted by the City of Barling, Arkansas shall apply.

Section 2
GEOMETRIC DESIGN STANDARDS

All new street improvements shall be designed in accordance with the Minimum Geometric Designed Standards as shown in Table 1 and with the Street Design Cross Sections for the various classifications of the streets shown on Figures 1 to 4.

A. STREET RIGHT-OF-WAY WIDTHS

All streets shall be constructed within right-of-way dedicated to the City of Barling. No private streets are allowed. The minimum street right-of-way width shall be as follows:

Principal Arterial Streets	90 feet
Minor Arterial Streets	80 feet
Collector Streets	60 feet
Local Streets	50 feet
Cul-de-sacs (residential)	100 feet diameter
Cul-de-sacs (comm/indust)	120 feet diameter

The right-of-way line at street corners shall be rounded to provide the normal distance between the radius of the curb return and the right-of-way line.

B. INTERSECTIONS

The center line of no more than 2 streets shall intersect at any point. Street intersections shall be as nearly at right angles as possible. No street shall intersect another street at an angle less than 75 degrees.

Proposed new intersections along one side of an existing street shall, wherever practicable, coincide with any existing intersections on the opposite side of such street. Street jogs with centerline offsets of less than 150 feet shall not be allowed without special approval of the Planning Commission. Intersections along arterial street of less than 600 feet shall not be allowed without special approval of the Planning Commission.

C. CUL-DE-SACS

Cul-de-sacs or courts designed to have one end closed shall not exceed 1,000 feet in length without special approval of the Planning Commission.

D. STREET NAMES

Street names shall require the recommendation of the Planning Commission, and approved by the Board of Directors and the Sebastian County 911 Board. Streets that are already in alignment with existing streets shall be given the name of the existing street.

Section 3
STREET IMPROVEMENTS

All new streets or reconstruction of existing streets shall generally be improved with curbs and gutters, aggregate base, asphalt concrete or portland cement concrete surface, underdrains, sidewalks, and driveways.

A. PAVEMENT AND BASE

All streets shall be constructed with an asphalt concrete or portland cement concrete pavement on aggregate base material. A CBR test of the subgrade shall be made by an approved soils testing laboratory to determine the required thickness of the pavement and base section. The minimum thickness of pavement and base for different classifications of streets and for different CBR values of the subgrade are shown on Table 2.

TABLE 2
 MINIMUM PAVEMENT THICKNESS STANDARDS
 CITY OF BARLING, ARKANSAS

Minimum Subgrade CBR**	Local Street			Collector Street		
	Asphalt Pavement		Concrete * Pavement (in)	Asphalt Pavement		Concrete * Pavement (in)
	Asphalt (in)	Agg Base (in)		Asphalt (in)	Agg Base (in)	
3	2.5	10.0	7.0	4.0	12.0	8.0
6	2.5	8.0	6.0	3.0	10.0	7.0
10	2.0	6.0	5.0	2.5	8.0	6.0

* A minimum of 4-inch thick Aggregate Base is required for all concrete streets

** CBR of final subgrade material having a minimum thickness of 12 inches

B. CURBS AND GUTTERS

Concrete curbs and gutters, having a minimum thickness of 6 inches, a minimum height of 6 inches, and a minimum gutter width of 18 inches shall be constructed on both sides of a street.

C. SIDEWALKS

Concrete sidewalks are generally required to be constructed only on one side of a street. The City will determine on which side of the street the sidewalk is to be constructed. Where sidewalks are constructed, the sidewalk shall have a width of 5 feet and a minimum thickness of 4 inches. The sidewalk shall be a minimum of 5 inches thick at residential driveways and 6 inches thick at commercial driveways. The sidewalk shall be installed adjacent to property line and shall slope toward the curb at a slope of ¼ inch per foot unless otherwise approved by the City.

D. DRIVEWAYS

Driveway approaches, between the curb and property line, shall be constructed of concrete and shall be a minimum of 5 inches thick for residential areas and 6 inches thick for commercial areas. Where sidewalks crosses driveways, the thickness of the sidewalk shall be the same as that required for the driveway. The minimum distance between the edge of the driveway and back of the curb line of the adjacent parallel street for different classifications of streets shall be as set forth below:

<u>Street Classification</u>	<u>Distance from edge of Driveway to Adjacent Parallel Street Back of Curb</u>
Arterial	60 feet
Collector - Commercial	50 feet
Collector I - Residential	35 feet
Local	25 feet

E. CONCRETE

All non-reinforced concrete used in street pavement, curbs, gutters, sidewalks, driveways, and drainage structures shall be 3000 psi, air entrained (5%), Fiber-Mesh reinforced (1 ½ lbs/CY). All reinforced concrete shall be 3,000 psi, air entrained (5%). No fiber-mesh reinforcement shall be used in reinforced concrete.

F. TRENCH BACKFILL

All trenches for utility and drainage lines that cross-existing or proposed streets shall be backfilled with a sand, cement, fly-ash slurry. For existing streets, the slurry backfill shall extend to within 6 inches of the surface and a 6-inch thick concrete cap constructed. For new streets being constructed, the slurry shall extend to within 6 inches of the subgrade for the crushed stone aggregate base.

G. UNDERDRAINS

Underdrains shall be installed on both sides of the street for all new streets where curbs are constructed. The underdrain shall be installed on the backside of the curb and shall consist of a trench approximately 12 inches wide and 3 feet deep, as measured from the top of curb. The underdrain shall be backfilled with 1 ¼ to ¾-inch concrete rock. A 4-inch perforated plastic pipe shall be installed near the bottom of the trench, which shall collect and transport the underground seepage water to a drainage ditch, channel, or underground storm drain system. The longitudinal slope of the underdrain shall have a minimum slope of 0.5%. The top of the underdrain shall be covered with 6 inches of topsoil and planted or sodded with grass.

H. DIRECTIONAL BORES

Where pipes are installed across streets using the directional bore method, the pipe shall have a minimum depth of cover of 5 feet. No pipe greater than 6 inches in diameter shall be installed across a street by the directional bore method without special permission of the City of Barling. All existing concrete pavement, curbs, driveways, swales, etc., that crack or rise more than ½ inch as a result of the directional bore shall be removed and replaced of similar material.

I. STREET NAME MARKERS

Street name markers shall be installed by the City. The design of the markers and signs shall conform to the City's standards.

Section 4
IMPROVEMENTS PLANS

All street improvements shall be constructed in accordance with plans and specifications prepared by a Registered Professional Engineer and approved by the City. The City or its designated representative shall review all street improvement plans and, upon approval of the plans, shall issue a written approval of the plans to the Engineer. When the improvements required by these rules and regulations have been completed and installed, the Registered Professional Engineer shall submit a letter to the City Administrator

certifying improvements and installations have been made in accordance with approved construction plans, specifications, drawings, and the standards established by the City.

Section 5 INSPECTION OF IMPROVEMENTS

All improvements shall be subject to the inspection of the City Inspector or his designated representative. Inspections will be made by the City Inspector from time to time during the course of construction to insure that the improvements have been or are being constructed in conformance with the approved plans and specifications and with the applicable design and construction standards.

The subgrade shall be proof-rolled prior to the construction of the base and the base shall be proof-rolled prior to the construction of the pavement. A dump truck loaded with approximately 20 tons of material, or equivalent loading, shall be used for the proof-rolling.

The City Inspector shall also make a final inspection of all improvements. If such final inspection reveals that there are any defects or deficiencies in such improvements as installed or that the improvements differ significantly from the final engineering plans and specifications, the City Inspector shall notify the Engineer in writing of such defects, deficiencies or deviations. The Engineer shall have the contractor correct such defects or deviations within 6 months of the date of the notification. When such defects, deficiencies or deviations have been corrected, the Engineer shall notify the City Inspector in writing that the improvements are again ready for final inspection.

When all improvements have been completed to the satisfaction of the City Inspector, the City Inspector shall certify in writing that all improvements have been completed and approved. The Board of Directors shall act on the acceptance of the improvements within 15 days of the receipt of the certification by the City Inspector.

Section 6 MAINTENANCE BOND

A Maintenance Bond or an irrevocable Letter of Credit shall be furnished to the City to cover any defects in materials and workmanship for all improvements constructed or installed. The Maintenance Bond or Letter of Credit shall be in the amount of 50 percent of the total cost of the improvements to be covered by such bond or letter of credit; shall be in full force and effect for not less than one year from the date of the letter in which the City Inspector certifies that all improvements have been completed and approved; and shall state that any and all defects in materials and workmanship shall be corrected prior to the end of the one year period of the bond or letter of credit. Work performed under the terms of the Maintenance Bond or irrevocable Letter of Credit shall be approved by the City Inspector.

ARTICLE III
LEGAL STATUS

Section 1
CONFLICTING REGULATIONS

Ordinance No. 138 is hereby repealed. All other ordinances or parts of ordinances inconsistent or in conflict with this ordinance are hereby repealed.

Section 2
SEVERABILITY

The provisions of this ordinance are hereby declared to be severable and a decision by any court of competent jurisdiction that a provision of this ordinance or any application thereof is illegal, invalid or unconstitutional, shall not affect the legality, validity or constitutionality of the remaining provisions or applications of this ordinance.

PASSED AND APPROVED this 9 day of May, 2000.

APPROVED: Mayor 

ATTEST: City Clerk


