

**Subdivision Regulations
City of Muskogee
Revised 3/24/03 by Ordinance 3638-A**

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DIVISION 1 - GENERAL PROVISIONS

Section 19-101 Preamble

A. The subdivision of land is the first step in the process of urban development. The arrangement of land parcels in the city for residential, commercial, and industrial uses for streets, schools, parks and other public purposes will determine to a large degree the conditions of health, safety, economy and amenity that prevail in the city. The quality of these conditions is of public interest. These regulations and standards for the subdivision and improvement of land for urban use are to make provisions for adequate light, air, open space, drainage, transportation, public utilities and other needs, to insure the development and maintenance of a healthy, attractive, and efficient city.

B. These regulations for the city are designed, intended, and should be administered in a manner to:

1. Implement the general plan;
2. Provide neighborhood conservation and prevent the development of slums and blight;
3. Harmoniously relate the development of the various tracts of land to the existing community and facilitate the future development of adjoining tracts;
4. Provide that the cost of improvements which primarily benefit the tract of land being developed be borne by the owners or developers of the tract, and the cost of improvements which primarily benefit the whole community be borne by the whole community;
5. Provide the best possible design for the tract;
6. Reconcile any differences of interest; and
7. Establish adequate and accurate records of land subdivision. (Prior Code, App. B, Sec. 1-1; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-102 Scope & Authority

These subdivision regulations and minimum standards for land development are adopted under the authority granted by Sections 41-101 et seq. of Title 11 of the Oklahoma Statutes and such powers that are available to the city under the Charter of the City of Muskogee. Land that has been subdivided prior to the effective date of these regulations should, whenever possible, be brought within the scope of these regulations. (Prior Code, App. B, Sec. 1-2; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-103 Jurisdiction

These regulations and development standards shall apply to the following forms of land

subdivisions:

A. The division of land into two (2) or more tracts, lots, sites or parcels for the purpose of sale, lease, transfer by gift, or development, any one of which when subdivided shall contain less than ten (10) acres in area;

B. The division of land, previously subdivided or platted into tracts, lots, sites, or parcels of less than ten (10) acres in area;

C. The dedication, vacation or reservation of any public or private easement through any tract of land, regardless of the area involved, including those for use by public and private utility companies; or

D. The dedication or vacation of any street or alley through any tract of land regardless of the area involved. (Prior Code, App. B, Sec. 1-3; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-104 Definitions

A. For the purpose of these regulations, certain terms used herein are defined as follows:

1. "Alleys" mean a minor right-of-way dedicated to public use which gives a secondary means of vehicular access to back or side of properties otherwise abutting a street, and which may be used for public utility purposes;
2. "Area" means all territory included within the jurisdiction of the Planning Commission;
3. "AUTOCAD" means a computer aided drafting program by "Autodesk Inc.";
4. "Block" means a parcel of land, intended to be used for urban purposes, which is entirely surrounded by public streets, highways, railroad right-of-ways, public walks, parks or greenbelts, rural land or drainage channels or a combination thereof;
5. "Building or setback line" means a line or lines designating the area outside of which buildings may not be erected;
6. "Certificate of survey" means an instrument, prepared by a or licensed land surveyor licensed to practice in Oklahoma, describing the location and boundaries of a tract or parcel of land;
7. "Collector street" means a minor street which collects traffic from other minor streets and serves as the most direct route to a major street or a community facility;
8. "Commission" means the Muskogee Planning and Zoning Commission;
9. "Council" means the legislative body of the city;

10. "Cul-de-sac" means a local street having one end closed and terminated by a turnaround and having an intersecting street;
11. "Culvert" means a short conduit or pipe which conveys stream flow through a roadway embankment or past some other type of flow obstruction.
12. "Deep absorption sanitary system" means a soil absorption sewer system for disposal of effluent through the bottom and sides of a hole or trench at a depth of more than three (3) feet below the natural undisturbed surface;
13. "Department" means the Engineering Department of the City of Muskogee;
14. "Developer" means the owner or agent of the owner of the land having the rights to subdivide and order the construction of improvements;
15. "Easement" means a grant by the property owner to the public, a corporation, or persons, of the use of a strip of land for specific purposes;
16. "Environmental corridor" means those lands identified in the development plan for Coody Creek which contain scenic, recreational sites, potential outdoor recreational and related open space site and scenic areas or vistas;
17. "Equal degree of encroachment" means the delineation of flooding limits so that flood plain land on both sides of a stream are capable of conveying a proportional share of flood flows. This is determined by considering the hydraulic conveyance of the flood plain along both sides of a stream for a significant reach;
18. "Final plat" means a map of a land subdivision prepared in a form suitable for filing of record with necessary affidavits, dedications, and acceptances, and with complete bearings and dimensions of all lines defining lots and blocks, streets, and alleys, public areas, and other dimensions of land;
19. "Flood" means a temporary rise in a stream level that results in inundation of areas not ordinarily covered by water;
20. "Floodway" means the channel of a watercourse and portions of the adjoining flood plain which are reasonably required to carry a discharge of the regulatory flood;
21. "Floodway fringe" means the area adjoining a watercourse, which although not lying in the floodway, has been or may hereafter be covered by a regulatory flood;
22. "Frontage or service street" means a minor street auxiliary to and located on the side of a major street for service to abutting properties and adjacent areas and for control of access;
23. "Full Urbanization" means an area developed to its maximum extent under the current zoning designation.
24. "General plan" means the comprehensive development plan for the city which has

been officially adopted to provide long-range development policies and which includes, among other things, the plan for land use, land subdivision, circulation and community facilities;

25. "Global Positioning System (GPS) " means a global location system established by the United States Department of Defense consisting of satellites orbiting the earth;
26. "Hardy-Cross Analysis" means an engineering method of solving for the flow, from several pipe circuits, to a given outlet of interconnected pipes, meeting the following conditions:
 - a. The Algebraic sum of the pressure drops around each circuit must be zero.
 - b. Flow into each junction must equal flow out of the junction.
 - c. Proper relation between head loss and discharge must be maintained for each pipe.
27. "High Accuracy Reference Network (HARN)" means a "B" order survey station established by GPS at 25 to 30 KM spacing to a relative accuracy of 1:1,000,000;
28. "Horizontal Control Monument" means a survey monument established by a licensed surveyor in the State of Oklahoma that has known North-South and East-West coordinates which locates it with respect to the Oklahoma State Plane Coordinate System;
29. "Local street" means any public way other than one designated
30. "Lot" means a subdivision of a block or other parcel intended as a unit for the transfer of ownership or for development;
31. "Lot, corner" means a lot located at the intersection of and abutting on two (2) or more streets;
32. "Lot, double frontage" means a lot which runs through a block from street to street and which has two (2) nonintersecting sides abutting on two (2) or more streets;
33. "Lot, reverse frontage" means a double frontage lot which is designed to be developed with the rear yard abutting a major street and with the primary means of ingress and egress provided on a minor street;
34. "Lot split" means the subdividing of a platted tract of land into two (2) or more tracts, any of which is less than ten (10) acres in area, and which does not require the dedication of right-of-way or easements;
35. "Magnetic media" means a magnetic storage media such as tapes and floppy disks for use on personal computers;
36. "Major street" means a public way designated as primary, secondary or collector street on the major street plan map as adopted by the council and any revisions thereto;

37. "Manning's Equation" means an engineering equation to determine the flow in an open channel or non-pressurized pipe. Defined as:

$$V = 1.49/n * R^{2/3} * S^{1/2} \text{ where:}$$

V = Average velocity (fs)

R = Hydraulic radius

S = Slope of the channel n = Roughness coefficient

38. "Mean sea level datum" means mean sea level datum, 1927 adjustments as established by the U.S. Coast Guard and Geodetic Survey;

39. "National map accuracy standards" means standards governing the horizontal and vertical accuracy of topographic maps and specifying the means for testing and determining such accuracy, by all federal agencies having survey and mapping functions and responsibilities;

40. "North American Geodetic Vertical Control Datum (NAVD) 1988" means the official civilian vertical datum for surveying and mapping in the United States. NAVD 1988 supersedes the NAVD 29;

41. "Off-street parking" means a type of parking wherein the maneuvering of the vehicles while parking and unparking, as well as the parking itself, is done entirely on private property, and where access to the area is by means of standard driveway approach;

42. "Preliminary plat" means a map of a proposed land subdivision showing the character and proposed layout of the tract in sufficient detail to indicate the suitability of the proposed subdivision of land;

43. "Primary control system" means a system of horizontal and vertical survey monuments established by the city known as "The City of Muskogee Survey Control Network." The primary horizontal control network shall be established to a minimum of first order accuracy standard of 1994;

44. "Rational method" means an engineering method to determine storm water flow (Q,cfs), where rainfall of intensity (I, in/hr) begins instantaneously and continues indefinitely, the rate of runoff will increase until the time of concentration (tc), when all of the watershed (A, acres) is contributing to the flow at the outlet. $Q = CiA$, C = runoff coefficient;

45. "Secondary control system" means a system of horizontal and vertical survey monuments established for a single project's use;

46. "Shorelands" means those lands lying within three hundred (300) feet distance from the shoreline of Coody Creek or to the landward side of the flood plain, whichever

is the greater and always includes the floodlands;

47. "Snyder Synthetic Unit Hydrograph" means an engineering method using empirically-defined terms and physiographic characteristics of the drainage basin as input for empirical equations which characterize the timing and shape of the unit hydrograph.
48. "Standard Proctor" means a laboratory procedure established by Proctor in 1933 for compacting soils in a laboratory approximating those obtained in the field using heavy equipment.
49. "Subdivider" means any person, firm, partnership, corporation, or other entity, acting as a unit, subdividing or proposing to subdivide land as herein defined;
50. "Subdivision" means any division of land into two (2) or more lots, parcels, tracts, sites or areas, any one of which when divided has an area of less than ten (10) acres or any division of land involving the vacation or dedication of right-of-way, or the realignment of any existing or proposed street or highway or public utility easement or the re-subdivision of land heretofore divided into lots, sites or parcels;
51. "Subdivision review committee" means a committee composed of city staff and public utilities which reviews proposals for subdivision plats and construction plans. The purpose of this committee is to review and thereafter make recommendations to the planning commission and city council on various proposals and to determine whether or not the technical elements of the construction plans and the subdivision plats meet or exceed the requirements within the subdivision regulations;
52. "Sump location" means the lowest point in a drainage system where water collects.
53. "Time of concentration" means the time at which all of the defined watershed begins to contribute.
54. "Vertical control monument" means a survey monument established by a licensed surveyor in the State of Oklahoma that has a known elevation relative to the NAVD-1988 established by the United States Coast and Geodetic Survey System;
55. "Zoning ordinance" means the zoning ordinance or any revision thereto adopted by the council; and
56. "Abbreviations."

cfs-cubic feet per second

CMP-corrugated metal pipe

EPA-Environmental

Protection Agency fps-feet per second gpm-gallons per minute

GPS-Global Positioning System

HEC-2-U.S. Army Corps of Engineers Hydraulic Engineering Center computer program for determining water surface profiles

ODEQ-Oklahoma Department of Environmental Quality

OSDH-Oklahoma Department of Health

P & P-plan and profile sheet

P.C.-point of curvature

P.I.-point of intersection

P.T.-point of tangency

psi-pound per square inch

SCS-Soil Conservation Service water surface profiles.

(Ord. No. 1310-A; Prior Code, App. B, Sec. 1-4; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

DIVISION 2 - GENERAL PROCEDURES

Section 19-110 Plat Approval

For all cases of subdividing within the scope of these regulations a plat of the land in question or an easement with a description in writing where appropriate shall be drawn and submitted to the Planning Commission and City Council for approval or disapproval as provided below. (Prior Code, App. B, Sec. 1-5; Ord. No. 3267-A, 4/6/93)

Section 19-111 Official Recording

No plat or other land subdivision instrument shall be filed in the office of the Muskogee County Clerk until it shall have been approved by the Planning Commission, and by the City Council as hereinafter set forth. (Prior Code, App. B, Sec. 1-5; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-112 Agenda

Each plat submitted for preliminary or final approval shall be placed on the agenda of the Planning Commission only after fulfilling the appropriate requirements of these regulations. However, a plat not meeting all of the requirements may be submitted provided the

subdivider presents with the plat, a written request for specific exceptions and enumerated in detail the reasons therefor. (Prior Code, App. B, Sec. 1-5; Ord. No. 3267-A, 4/6/93)

Section 19-113 Fees

Fees pertaining to subdivision matters are adopted by city ordinance, motion or resolution. (Ord. No. 1151-A, 1152-A, 1153-A, 1/27/75; Prior Code, App. B, Sec. 1-5; Ord. No. 3267-A, 4/6/93)

Section 19-114 Exemptions For Lot Splits

Whenever there is a previously subdivided parcel (s) under single ownership which is to be resubdivided into four (4) or fewer lots, the proposed subdivision may be exempted from the procedural provisions of these regulations, and a preliminary and final plat may not be required, but this shall not constitute an exemption from any of the design requirements herein contained. Exemptions which shall be designated as "lot splits" shall be permitted under the following procedures:

A. An accurate survey of the proposed tract and the re-subdivision thereof, which shall be prepared by a land surveyor registered in the State of Oklahoma, shall be submitted to the Planning Department at least fourteen (14) days prior to a Planning Commission meeting; or

B. The Planning Department and the City Engineer's staff shall review the proposed lot split to insure compliance with all design requirements of these regulations and shall prepare a written report thereon, which shall be forwarded to the Planning Commission for consideration at the next regular meeting of the Planning Commission. If the application is approved by the Planning Commission, it shall be certified by the signature of the chairman of the Planning Commission and on the survey. If the application is denied, the reasons for denial shall be stated in writing, with reference made to the express provision of the regulations to which the proposed lot split does not conform, and shall be transmitted to the applicant. The action of the Planning Commission is final. The approved lot split survey shall be recorded with the County Clerk by the Planning Department.
(Prior Code, App. B, Sec. 1-5; Ord. No. 3267-A, 4/6/93)

DIVISION 3 - PRINCIPLES AND STANDARDS

Section 19-120 Urban Design Principles.

The quality of design of the city is dependent on the quality of design of the individual subdivisions that compose it. Good community design requires the coordination of the efforts of each subdivider and developer of land within the city. Therefore, the design of each subdivision shall be prepared in accordance with the principles established by the general plan for land use, circulation, community facilities and public utility services, and in accordance with the following general principles:

A. It is intended that the city shall be designed as a group of planned residential neighborhoods with appropriate commercial and industrial and public facilities. The

neighborhood, as a planning unit, is intended as an area principally for residential use, and of a size that can be served by one elementary school. Space for religious, recreational, educational and shopping facilities to serve the residents of the neighborhood should be provided and designed as an integral part of each neighborhood;

B. The size of lots and blocks and other areas for residential, commercial, industrial and public uses shall be designed to provide adequate light, air, open space, landscaping and off-street parking and loading facilities;

C. The arrangement of lots and blocks and the street system should be designed to make the most advantageous use of topography and natural physical features. Tree masses and large individual trees should be preserved. The system of sidewalks and roadways and the lot layout should be designed to take advantage of the unique qualities of the area;

D. Circulation within the city shall be provided in accordance with the following design criteria:

1. Each subdivision shall provide for the continuation of all arterial streets and highways as shown on the major street plan. Arterial streets should be located on the perimeter of the residential neighborhood; provisions should be made for a collector street(s) at intervals not exceeding a one-half (½) mile, which shall be measured from a collector or higher class street;
2. Minor streets should be designed to provide access to each parcel of land within the residential neighborhood and within industrial areas, and in a manner that will discourage use by through traffic. They should be planned so that future expansion will not require the conversion of minor streets to arterial routes;
3. Collector streets should be designed to provide a direct route from other minor streets to the major streets and expressway systems;
4. Pedestrian ways should be separated from roadways used by vehicular traffic. Sidewalks should be designed to provide residential building sites with direct access to all neighborhood facilities, including the elementary school, parks, playgrounds, churches and shopping centers; and
5. Proposed streets shall be extended to the boundary lines of the tract to be subdivided, unless prevented by topography or other physical conditions, or unless in the opinion of the Planning Commission such extension is not necessary or desirable for coordination of proposed streets within the subdivision with existing streets or for the most advantageous future development of adjacent tracts.
6. The arrangement of streets shall be such as not to cause substantial hardship in the subdividing of adjacent properties.

E. Minimum standards for development are contained in the city's zoning ordinance, the building code, and in these regulations. However, the general plan expresses policies designed to achieve optimum quality of development in the city. If only the minimum standards are followed, as expressed by the various ordinances regulating land development,

a standardization of development will occur. This will produce a monotonous urban setting. Subdivision design should be of a quality to carry out the purpose and spirit of the policies expressed in the general plan and in these regulations rather than be limited to the minimum standards required herein.

(Prior Code, App. B, Sec. 1-6; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-121 Subdivider To Provide Improvements.

The subdivider is put on notice that within the proposed subdivision he shall, at his own expense, pave all streets, install sanitary sewers, street signs, traffic-control signs, storm drainage and water lines as required by these regulations. (Prior Code, App. B, Sec. 1-7; Ord. No. 3267-A, 4/6/93)

Section 19-122 Streets.

The arrangement, character, extent, width, grade and location of all streets shall conform to all the elements of the general plan and shall be designed in accordance with the following provisions:

- A. Major streets shall be planned to conform with the major street plan;
- B. Whenever a subdivision abuts or contains an existing or proposed major street, the Planning Commission may require service streets, reverse frontage with screen planting contained in a non-access reservation along the rear property line, deep lots or such other treatment as may be necessary for adequate protection of residential properties and to afford separation of through and local traffic;
- C. Minor streets shall be laid out so that their use by through traffic will be discouraged;
- D. Where a subdivision borders on or contains a railroad right-of-way or limited access highway right-of-way, the Planning Commission may require a street approximately parallel to and on each side of such right-of-way at a distance suitable for the appropriate use of the intervening land. Such distances also shall be determined with due regard to the requirements of approach grades and future grades separation structures;
- E. Where the plat to be submitted includes only part of the tract owned or intended for development by the subdivider, a tentative plan of a proposed future street system for the un-subdivided portion shall be prepared and submitted by the subdivider.
- F. When a tract is subdivided into larger than normal building lots or parcels, such lots or parcels shall be so arranged as to permit the most logical location and opening of future streets and appropriate re-subdivision, with provision for adequate utility easements and connection for such re-subdivision;
- G. Street jogs with center line of less than one hundred fifty (150) feet should be avoided. The Planning Commission may require that streets be connected by a curve or diagonal line in such a manner that a smooth flow of traffic and the elimination of traffic hazards are

assured;

H. Street signs and traffic-control signs shall be installed by the city street department at the expense of the subdivider according to the street sign specifications of the city;

I. Whenever the major or minor street is located wholly within the proposed subdivision, the total width of the right-of-way shall be dedicated;

J. A cul-de-sac should not exceed five hundred (500) feet in length, measured from the entrance to the center of the turnaround, and if more than one hundred fifty (150) feet in length, shall be provided with a turnaround having a radius of not less than fifty (50) feet at the property line and not less than forty (40) feet at the curb line. In all instances, provisions must be made for adequate storm drainage structures to prevent water from standing in the end of a cul-de-sac or stub street;

K. In the case of dead-end streets which are stub streets designed to provide connections with adjoining unsubdivided area, the Planning Commission may require an easement for a temporary turnaround or an appropriate area for a back around; L. Half streets shall be prohibited, except where essential to the reasonable development of the subdivision in conformity with the other requirements of these regulations. Provided that the Planning Department recommends to the Planning Commission that it will be practical to obtain the dedication of the other half of the easement when the adjoining property is subdivided. Wherever a half street is adjacent to a tract to be subdivided, the other half of the street shall be platted within the tract being subdivided;

M. All new streets shall be named according to the 911 grid system, unless the new street is a continuation of an existing street, or the name will automatically or geographically locate the street. No street names shall be used which will duplicate or be confused with the names of existing streets. Street names within the city will be assigned by the 911 coordinator, (city official responsible for maintaining the 911 grid system) subject to the approval of the Planning Commission. In addition, the Planning Department shall name all subdivisions, and designate the numbering of lots and blocks within the subdivision.

N. Street corners shall have a radius of twenty-five (25) feet at the curb line. Street intersections involving major streets and highways shall have a minimum street corner radius of thirty (30) feet at the curb line or its equivalent; and

O. All street grades shall conform to the requirements of Section 19-146 of this code. When deemed advisable, the Planning Commission may permit a variation from these grades in order to adjust to topographical conditions.
(Prior Code, App. B, Sec. 1-7; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-123 Alleys

(Prior Code, App. B, Sec 1-7; Ord. No. 3267-A 4/6/93; Ord. No. 3363-A, 4/22/96 Section deleted)

Section 19-124 Easements And Utilities.

A. Easements not less than twenty (20) feet wide shall be provided along each rear lot line, and along side lot lines where necessary for use by public and private utilities. Easements of greater width may be required for the extension of main storm and sanitary sewers, restricted drainage easements for overland flow, and other utilities or where more than one utility will be located within an easement.

B. The maintenance of easements shall be the responsibility of the property owner. (Prior Code, App. B, Sec. 1-7; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-125 Public Areas And Open Spaces.

Public parks, playgrounds, school sites and other public areas and open spaces shall be provided in accordance with the requirements and standards set forth in the general plan and in the ordinances relating thereto. (Prior Code, App. B, Sec. 1-7; Ord. No. 3267-A, 4/6/93)

Section 19-126 Blocks.

Block design standards are as follows:

A. The lengths, widths and shapes of blocks shall be determined with due regard to the following:

1. Provisions of adequate building sites suitable to the special needs of the type of use contemplated;
2. Zoning requirements as to lot sizes and dimensions;
3. Needs for convenient access, circulation, control, and safety of street traffic; and
4. Limitation and opportunity of topography;

B. Blocks shall not be longer than twelve hundred (1200) feet, measured along the center line of the block. When a block exceeds six hundred (600) feet in length, the Planning Commission may require a dedicated right-of-way of not less than twenty (20) feet in width and a paved crosswalk not less than four (4) feet in width to provide pedestrian access across the block; and

C. Blocks used for residential purposes should be of sufficient width to allow for two (2) tiers of lots of a minimum depth of one hundred twenty (120) feet. Blocks intended for business and industrial use should be of a width suitable for the intended use, with due allowance for off-street parking and loading facilities. (Prior Code, App. B, Sec. 1-7; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-127 Lots.

Lot design standards are as follows:

A. Residential lots other than lots for townhouses or apartments shall not be less than sixty (60) feet in width at the front building line and shall abut a street a distance of not less than forty (40) feet, except that a corner lot shall not be less than seventy (70) feet in width at the front building line;

B. Side lot lines should be approximately at right angles or radial to street lines;

C. The depth of residential lots other than lots for townhouses and apartments should not be less than one hundred twenty (120) feet;

D. The area of residential lots other than lots for townhouses and apartments shall not be less than seven thousand two hundred (7,200) square feet. Where public sanitary sewer facilities are not accessible, the lot size shall be increased as per Section 19-148;

E. Lots for townhouses and apartments shall have a width, depth, and area of not less than that required by the "D" Multi-Family Residential District of the zoning ordinances of the city;

F. In residential subdivisions where septic tanks or individual sewage disposal devices are to be installed, the area of the lot shall be a minimum of one acre or larger as determined by the percolation rates as established by the county health department. The width of the lot at the front building line shall not be less than one hundred (100) feet;

G. Lots for subdivisions of commercial and industrial use shall be of appropriate size and arrangements to provide for adequate off-street parking and loading facilities based on the intended use. No lot shall be created for a particular commercial or industrial use that has an area, width or depth that is less than is required for the permitted use under the applicable provisions of the city's zoning ordinance; and

H. Double frontage and reverse frontage lots should be avoided except where they are needed to provide for the separation of residential development from traffic arteries or to overcome specific disadvantages of topography and orientation. A planting screen easement of at least ten (10) feet shall be provided along the portion of the lots abutting such a traffic artery or other use where screening is required. There shall be no right of access across a planting screen easement. At the direction of the Planning Commission, the developer may substitute for an easement and a planting screen a permanent ornamental fence of a height and architectural design which will appropriately screen and be harmonious with residential or other neighborhood elements.

I. All lots shall abut on a publicly dedicated street, or on a private street if the City Council specifically approves the creation of such streets under provisions of a "PUD" Planned Unit Development.

J. If a tract being subdivided contains a water body, or portion thereof, lot line shall be so drawn as to distribute the entire ownership of the water body among the adjacent lots. The Planning Commission may approve an alternative plan whereby the ownership of and responsibility for safe maintenance of the water body is so placed that it will not become a local government responsibility. No more than twenty-five (25%) of the minimum area of a lot required under the Zoning Ordinance may be satisfied by land that is under water.

(Prior Code, App. B, Sec. 1-7; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-128 Acre Subdivisions.

A. When the proposed subdivision involves lots of one acre or more in area, consideration should be given to any re-subdividing that might take place with proper provisions being made for such street extension as may be necessary.

B. Existing road improvements must be considered in granting a lot split where the increase in lot density will generate additional traffic that might exceed the original design standard. Additional street improvements may be required before lot density is allowed to increase.

(Prior Code, App. B, Sec. 1-7; Ord. No. 3267-A, 4/6/93)

Section 19-129 Building Line Controls.

Repealed. (Ord. No. 3267-A, 4/6/93)

Section 19-130 Neighborhood Unit Development.

Whenever a subdivision is developed as a neighborhood unit, wherein adequate park or playground area is provided, through traffic is cared for adequately, and the majority of the minor streets are of the cul-de-sac or loop type, the Planning Commission may vary the requirements of this article in order to allow the subdivider more freedom in the arrangement of streets and lots, but at the same time, protect the convenience, health, safety and welfare of the probable future residents of the subdivision as well as the character of the surrounding property and the general welfare of the entire city. However, in no case shall the lot area be less than seven thousand two hundred (7,200) square feet for detached single-family dwellings. (Prior Code, App. B, Sec. 1-7; Ord. No. 3267-A, 4/6/93)

DIVISION 4 - IMPROVEMENTS

Section 19-140 General Provisions.

All improvements shall be designed and installed in accordance with all of the elements of the general plan and shall meet the minimum standards established by the ordinances and regulations of the city relating thereto. (Prior Code, App. B, Sec. 1-8; Ord. No. 3267-A, 4/6/93)

Section 19-141 Plan Preparation.

Plans for the improvements herein required shall be prepared by a qualified engineer, registered in the State of Oklahoma. (Prior Code, App. B, Sec. 1-9; Ord. No. 3267-A, 4/6/93)

Section 19-142 Continuity Of Improvements.

All improvements shall be designed and installed such as to provide for a logical system of utilities, drainage, and streets and to create continuity of improvements for the development of adjacent properties. (Prior Code, App. B, Sec. 1-10; Ord. No. 3267-A, 4/6/93)

Section 19-143 Subdivision Improvement Assurance.

A. The final plat shall contain the following statement in the signature block: "I, _____, owner, developer, successor, or assignee, hereby agree that no transfer of deeds or building permits will be transacted until all streets and utility improvements have been completed and accepted by the city or appropriate financial guarantees as required by Section 19-143 (D) have been submitted and accepted."

B. Upon acceptance of all improvements in the development, a certificate of compliance will be issued to the developer for release of land sales and building permits. This certificate will be issued by the director of the engineering department.

C. Prior to beginning construction, the developer must satisfy the city that adequate engineering inspection of all improvements will be provided by a licensed engineer in the State of Oklahoma (or an inspector under the direct supervision of a licensed engineer in the State of Oklahoma) and if, in the opinion of the city the developer will not provide adequate inspection, the city will provide same and bill the developer accordingly.

D. Improvement Guarantees. Building permits may be issued on lots within a subdivision prior to the completion of the required improvements when appropriate financial assurances have been accepted by the city that will guarantee their installation. The acceptable types of financial guarantees shall be:

1. Cashiers' check payable to the city;
2. Performance bond from a licensed surety within the State of Oklahoma payable to the city; or
3. Irrevocable letter of credit from a bank or other reputable institution.

The amount of the financial guarantee shall be for one hundred and ten percent (110%) of the cost of the improvements, and shall be based on the approved improvement plans and shall include a written estimate from a registered engineer specifying the costs for the various improvements. The financial guarantee shall be valid for a one year period from the date of the acceptance of the estimated costs by the City Engineer. The city shall be immediately entitled to payment from the creditor, surety or cashier's check without further action should the subdivider fail to complete the specific improvements within the required time period. The amount of the financial assurance may be reduced from time to time as the improvements are completed to the satisfaction of the City Engineer. A structure for which a building permit has been issued in conformance with this section shall not be occupied until the subdivision improvements have been completed and accepted by the City Council. The city shall not be responsible for providing emergency services to the subdivision until all

improvements are completed and accepted .(Prior Code, App. B, Sec. 1-11; Ord. No. 3267-A, 4/6/93; Ord. No. 3273-A, 5/24/93)

Section 19-144 Maintenance Bond Or Irrevocable Letter Of Credit.

A. After all streets and utilities have been completed and accepted by the city, the contractor is required to obtain a maintenance bond from a surety bonding company authorized to do business in the State of Oklahoma. The bond shall be filed with the city, and shall be payable to the city. The amount of the bond shall be equal to one hundred percent (100%) of the entire cost of materials and labor for all water lines, sanitary sewer lines, paving, grading and drainage improvements for a period of one year from the date of acceptance. On paving, a fifteen percent (15%) maintenance bond shall be required for an additional period of four (4) years thereafter. The duration of the paving maintenance bond shall be for total of five (5) years from the date of acceptance of the improvements by the City Council.

B. In lieu of a maintenance bond, the contractor may provide in a sum equal to one hundred percent (100%) of the entire cost of materials and labor for all water lines, sanitary sewer lines, paving, grading and drainage improvements, an irrevocable letter of credit issued by a financial institution insured by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation for the benefit of the city up to a sum of One Hundred Thousand Dollars (\$100,000.00). To the extent the costs herein mentioned exceed the sum of One Hundred Thousand Dollars (\$100,000.00), an irrevocable letter of credit shall not be used in lieu of a maintenance bond. The use of an irrevocable letter of credit shall in no way alter or waive the duration requirements in Subsection A of Section 19-144. (Ord. No. 3098-A, 3-14-88; Prior Code, App. B, Sec. 1-12; Ord. No. 3267-A, 4/6/93)

Section 19-145 Survey And Monuments

A. Administration - The City Engineer will be responsible for establishing and maintaining a primary horizontal and vertical survey control system for the city. This system will be identified as "The City of Muskogee Survey Control System of 1994." All horizontal control monuments will be constructed of a 3-inch bronze survey cap set in concrete and identified with the name of the city, control number, and year the monument was set. The City Engineer will maintain records that give the location and description of each survey point. These records will be available to the public as described herein.

B. This ordinance adopts the "Oklahoma Minimum Standards for the Practice of Land Surveying" established by the Oklahoma State Board of Registration for Professional Engineers and Land Surveyors dated September 17, 1993.

C. The City Engineer will be responsible for reestablishing lost monuments and adding additional control monuments as necessary to maintain the integrity of the system.

D. All horizontal control monuments shall be tied to the City of Muskogee Survey Control System. All vertical control shall be tied to the City of Muskogee Vertical Control Network.

1. Each block and subdivision corner shall be marked with iron pipes or pins not less than one-half ($\frac{1}{2}$) inch in diameter and twenty-four (24) inches long at least one inch below finished grade.
2. The surveyor or engineer will be required to establish a minimum of three permanent horizontal and vertical control secondary monuments on each project that will serve as control for that particular project. These control monuments may not be reused for other projects. Survey control for each project must be tied into the primary control system and shown on the final plat.
3. The horizontal project control monuments will be established by standard traverse methods or a global positioning system (GPS) that ties into a minimum of two first order city horizontal control monuments. The horizontal control monuments must be placed at the intersection of the centerline of right-of-way regardless of whether the paving of the street is centered in the right-of-way. If a right-of-way intersection does not exist, a block corner, or other readily definable point can be used. Control coordinates for the two secondary horizontal control monuments must be shown on the final plat.
4. Secondary horizontal control monuments shall be established to an accuracy of third order. Secondary vertical control will be established using the method of differential levels to a third order accuracy.
5. A secondary horizontal control monument will be a $\frac{5}{8}$ inch x 24 inch iron pin with a 1 $\frac{1}{2}$ inches to 2-inch aluminum cap or 2-inch brass cap bearing the license number of the surveyor that established the control monument and a description of the monument location.
6. A secondary vertical control monument will be a $\frac{5}{8}$ inch x 24 inch iron pin with a 1 $\frac{1}{2}$ inch to 2-inch aluminum cap bearing the license number of the surveyor that established the monument and the monument elevation. Secondary vertical control marks can also be chiseled "X" in concrete head walls and curbs.
7. A minimum of 3 permanent reference markers shall be placed at each secondary control monument. All markers shall be set in concrete.
8. The location and identification of all permanent markers shall be shown on the face of the recorded plat. (Prior Code, App. B, Sec. 1-13; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-146 Street And Sidewalk Improvements.

The subdivider of any subdivision designed to be used for residential, commercial, industrial, mobile home parks, or other purposes shall layout, grade and otherwise improve all streets that are designated on the approved plat in accordance with the following provisions:

- A. The design of an improvement of an intersection of any new street with an existing state

or federal highway shall be in accordance with the specifications of the Oklahoma State Department of Transportation, but in no case shall the standards be less than the applicable city specifications; and

B. Public and private street construction standards and right of way widths shall be in conformance with the requirements set forth in Tables 1 and 2 which follow. The standards set forth in these tables are considered to be the minimum standards allowed. Site conditions and traffic projections might dictate the need to increase these minimum requirements.

C. The use of the Type B & C street improvement shall be limited to those areas zoned "B-1-A," Urban Estates Residential District or "PUD", Planned Unit Development and shall be subject to the following provisions:

1. The smallest lot within the development shall be used as the basis of determining the allowable street section.
2. The city may require any street within the "B-1-A," Urban Estates Residential District to be constructed to the Type "A" street standard or greater if it is determined that a street within the proposed development is an extension or link to an existing local Type "A" street or greater.
3. Type "B" streets will only be allowed in subdivisions where the minimum lot frontage is 150 feet and the lots are a minimum of 1 acre in size.
4. Type "C" streets will only be allowed in subdivisions where the minimum lot frontage is 200 feet and the lots are a minimum of 2 acres in size.

D. Sidewalks will be required on both sides of any Type "A" public or private street improvement that is contained within the subdivision. Sidewalks must meet all ADA requirements. Sidewalks shall be constructed in accordance with applicable standard specifications of the city. Sidewalks shall be 5 feet in width in residential areas. Sidewalks shall generally be located adjacent to the curb of the street.

E. In addition to the above, the subdivider may be required to improve, resurface, repair or replace off-site streets that directly serve the subdivision. The extent of the off-site street improvements must be approved by the City Council. The City Engineer shall maintain standard construction details and a list of materials that can be used for the construction of street improvements.

(Prior Code, App. B, Sec. 1-14; Ord. No. 3267-A, 4/6/93; Ord. No., 1/23/95 Ord. No. 3273-A, 5/24/93; Ord. No. 3363, 3/24/03, Ord No. 3638A)

Section 19-146

Street Improvements Table 1

| Design Element | Primary Arterial | Secondary Arterial | Collector Local | Low volume residential streets | | |
|----------------|------------------|--------------------|-----------------|--------------------------------|--------|--------|
| | | | | Type A | Type B | Type C |
| Design Speed | | | | | | |
| Outlying Areas | 65 mph | 45 mph | 35 mph | 35 mph | 35 mph | 35 mph |
| Urbanized Area | 55 mph | 45 mph | 35 mph | 35 mph | 35 mph | 35 mph |
| Min. Radius | 1650 | 950 | 400 | 250 | 150 | 150 |
| Max. Grade | 5% | 5% | 8% | 8% | 8% | 8% |

| | | | | | | |
|---|---------------------|---------|--------|--------|--------|--------|
| Min. Grade | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% |
| Stopping Sight Distance | 550' | 375' | 275' | 275' | 275' | 275' |
| No. of Lanes | 4 | 4 | 3 | 2 | 2 | 2 |
| Lane Width | 12' | 12' | 11' | 11' | 9.5' | 10' |
| Parking | none | none | 1 side | 1 side | None | None |
| Min. Street Width Measured to Face of curbs | 52' | 50' | 32' | 26' | 22' | |
| Width of Shoulder or parking lane | 10' | 10' | 10' | 8' | None | 3' |
| Right of Way Width | 120' | 80' | 60' | 60' | 60' | 60' |
| Access Control | Planned | Planned | | | | |
| Structure Design Load: | HS-20 | HS-20 | H-15 | H-15 | H-15 | H-15 |
| Vertical Clearance: | 17.5' | 15.5' | 15.5' | 15.5' | 15.5' | 15.5' |
| Minimum Allowable Lot Size | No minimum required | | | | 1 Acre | 2 Acre |
| Minimum Req. Lot Frontage | No minimum required | | | | 150' | 200' |

Note: All streets have six-inch curbs and enclosed storm drainage, except Type C.

Section 19-146 Paving Design Table 2

| Paving Design Type | CC | CA | RC | RA | RUEA |
|-------------------------|--|-----------|--------------------------|-----------|---------------|
| Street Classification | Arterial & Local | | Local (Only) | | |
| Use | Commercial Subdivisions | | Residential Subdivisions | | Urban Estates |
| Surface Material | Concrete | Asphalt | Concrete | Asphalt | Asphalt |
| Paving Thickness | 8" | 8" | 6" | 6" | 4" |
| Concrete Strength | 3,500 psi | | 3,500 psi | | |
| Asphalt Type "A" | | 5" | | 4" | 2" |
| Asphalt Type "B" | | 3" | | 2" | 2" |
| Base Material | Base Rock | Base Rock | Base Rock | Base Rock | Base Rock |
| Base Thickness | 4" | 6" | 4" | 6" | 8" |
| Sub-grade Compaction | 95% | 95% | 95% | 95% | 95% |
| Sub-grade Thickness | 8" | 8" | 8" | 8" | 6" |
| Sub-grade Stabilization | | | | | |
| P.I. Less than 15 | None | None | None | None | None |
| P.I. between 15 & 28 | Fly-Ash | Fly-Ash | Fly-Ash | Fly-Ash | Fly-Ash |
| P.I. > 28 | Paving Design by Registered Engineer is Required | | | | |

Liquid Limit – is the lowest moisture content at which soil tends to flow when disturbed slightly. The change from plastic to liquid and is expressed in percentage of water by weight to the weight of dry soil.

Plastic Limit – The lowest percentage of water that will allow rolling a sample to 1/8 inch diameter without crumbling. It is given in terms of percentage of water by weight to the weight of dry soil.

Plasticity Index (P.I.) - is the difference between the plastic and liquid limits.
(Prior Code, App. B, Sec. 1-14; Ord. No. 3267-A, 4/6/93; Ord. No., 1/23/95 Ord. No. 3273-A, 5/24/93; Ord. No. 3363, 3/24/03, Ord No. 3638A)

Section 19-147 Water Lines.

A. The subdivider shall install water lines and fire hydrants within his immediate subdivision. Installation shall be in accordance with these standards and the latest revision of Oklahoma Department of Health Engineering Bulletin No. 0589.

1. The minimum water line size shall be as follows:
 - a. Water lines constructed on section lines shall be not less than 12 inches in diameter;
 - b. Water lines constructed on ½ section lines shall be not less than 8 inches in diameter;
 - c. Water lines in residential areas shall be not less than 6 inches in diameter;
 - d. Water lines in commercial and industrial areas shall be not less than 8 inches in diameter;
 - e. Four (4) inch lines may be used in cul- de-sacs for distances not more than 300 feet;

In no case shall the pipe diameter be less than the diameter of the existing pipe being extended. The city may require the pipe size to be increased to accommodate future growth or meet distribution needs.

2. Fire hydrants:
 - a. Residential spacing for hydrants shall not exceed 500 feet;
 - b. Commercial and Industrial area spacing shall not exceed 300 feet;
 - c. Hydrants shall be located within 10 feet of a roadway. Hydrant location shall be adjusted so the hydrant is located on lot lines and street intersections;
 - d. Hydrants shall not be installed on lines less than 6 inches in diameter;
 - e. A valve shall be installed between the main and the hydrant;
3. Water mains shall be extended to the boundary of a subdivision. Mains shall be looped at intervals not exceeding 600 feet, unless approved by the City Engineer. Dead-end lines will require a fire hydrant for flushing. A waterline may be capped and not placed into service if no connections are anticipated on the section of line and the line is a dead end for a future extension. Flushing hydrants will not be required in this case.

4. All water mains shall be sized to supply a minimum of 45 psi and provide a fire flow of 1,500 g.p.m. at a residual pressure of 20 psi at the point of service. Higher pressures and flows may be required as defined in "NFPA 1231- Standard on Water Supplies for Suburban and Rural Fire Fighting, 1993 Edition." A Hardy-Cross analysis must be submitted with the final plat showing the proposed water line extensions meet these requirements.
5. Isolation valves shall be installed at all pipe junctions so that each section of pipe can be isolated. Valves shall be installed at no less than 1,000 feet on a straight section of pipe.
6. All creek and river crossings shall be encased in steel.
7. Private service lines shall be installed to all lots where a street crossing is required. Service lines shall be installed within 5 feet of a lot line. Separate service will be required for each lot or tract. The location of the service line shall be marked on the top of the curb with a "W." The letter "W" shall be 2" wide and 2½" high cut a minimum of ½" into the concrete curb.
8. Water lines shall be located in the street right of way 10 feet from the right of way line where possible.
9. All plastic water lines shall have a tracer wire to be used for location purposes.

B. The City Engineer shall maintain standard construction details and a list of materials that can be used for the construction of water line improvements.
 (Ord. No. 1811-A, 9-28-81; Prior Code, App. B, Sec. 1-15; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-148 Sanitary Sewers.

A. Sanitary sewers shall be installed to serve each lot. No individual disposal system or treatment plant shall be permitted except as noted herein.

1. The developer is required to connect to the public sewer system if the development is within 300 feet of the nearest public sewer line, measured from the subdivision boundaries or when subdivisions contain ten (10) acres and more than ten (10) lots.

B. Whenever a sanitary sewer is not accessible, septic tanks or other unit disposal systems may be used in accordance with the following provisions:

1. A lot on which a unit disposal system is located shall not be less than one acre in area if it is not served by a public water line, and two (2) acres in area if it has a water well;
2. No portion of any unit disposal system shall be located closer than twenty (20) feet

to the lot line of the lot on which the system is located; and

3. All unit disposal systems and plat requirements shall comply with the recommendations and requirements of the state and county health departments.
4. When a unit disposal system is proposed the County Health Department must sign the plat indicating the site is suitable for such purposes.

C. The City Engineer shall maintain standard construction details and a list of materials that can be used for the construction of sanitary sewer improvements. Sanitary sewers shall be installed in accordance with the latest revision of Oklahoma Department of Health Engineering Bulletin No. 0587 and these standards.

1. The depth and slope of sanitary sewers mains shall be designed so the maximum extension of the main can be made.
2. Manholes shall be provided at the ends of all main lines. If the line has potential for extension, one section of pipe shall be stubbed out.
3. Manholes located in low places, drainage ways or flood prone areas shall be raised so that water cannot enter. Watertight lids may be used with permission.
4. The maximum depth of flow in a sanitary sewer pipe line including peaks shall not exceed 60% of the diameter of the pipe for design purposes.
5. Private service lines shall be installed to all lots or tracts where a street crossing is required. The location of the service line shall be marked on the top of the curb with an "L." The letter "L" shall be 2" wide and 2½" high cut a minimum of ½" into the concrete curb.
6. Sanitary sewer mains shall be located, where possible in the street right of way on the opposite side of the street from the water line. The main shall be 10 feet from the right of way line where possible. Vehicle access to all manholes is important. All other line locations not conforming to the above must have prior approval of the City Engineer. All weather access roads or driveways may be required to provide access to manholes.
7. All creek and river crossings shall be encased in steel.8. No public sanitary sewer line shall be less than 8 inches in diameter.
9. When it is necessary to change pipe diameters, the pipe elevations shall be adjusted at the manhole so the tops of the pipes match. Discharge into a smaller pipe with a larger pipe will not be allowed.(Prior Code, App. B., Sec. 1-16; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-149 Storm Sewer And Drainage.

- A. General Requirements and Nature of Storm Sewers and Drainage Facilities - The

subdivider shall install all storm sewers and drainage improvements, and (such improvements) shall be designed and constructed in accordance with these standards.

1. Where a subdivision is traversed by a watercourse, drainage channel or stream, there shall be provided an easement adequate to contain the runoff from a 100-year rainfall event. The easement shall include all of the land within the subdivision that has an elevation below the 100-year rainfall event. The maximum water surface elevation shall be determined using appropriate engineering methods such as an HEC-2 model. Dedicated drainage ways shall be provided with adequate vehicular ingress and egress for maintenance purposes. If said drainage way is less than 150 feet, the minimum width required will be the floodplain plus an additional width of 15 feet on each side of the floodplain. The City Engineer may allow easement widths other than specified above when storm drainage improvements, topographic conditions, or floodplain permits are allowed.
 - a. U.S. Weather Bureau Technical Paper No. 40 and National Weather Service HYDRO-35 (June 1977) shall be used for rainfall information.
 - b. All drainage way systems shall be designed to receive and pass the runoff from a 100-year frequency rainstorm with full urbanization. The collector system shall be designed either:
 - (1) to pass a minimum of a 10-year frequency storm in a pipe network with overland flow capacities so the combination of any two will pass the runoff from a 100-year frequency storm event;
 - (2) or pass the entire 100-year flood in the pipe network.
 - (3) In the event, that a street has a slope greater than 1.0% the allowable storm water depth shall not be deeper than the height of the curb of the street for the 100-year design rainfall. The depth of water at sump locations shall be contained within the existing right-of-way for the 100-year design rainfall for full urbanization.
2. The overland flow portion of the collector system shall be confined to the dedicated right of way, or restricted drainage easements to assure that stormwater can pass through the development without inundating the lowest level of any building, dwelling or structure. Restricted drainage easements shall be shown on the plat.
 - a. Borrow ditches along Type "C" streets shall not exceed 4 feet in depth. Culverts shall be designed to handle the 10-year rainfall event.
 - b. All storm drainage and hydraulic calculations will be submitted to the engineering office for review and approval. This shall include sizing of catch basins, pipe, channels, bridges and storm water routing and volume calculations.
 - c. The rational method can be used to calculate runoff from areas less than 25 acres or closed pipe networks with discharges up to 400 cfs. For discharges more than 400 cfs a unit, hydrograph method will be used. U.S. Soil

Conservation Service models can be used on all areas.

- d. Piping from roof drains, French drains, swimming pools or sump pumps directly into a gutter by cutting the concrete curb will not be allowed.
 - e. The duration of the design storm shall not be less than two times the time of concentration or 6 hours.
 - f. The loss rates in determining the runoff hydrograph shall be an initial loss of 0.5 inches and a uniform loss of 0.08 inches/hr. for the subsequent hours once the initial losses are satisfied.
3. Location - The developer may be required by the Planning Commission and the City Engineer to carry away by pipe or open channel any spring, or surface water that may exist either previously to, or as a result of the subdivision. Such drainage facilities shall be located in the street right of way where feasible, or in perpetual unobstructed easements of appropriate width, and shall be constructed in accordance with these construction standards. Drainage easements shall extend from the street right of way to a natural watercourse or to other drainage facilities. When a proposed drainage system will carry water across private land outside the subdivision, appropriate drainage rights must be secured and indicated on the plat.
- a. Accommodation of Upstream Drainage Areas - A culvert or other drainage facility shall in each case be large enough to accommodate potential runoff from its entire upstream drainage area, whether inside or outside the subdivision. The City Engineer shall determine the necessary size of the facility, based on the provisions of the construction standards and specifications assuming conditions of full urbanization.
 - b. The City Engineer shall also study the effect of each subdivision on existing downstream drainage facilities outside the area subdivision. Drainage studies together with such other studies as shall be appropriate, shall serve as a guide to needed improvements. Where it is anticipated that the additional runoff incident to the development of the subdivision will overload an existing downstream drainage facility, the Planning Commission may withhold approval of the subdivision until provision has been made for the expansion of the existing downstream drainage facility.
- B. Detention Facilities - On-site detention may be required when a public drainage way designed to handle full urbanization is not available or the downstream basin is experiencing flooding. Private detention facilities will not be allowed unless it is designated as a common area in a PUD or RTC zoning district. A detention facility may also be allowed when it is located on the same lot or tract as the development being served. The detention facility cannot be separated from the improvement it serves.
1. Detention requirements shall be determined by taking the proposed runoff after development for only the development minus the existing runoff of the site. Peak release rates from the development should not exceed the natural runoff that occurred before developments for all storms up to and including the 100-year

storm. Areas suitable for on-site detention include parking lots and landscaped areas.² An owner may at his option contribute to the estimated or actual cost of a regional or sub-regional detention facility to be constructed in lieu of constructing on-site detention as above provided unless it is determined by the City Engineer that on-site detention should be required because of physical facts in the area. This option is only available if a plan for a regional or sub-regional detention facility has been adopted or constructed by the City Council.

3. The city shall determine the amount of the contribution or fee based on the type of development as defined using the Runoff Coefficients for the Rational Method published by the American Society of Civil Engineers and its relative impact on the drainage area versus the cost of the public improvement for that drainage basin. This shall be done by dividing projected flow for the development by the projected flow for the total area contributing to the regional detention facility determined by methods described in this section. This ratio times the total cost of the regional detention facility will determine the owner's contribution. The projected flows shall be based on the 100-year storm for a fully urbanized area.
4. When using an estimated cost, the cost shall be adjusted yearly, based on Engineering News Record Construction Cost Index and recognizing changes in land costs in the Muskogee area on the annual anniversary of the ordinance. The City Engineer will review and approve the estimated project cost and all calculations relating to contributions in lieu of on-site detention.
5. The boundaries of watersheds and priority of acquisition of regional and sub-regional detention facilities and construction of said detention facilities shall be established by the City Engineer and approved by the Planning Commission.
 - (a) Detention facilities must be designed for ease of maintenance. Side slopes should not be steeper than 3 horizontal units to 1 vertical unit (3:1) and the preferred slope is 4:1. All areas of an earthen basin must have a minimum of 6" of topsoil with established grass cover. A paved trickle channel from the inlet to the outlet structure to transmit low flows shall be provided. The channel width must be capable of containing the normal low flow.
 - (b) An access way at least 15 feet wide shall be provided to any required detention facility.
 - (c) The maximum allowable depth for water storage in a parking lot will be 6 inches for parking areas and 8 inches for driving areas. Drains will be designed to minimize the potential for clogging.
 - (d) Detention Facilities plan sheets shall show existing and final contours, typical cross sections through the facility, including 5 and 100 year water levels, details of inlet and outlet structures, a back water profile for the existing and proposed topography and a summary of the design calculations.
6. The Snyder Synthetic unit hydrograph method or the Soil Conservation Service derivative thereof, shall be used for the design of all detention facilities.

7. All detention facilities must be designed in a dry state unless a variance is granted by the City Engineer.
8. If a tract of land being developed is located in more than one watershed, grading work to divert flows from one watershed to another will not be allowed and compensatory storage will not be permitted in one watershed for that required in another.
9. In designing the dams for detention facilities, the book titled "Design of Small Dams" by the U.S. Department of the Interior, Bureau of Reclamation shall be used. An analysis shall be furnished of any proposed earthen dam construction soil. A boring of the foundation for the earthen dam may be required.
10. All detention dams or dikes shall be constructed as earth filled and non-overflow type dams. Spillways shall be constructed to pass the 500-year flood event with a minimum of (1) foot of freeboard on the earth dam structure.

C. Closed Conduit Storm Sewer Systems

1. All pipe systems shall be designed using methods to insure maximum water tightness. Pipe joints must have gaskets. Connections into manholes must be grouted with a non-shrink grout.
2. Storm water inlets shall be installed so that water is collected from the gutters at approximately 500 feet intervals. Storm water inlets shall be sized according to "Drainage of Highway Pavements" by the Federal Highway Administration, Hydraulic Engineering Circular No. 12, March 1984. All inlets shall be designed according to "Hydraulic Design of Highway Culverts" by the Federal Highway Administration, Hydraulic Design Series No. 5, and September 1985. Provide all calculations for review.
3. Inlets shall be located in such a manner that no portion of the inlet will encroach upon the curb radius within the street intersection. When possible, the inlet should be located upstream of the intersection and crosswalks, to intercept street flow before the flow can enter the intersection. Inlets should be located on local streets in advance of intersections, to intercept in-street flows before they run into collector or arterial streets.
4. All outlets shall have concrete head walls.
5. Manholes shall be located at all pipe junctions, bends and spaced no more than 500 feet apart.
6. When it is necessary to change pipe diameters the pipe elevations shall be adjusted at the manhole so the tops of the pipes match. Discharge into a smaller conduit or pipe with a larger conduit or pipe will not be allowed.
7. When storm sewers are constructed in fill areas, all materials in fill areas shall be

compacted to 95% standard proctor density prior to the laying of the pipe.

8. A maximum time of concentration of 10 minutes to the first inlet shall be used for single and multi-family residential areas. A maximum time of concentration of 5 minutes to the first inlet shall be used for commercial and industrial areas.
9. A manhole or junction box will be required at all changes in grade, alignment, elevation or when two or more different size pipes or conduits join together.
10. Storm water conduits should typically be located in the centerline of the street unless previous improvements will not allow said location.
11. The horizontal distance between storm sewer pipes being placed in the same trench shall be a minimum of 2' or one-third the diameter of the largest pipe, whichever is greater. This would include multiple pipe crossings for culvert purposes.
12. Radius pipes will not be used on storm sewers having a diameter less than 36". Radius pipes will be used on storm sewers larger than 36". The radius of the curve shall be not less than 5 times the diameter of the pipe. The degree of deflection shall be no more than 7-1/2 degrees per joint of radius pipe.
13. Manholes of 5 feet inside diameter shall be used whenever possible. If the diameter of the manhole exceeds 5 feet, junction boxes will be used. The rim elevation shall be indicated on all manholes and junction boxes. Manhole and junction boxes may be precast or cast in place.
14. Drainage pipes shall not enter manholes with 4 feet inside diameter in the Corbel (neck down) section. The size of pipe entering or leaving a 4 feet, diameter manhole shall not exceed 24 inches.
15. A minimum of 6 inches cover shall be provided over pipes and box culverts to the bottom of the sub-grade of the street except when box culverts are built with the top at the same grade of the street.
16. All storm sewers shall be shown in profile, showing flow line, size, type, grade and the design discharge. Profiles shall show the natural and proposed ground line at the center line of the storm sewer.
17. The radius of curve for a box structure shall be a minimum of 3 times the maximum width of the box structure, but not less than 50 feet.
18. Box culverts and bridges shall have adequate capacity to pass 100-year fully urbanized flows with 1' freeboard. Backwater analysis shall be provided by the consulting engineer to illustrate compliance with this requirement.
19. All head walls shall be broken back design except for culverts under roadway embankment where purpose of head wall is primarily to retain earth.
20. Storm sewer conveyance systems shall be closed-conduit up to 60" diameter pipe

or its hydraulic equivalent. Exceptions may be made to this requirement for lands being developed for park purposes and Type "C" street sections.

21. Connections from roof drains, French drains and sump pumps will be made at junction boxes, manholes, storm sewer inlet boxes and where stub out connections have been provided. Direct connections to the conduit pipe will generally not be allowed.

D. Open Channel Flow

1. Minimum velocity in an open channel, having a roughness coefficient less than or equal to 0.015, shall be 2.5 fps to avoid sedimentation. Use Manning's equation to determine the normal depth for the design flow and check to see if the critical depth is greater. Critical depth must always be less than normal depth. If the critical depth is greater than normal depth, the channel slope is too steep and must be changed.
2. All improved channels shall be provided with a minimum of 1' of freeboard.
3. The centerline radius of a curve on an improved channel shall be a minimum of 3 times the maximum top width at the design flow elevation.
4. The maximum allowable side slope for an improved channel with earthen slopes shall be 3 units horizontal to 1 unit vertical (3:1). Channel slopes steeper than (3:1) shall be protected using concrete, fabric form or other similar methods approved by the City Engineer.
5. A trickle channel will be required on all channel improvements that have flat bottoms. The trickle channel must be wide and deep enough to contain the normal dry weather flow but not less than 5 feet.
6. All earthen side slopes will receive a minimum of 6" of topsoil and be protected against erosion using sod, sprigging or seeding with protective geotextile matting. Where channel velocities are excessive special erosion control measures will be used to protect the channel. These measures will include grouted rip-rap, concrete lining, hydraulic jumps, and flow restrictions.
7. All open channels shall be designed for ease of maintenance and access to all points.
8. Water surface profiles will be required for large drainage channels where flows exceed 1,500 cfs. Profiles shall be computed using HEC 2.
9. Valley gutters at street intersections are not desirable and should never extend across a collector or arterial street.
10. The City Engineer will maintain standard details and an approved list of allowable materials for the construction of storm sewer improvements. (Prior Code, App. B, Sec. 1-17; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-150 Street Lighting.

A. Street lighting in a subdivision shall be addressed at the time the subdivision is platted. All easements required to provide service to street lights shall be shown on the plat. Standard street lighting in residential subdivisions will be one (1)-9500 lumens high pressure sodium light on a 28' wood pole.

B. Only one light shall be required at street intersections and crosswalks required by the Planning Commission. Higher density lights, additional lights, or decorative lights may be allowed with approval from the Public Works Director. Before permission can be granted, the property owner must furnish a written agreement between the adjoining property owner and the local electric company which insures payment of electric service and maintenance by the property owner.

C. Street lighting will be installed when the subdivision is 80% occupied. If the developer wants street lights installed prior to 80% occupancy, the developer must furnish a written agreement between the adjoining property owners and the local electric company which insures payment of the electric service and maintenance by the property owner until the city accepts responsibility for payment. Acceptance shall occur on 80% occupancy. Occupancy is based on issuance of certificates of occupancy in accordance with local building codes. (Prior Code, App. B, Sec. 1-18; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-151 Street Signs.

A. All traffic signs and street name signs shall be furnished by the developers. Their locations may be approved by either the Subdivision Review Committee or the Public Works Department. Regulatory signs (stop, speed limit, etc.) shall meet the city specifications and conform with the Manual on Uniform Traffic Controls. Color of signs will be the standard green background with white reflective letters. In the approved historical area, the signs shall have a brown background with white reflective letters. Private streets shall have a blue background with white reflective letters. The city will install the appropriate signs in new subdivisions at the developer's expense or the developer may install the signage with the approval of the Public Works Department.

B. The Public Works Director will maintain standard details and an approved list of allowable materials for sign construction. (Prior Code, App. B, Sec. 1-19; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-152 Maintenance And Supervision.

Where the subdivision contains sewer, sewage treatment plants, water supply systems, or other physical facilities necessary or desirable for the welfare of the area, or that of common use or benefit which are not or cannot be satisfactorily maintained by an existing public agency, provisions shall be made which are acceptable to the City Council for the proper and continuous operation, maintenance and supervision of the facility. (Prior Code, App. B,

Section 19-153 General Drafting Requirements For Improvement Plans.

A. All improvement plans prepared for the Department shall conform to the following provisions.

1. Title sheet shall be used for each set of plan documents. The title sheet shall include:
 - a. A location map shall be shown indicating the project area, section, township and range.
 - b. A page index.
 - c. Name of Project and city designated project number.
 - d. Developer's Name, Engineer's name, addresses, phone number, etc.
 - e. P.E. seal and signature line.
 - f. Legend.
 - g. Drawing Date (Month and Year).
 - h. Drawing Status (Preliminary, Final, As-Built).
2. Plan sheets shall generally be grouped as follows:
 - a. Title Sheet
 - b. Preliminary Plat (Reference Section 19-160)
 - c. Final Plat (Reference Section 19-168)
 - d. Site Grading Plan
 - e. Water Plan and Profile Sheets
 - f. Sanitary Sewer Plan and Profile Sheets
 - g. Paving and Storm Sewer Plan and Profile Sheets
 - h. Joint Layout Sheet
 - i. Special Detail Sheets
 - j. Erosion and sediment control details
 - k. Street cross-sections
 - l. City of Muskogee Standard Detail Sheets
 - m. Intersection layout plan
3. All drafting shall be done using AUTOCAD or other similar programs that are compatible with AUTOCAD.
4. Utilities shall be drawn using the computer aided drafting layer designation established by the City Engineer.
5. Construction Specifications shall be included as a separate document from the drawings. Plans shall only contain general notes.
6. A title block shall be used on each sheet. The title block shall be located in the lower right-hand corner. The title block shall include the city project number assigned by the City Engineer, date of the drawing, identification of the drafter,

name of the drawing, scale, name and address of the engineering firm, page number and total number of pages in the plan document.

7. AS BUILT Drawings - The following information shall be added to the as-built drawings.
 - a. Indicate what type of pipe material was used and date of installation.
 - b. Show all changes from original drawings.
8. Refer to the Section 19-167 for additional drafting requirements relating to plats and subdivisions.
9. All easements, right of way and street widths shall be shown.
10. North arrows and a bar scale will be shown on each page.
11. Grading Plan -- A grading plan will be required for subdivisions. The plan will detail all drainage channels, swales, lot grading, first floor elevations and other such improvements. Existing and proposed contours will be required. The developer will be required to do the improvements shown in the grading plan before final acceptance of the public improvements by the city.
 - a. Grading of lots and tracts shall conform to the following:
 - (1) A minimum of a 2% grade from the front building setback line to the top of curb.
 - (2) The rough lot grading will include the construction of a typical 35' x 40' building pad.
 - (3) The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of not less than 1 unit vertical in 12 units horizontal (1:12) for a minimum distance of 8 feet.
 - (4) Plans should show top of curb elevations, swales, channels, finished contours, detention areas and other such improvements.
12. Areas requiring fill will be compacted to densities appropriate for the intended use.
13. Drafting Requirements for Grading Plan - The grading plan shall be drawn at a 1"=50' horizontal scale for typical subdivisions. Existing contours shall be shown using a light dashed line. Finished contours shall be shown using a solid line.
14. Utility Drafting Requirements - A plan and profile sheet will be required for all water, sanitary sewer and storm sewer improvements. All plan and profile sheets for utility improvements in unimproved areas shall be drawn at 1"=50' horizontal, 1"=5' vertical. Plan and profile sheets for utility improvements in improved areas

shall be drawn at 1"=20' horizontal, 1"=5' vertical. All drawings shall be on 24" x 36" format. Special permission may be granted by the City Engineer for use of other scales and sheet sizes.

- a. Utility stationing shall begin at station 0+00 which is the point of tie-in for the waterline or the lowest point for a sanitary sewer. The plan view shall be oriented so the stationing runs from left to right and the plan view matches the profile.
- b. Survey coordinates shall be shown for each manhole and reference point. Bearing and distances shall be shown between manholes. All utilities that are visible at ground level shall have location coordinates established.
- c. The location of utilities shall be referenced to easement lines and property lines. Property ownership shall be shown where easements are acquired.
- d. A temporary benchmark shall be shown on every P & P sheet. A copy of all survey field notes shall be provided to the city.
- e. Match lines shall be used to go from sheet to sheet. An overlap of 40 feet should be used on each end of the P & P sheet.
- f. Locate and identify all known utilities. Show utility conflicts in both plan and profile view.
- g. Flow line and finished rim elevations shall be shown on all manholes. The top of the manhole shall be flush with paving and shall not extend more than 2 inches above finished ground elevations unless the location is in a flood plain or drainage way.
- h. The slope and size of the line shall be shown in the profile view. Show slope in percent.
- i. All manholes shall be numbered. Use the city designation numbers supplied by the City Engineer.

15. Drafting Requirements for Street Improvements - Street improvement plans shall consist of Plan and Profile Sheets, Joint Layout Sheets, Intersection Detail Sheets, and Cross Sections. Drafting requirements for the above shall conform to the following: a. Plan and Profile Sheet - A plan and profile sheet will be required for all street improvements. All plan and profile sheets for new street improvements in undeveloped areas shall be drawn at 1"=50' horizontal, 1"=5' vertical. All reconstruction of streets shall be drawn at 1"=20' horizontal. All drawings shall be on 24" x 36" format. Special permission may be granted by the City Engineer for use of other scales and sheet sizes.

- b. Stationing shall begin at station 0+00 which is the intersection of the new street with an existing street centerline. The plan view shall be oriented so the stationing runs from left to right and the plan view matches the profile.

- c. Survey coordinates, stationing and elevations shall be shown for each P.C., P.T., P.I., Intersection of side streets, and the beginning and ending of vertical curves.
 - d. Existing and finish grade elevations shall be shown at 50 foot stations.
 - e. Match lines shall be used to go from sheet to sheet. An overlap of 40 feet should be used on each end of the P & P sheet.
 - f. Show the slope of the centerline of the street. Show slopes in percent.
 - g. All property lines shall be shown, dimension and location referenced thereto. This includes right of way, easements, and building lines.
16. Joint Layout Sheet -The City Engineer will maintain a standard detail sheet for typical joint layout for the use of the developer.
17. Intersection Detail Sheet - A large scale drawing shall be shown for cul-de-sacs and intersections with spot elevations, top of curb elevations, drainage arrows indicating direction of flow, stations, construction joint layout, expansion joints, and location of inlets. Stationing shall be shown for all P.C., P.T. and P. I.'s.
18. Cross Sections of Street and Drainage Channels.
- a. All cross sections for streets shall be drawn to scale showing existing ground and proposed construction from building line to building line.
 - b. Each Station shall be clearly identified. Sections shall be shown on 100 foot intervals and at all P.C. and P.T.
 - c. Scale for cross sections shall be not less than:
 - Channels
 - 1"=10' Horizontal
 - 1"=5' Vertical
 - Streets
 - 1"=5' Horizontal
 - 1"=5' Vertical
 - d. Cross sections will be required on plans at center line of each lot when the slope from the top of the curb to the right of way exceeds twelve percent (12%). (Ord. No. 3363-A, 4/22/96)

Section 19-154 Geotechnical Investigation

A. Developers shall be required to provide a geotechnical report prepared by a licensed engineer where street or storm drainage improvements are required. The report will identify potential problems with perched ground water, high water tables, unstable soils, and special

conditions that may affect the long term stability of public improvements. The report will make recommendations as to the best method to mitigate problems identified by the report. The City Engineer may waive this requirement if there is no evidence of subsurface problems in the area to be developed.

1. If soil problems are identified that affect the public improvements and have the potential for affecting the private improvements, the problems with the private improvements must be addressed and resolved as part of the overall improvement plan.
2. If a subsoil drainage system is required as part of the private improvement the developer must install a storm water collection system capable of collecting the discharge from the individual subsoil drainage systems in addition to the normal surface runoff. The City Engineer may waive this requirement if there is no evidence of subsurface problems in the area to be developed. (Ord. No. 3363-A, 4/22/96)

Section 19-155 Utility Locations

A. Survey coordinates will be established to locate all city owned and maintained utilities. Accuracy shall be to the nearest 0.5 feet. The following items shall be located and identified by horizontal coordinates based off the City's survey system:

Manholes, Valves, Tees, Crosses, Fire Hydrants, Air Release Valves, Outfalls, Catch Basins, Vaults and other appurtenances.

B. Vertical control will be established for all gravity pipe lines. Accuracy shall be to the nearest 0.1 feet. Bench marks will be established to third order accuracy.

C. Utility location information will be denoted on the plan sheets by a table showing the description of the utility point and N-S, E-W coordinates. The engineer will submit a reproducible location map in hard copy and a copy of the map in magnetic media format drawn with AUTOCAD using the city's horizontal and vertical control system. (Ord. No. 3363-A, 4/22/96)

Section 19-156 Permits

All construction projects that involve more than 5 acres will require a storm water permit from EPA. Identified in Federal Register, Volume 57, No. 175. (Ord. No. 3363-A, 4/22/96)

DIVISION 5 - PLAT PREPARATION AND APPROVAL PROCEDURES

Section 19-160 The Preliminary Plat In General.

The subdivider shall prepare a preliminary plat for submission to the Planning Commission. The required fee, application form and copies of the preliminary plat as specified in the application form shall be submitted to the Planning Department not less than

twenty-one (21) days prior to the meeting at which it is to be considered. (Prior Code, App. B, Sec. 1-21; Ord. No. 3267-A, 4/6/93)

Section 19-161 Certification Of Design.

The preliminary plat shall be accompanied by a statement signed by the registered engineer preparing the plat that he has to the best of his ability designed the subdivision in accordance with the general plan, with which he is completely familiar, and in accordance with the ordinances and regulations governing the subdivision of land except where an exception is requested in writing and the reasons for which are clearly stated. (Prior Code, App. B, Sec. 1-21; Ord. No. 3267-A, 4/6/93)

Section 19-162 Contents Of The Preliminary Plat.

A. The preliminary plat shall be drawn at a scale of one hundred (100) feet to one inch and shall contain or be accompanied by the following information:

1. The scale, north arrow and date;
2. The proposed name of the subdivision;
3. The name and address of the owner of record, the subdivider and the registered engineer preparing the plat;
4. A key map showing the location of the proposed subdivision referenced to existing or proposed major streets and to government lines, and including the boundaries and number of acres of the drainage area of which the proposed subdivision is a part;
5. The names, with location of intersecting boundary lines, of adjoining subdivisions, and the location of city limits, if falling within or immediately adjoining the tract;
6. The land contours with vertical intervals not greater than two (2) feet referenced to a United States Geological Survey or Coast and Geodetic Survey bench mark or monument;
7. The location of existing buildings, water, watercourses, and the location of dedicated streets at the point where they adjoin or are immediately adjacent to the subdivision, provided, however, that the actual measured distances shall not be required;
8. The length of the boundaries of the tract, measured to the nearest foot and the proposed location and width of streets, alleys, easements, and setback lines and the lot dimensions;
9. The location, size and type of street improvements, sanitary and storm sewers, water mains, culverts, power and natural gas lines and other surface and subsurface

structures and pipe lines existing within or immediately adjacent to the proposed site;

10. The location of all drainage channels and subsurface drainage structures and the proposed method of disposing of all runoff from the proposed subdivision, and the location and size of all drainage easements relating thereto, whether they are located within or outside of the proposed plat;
11. The classification of every street within or adjacent to the subdivision in accordance with the intended use of the street based on the proposed design. This shall be done by placing the appropriate term, expressway, primary thoroughfare, secondary thoroughfare, collector (or minor), directly on each street;
12. Zoning district classification (if there is more than one classification, the dividing lines should be shown) on land to be subdivided and on adjoining lands;
13. Proposed fill or other structure elevating techniques, levees, channel modifications, and other methods to overcome flood or erosion-related hazards. Such fill and compaction shall be in conformance with the city's building code; and
14. Lots and blocks numbered consecutively and the size of the lots in square feet or acres.
15. Show ties into the City of Muskogee Survey Control System. (Prior Code, App. B, Sec. 1-21; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-163 Planning Commission Action On Preliminary Plat.

The City Planning Commission shall approve, approve conditionally or disapprove the plat within sixty (60) days of the date of its submission by the applicant. If the preliminary plat is disapproved, the reasons for such action shall be stated in writing, a copy of which shall be signed by the Planning Commission chairman and transmitted to the subdivider. Unless stipulations or additional time is agreed to by the subdivider, and if no action is taken by the Planning Commission within sixty (60) days after submission, the plat shall be referred to the City Council for action. The reasons for disapproval shall refer specifically to those parts of the general plan or specific regulations with which the plat does not conform. On conditionally approving a plat, the Planning Commission may require submission of a revised preliminary plat. If the plat conforms to all of the standards, or after the applicant and Planning Commission agree upon any revision which shall be filed with the Planning Commission on a revised copy, the subdivider may proceed with the final plan of streets and roads, the preparation of utility plans and with the preparation of a final plat. (Prior Code, App. B, Sec. 1-21; Ord. No. 3267-A, 4/6/93)

Section 19-164 Subdivision Review Committees.

- A. There shall be created a subdivision review committee, the membership of which shall

be composed of one representative of each of the following departments or agencies and such other officials as the City Manager of the city may designate:

1. Planning department (chairman of committee);
2. Engineering department:
 - a. Water division; and
 - b. Sewer division;
3. Public works department;
4. Fire department;
5. City-county health department; and
6. Private utility companies.

The purpose of the Subdivision Review Committee is to review preliminary and final plats for conformance with these articles and to provide recommendations to the Planning Commission. (Prior Code, App.B, Sec. 1-21; Ord. 3267-A, 4/6/93)

Section 19-165 The Final Plat And Final Plans In General.

The required fee, application form and copies of the final plat and improvement plans and specifications as required on the application form shall be submitted to the Planning Department not less than twenty-one (21) days before the Planning Commission meeting. Underground utilities, streets, curbs and gutters shall not be installed to the project site before the site is leveled to the appropriate finish grades. Also no utilities, street or site improvements shall be constructed until the final plat and final plans have all been approved by the Planning Commission and City Council in accordance with all city specifications and ordinances. (Prior Code, App. B, Sec. 1-22; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-166 Time Of Submission.

The final plat of the proposed subdivision shall be submitted to the Planning Department within one year of the date of which the preliminary plat was approved. If not submitted for final approval within such time, the preliminary plat shall be considered as having been disapproved unless the Planning Commission agrees to an extension of time. The final plat shall be filed in the office of the county clerk within one year after approval by the City Council, or if not filed within such time, the approval shall be considered as having been voided. When deemed appropriate by the Planning Department, the final plat may be submitted simultaneously with the preliminary plat. (Prior Code, App. B, Sec. 1-22; Ord. No. 3267-A, 4/6/93)

Section 19-167 Drafting Of Final Plat.

A. The final plat shall be drawn at a scale of one hundred (100) feet to one inch from an accurate survey and on sheets of the dimensions of twenty-four (24) inches by thirty-six (36) inches. On the first sheet of every plat there shall be a key map showing the location of the subdivision referenced to government survey section lines and major streets. If more than two (2) sheets are required for the plat, the key map shall show the number of the sheet for each area. A border of one inch shall be left blank at the right-hand side, a border of one and one-half (1 ½) inches at the top and bottom, and a margin of two (2) inches at the left side for binding purposes.

B. The engineer will be required to prepare the plat using computer aided drafting techniques. The engineer is required to use an AUTOCAD compatible program and submit final drawings in magnetic format in addition to the two (2) reproducible mylars of the plat. (Prior Code, App. B, Sec. 1-22; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-168 Contents Of The Final Plat.

A. The final plat shall show:

1. The location and description of all section corners and permanent survey monuments in or near the tract, to at least two (2) of which the subdivision must be referenced;
2. The length of all required lines dimensioned in feet and decimals thereof, and the value of all required true bearings and angles dimensioned in degrees and minutes, as hereafter specified;
3. The boundary lines of the land being subdivided fully dimensioned by lengths and bearings, and the location of boundary lines of adjoining lands, with adjacent subdivisions identified by official names;
4. The lines of all proposed alleys. Where the length or direction of an alley is not readily discernible from data given for lot and block lines, length or bearing shall be given;
5. The widths, and names where appropriate, of all proposed streets and alleys, and of all adjacent streets, alleys, and easements which shall be properly located. If names of proposed streets are not available, the engineer preparing the plat must obtain street names from the 911 coordinator;
6. The lines of all proposed lots fully dimensioned by lengths and bearings or angles, except that where a lot line meets a street line at right angles, the angle or bearing value may be omitted;
7. The outline of any property which is offered for dedication to public use fully dimensioned by lengths and bearings, with the area marked "Public";
8. The blocks numbered consecutively throughout the entire subdivision and the lots numbered consecutively throughout each block, with areas to be excluded from

plattting marked "Reserved" or "Not a Part";

9. The location of all building lines, setback lines, and easements for public services or utilities with dimensions showing their location; 10. The radii, area, point of tangency, point of intersection and central angles for curvilinear streets and radii for all property returns;
11. The proper acknowledgment of owners and the consent by the mortgagor to plat restrictions;
12. Show ties into the City of Muskogee Survey Control System.
13. The location of all areas in the subdivision that is located within the floodplain.
14. The following shall be made and shown on the mylar drawing:
 - a. Owner's certificate and dedication, signed;
 - b. Certificate of survey, signed and with appropriate seal and acknowledged;
 - c. Certificate for release of mortgage for any portion dedicated to the public;
 - d. Reference to any separate instruments, including restrictive covenants, filed in the office of the County Clerk which directly affect the land being subdivided;
 - e. Certificate of County Clerk;
 - f. Certificate of City Council's approval and acceptance of ways, easements, and public land dedication;
 - g. County Treasurer's certificate as to payment of taxes;
 - h. Department of Environmental Quality's certificate whenever a sanitary sewer in not reasonably accessible and a unit disposal system is proposed;
 - i. Improvement assurance as per Section 19-143; and
15. A title which shall include:
 - a. Name of the subdivision;
 - b. Name of city, county and state; and
 - c. Location and description of the subdivision referenced to section, range and township. (Prior Code, App. B, Sec. 1-22; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

A. The Planning Commission shall act upon the final plat within forty-five (45) days after it has been submitted for final approval. Unless stipulation for additional time is agreed to by the subdivider, and if no action is taken by the Planning Commission at the end of forty-five (45) days after submission, the plat shall be submitted to the City Council for action.

B. If the final plat is disapproved, grounds for this refusal shall be stated in writing, a copy of which shall be transmitted with the tracing and prints to the applicant. The reason for disapproval shall refer specifically to those parts of the general plan or ordinance with which the plat does not comply. (Prior Code, App. B, Sec. 1-22; Ord. No. 3267-A, 4/6/93)

Section 19-170 City Council Action.

Before recording the final plat, it shall be submitted to the City Council for approval and for acceptance of public ways and service, and utility easements and land dedicated to public use. This approval of the plat shall be shown over the signature of the mayor and attested by the City Clerk. The disapproval of any plat or plan by the City Council shall be deemed a refusal of the proposed dedication shown thereon. (Prior Code, App. B, Sec. 1-22; Ord. No. 3267-A, 4/6/93)

Section 19-171 Recording Of Plat.

A. After final approval of the plat and the affixing of all required signatures on the original mylar, the subdivider shall provide the Planning Department with two (2) reproducible mylars, the mylars to be filed with the Planning Department.

B. The installation and acceptance of improvements are required prior to recordation of the final plat except when improvement guarantees are provided under Section 19-143 (D).

C. The Planning Department shall file the final plat with the County Clerk. The applicant shall pay all required filing fees. (Prior Code, App. B, Sec. 1-22; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-172 Submittals Of Plans And Specifications.

Two (2) sets of prints of the proposed plans and specifications for all improvements shall be filed with the City Engineer. One set of reproducible (mylar Drawings) and a copy on magnetic media of "as-built" plans and specifications shall be submitted to the department of engineering. All "as-built" plans and specifications shall be certified and signed by an engineer registered in the State of Oklahoma, and shall be submitted to the engineering department prior to the acceptance of the City Council of any improvements installed by the subdivider, and the issuance of building permits within the subdivision, unless appropriate improvement guarantees have been accepted in conformance with Section 19-143 of this code. (Prior Code, App. B, Sec. 1-22; Ord. No. 3267-A, 4/6/93; Ord. No. 3273-A, 5/24/93)

DIVISION 6 - ADMINISTRATION AND AMENDMENT

Section 19-180 Variations And Exceptions.

Where the Planning Commission finds that extraordinary hardships or practical difficulties may result from strict compliance with these regulations and/or the purpose of these regulations may be served to a greater extent by an alternative proposal, it may approve variances to these Subdivision Regulations so that substantial justice may be done and the public interest served, provided that such variance shall not have the effect of nullifying the intent and purpose of these regulations; and further provided, the Planning Commission shall not approve variances unless it shall make findings based upon the evidence presented to it in each specific case that:

- A. The granting of the variance will not be detrimental to the public safety, health or welfare or injurious to other property;
- B. The conditions upon which the request for a variance is based are unique to the property for which the variance is sought and none of which are self-imposed;
- C. Because of the particular physical surroundings shape or topographical conditions of the specific property involved, a particular hardship to the owner would result; and
- D. The variance will not impair the intent and purpose of the Zoning Regulations or conflict with the Comprehensive Plan;

Such modification may be granted upon written request of the subdivider stating the reason(s) for each modification and may be waived by three-fourths (3/4) vote of the regular membership of the Planning Commission, subject to the acceptance of the plat and the dedications thereon by the City Council. (Prior Code, App. B, Sec. 1-23; Ord. No. 3267-A, 4/6/93; Ord. No. 3363-A, 4/22/96)

Section 19-181 Administration And Amendment.

The City Council may, from time to time, adopt, amend and make public rules and regulations for the administration of these regulations to the end that the public be informed and that approval of plans be expedited. These regulations may be enlarged or amended by the City Council after public hearing, due notice of which shall be given as required by law. (Prior Code, App. B, Sec. 1-24; Ord. No. 3267-A, 4/6/93;)

Section 19-182 Penalty.

Any person who shall violate any of these provisions of these regulations, or who shall fail to comply therewith, or with any of the requirements thereof, shall be deemed guilty of an offense and shall be punished as provided in Section 1-115 of this code. Each day such violation shall be permitted to exist shall constitute a separate offense. In addition to the other remedies provided herein, the city may institute any proper action or proceedings to enforce the provisions of this regulation. (Prior Code, App. B, Sec. 1-28; Ord. No. 3267-A,

4/6/93)

Section 19-183 Conditions For Issuing A Building Permit.

Building permits may be issued on changes or alterations of an existing structure when the tract of land on which the structure is located does not comply with the provisions of these regulations with the following limitations:

- A. The existing property boundaries are not being changed or altered in any respect;
- B. The owner must provide a property survey, by a licensed surveyor in the State of Oklahoma, when the permit shows an addition to an existing structure. The survey will show all property lines, easements, rights-of-ways, buildings, parking, setbacks, size of tract and zoning;
- C. This exemption shall not apply to sites with mobile homes. (Ord. No. 3267-A, 4/6/93)

Section 19-184 Warning And Disclaimer Of Liability.

The degree of flood protection required by the flood plain ordinance and regulation is considered reasonable for regulatory purposes and is based on engineering and scientific method of study. Larger floods may occur on rare occasions. Flood heights may be increased by manmade or natural causes, such as bridge openings restricted by debris or encroachment on the floodway. These subdivision regulations do not imply that areas outside of the delineated flood hazard areas of land uses permitted in such areas will be free from flooding or flood damages. These subdivision regulations shall not create liability on the part of the city or any officer, commissioner, or employee thereof for any flood damages that result from reliance on these subdivision regulations or any administrative decision made thereunder. (Ord. No. 3267-A, 4/6/93)