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CHAPTER 12

DRAINAGE

SECTION:

10-12-1: DRAINAGE:

(A) All subdivisions shall have an engineer designed and Zoning Board approved drainage system plan which shall include full details of all surface and/or subsurface improvements. Design of the drainage system plan and stormwater management facilities shall be in accordance with current and best engineering practices. The standards for the design shall be adequate for the soils within the site as well as meet applicable local, state and federal requirements in existence at the time of subdivision approval.

(B) Drainage systems shall have adequate capacity to bypass through the subdivision the flow from all upstream areas currently accepted upon the subdivision site and for that volume of water generated by a storm of one hundred (100) year frequency for the County. See: Plate 3.

(C) Internal drainage of the subdivision shall adequately drain all portions of the subdivision, and shall be designed for a storm of one hundred (100) year frequency with a release rate from the site not to exceed the stormwater runoff rate in its natural undeveloped state, as otherwise herein indicated. Runoff concentration shall not be permitted which cause erosion or other hazards to life and property within, adjacent to, or downstream from the subdivision.

(D) Whenever agricultural tiles are located within a subdivision which drains an area outside of the subdivision, the developer shall dedicate an easement not less than ten feet (10') in width along each side of the agricultural drainage tile for purposes of maintenance, improvements or replacement of the tile. Tiles may be relocated but shall be placed in easements or contained within public rights-of-way. The developer shall be responsible for relocating all agricultural field tile in the subdivision that services any area located outside the subdivision. New tile must replace all disturbed agricultural tile. Relocated tile shall retain the design flow

of the original tile. Agricultural drainage tiles which drain an area outside of the subdivision shall remain a separate system and not incorporated into the subdivision surface and/or subsurface system, except that a connection may be permitted where the flow entering the agricultural tile system is not increased beyond the flow of the site in its present natural undeveloped state. There shall be no connection between a septic system, storm sewer, road drainage system, or sink to any agricultural field tile unless approved by the County Health Department. The Zoning Board may require the subdivider to take those actions necessary for the purpose of discovery of the agricultural drainage tile. Agricultural drainage tiles shall, where possible, be aligned in easements located along property lines. Tiles crossing potential building pads and septic system locations shall be relocated or the lot designed to avoid such potential conflict.

(E) Design flows for roadside ditches shall conform to the requirements of the Illinois Department of Transportation's Bureau of Design, Design Manual, latest amended edition; however, at a minimum, such ditches shall be designed to accommodate the maximum discharge from a storm of twenty (20) year frequency. Stormwater sewers which serve as main or terminal collectors shall be of sufficient design to accommodate a maximum discharge from a storm of ten (10) year frequency. Those storm sewers which serve as laterals shall be of sufficient design to accommodate a maximum discharge from a storm of five (5) year frequency.

(F) The filling, alteration, widening or any other restriction or alteration of a natural stream and flood basin shall be permitted only as shown upon the final approved engineering drawings. Where erosion occurs along stream side slopes, whether caused by alteration or natural occurrence, suitable erosion controls shall be instituted by the developer. All disturbed areas will be seeded, fertilized, and mulched to prevent soil loss in excess of tolerable soil loss limits as defined by the U.S. Soil Conservation Service. Temporary erosion control measures will be used during the time of development to control excess soil erosion caused by development activities. Permanent measures will be installed as well where needed. Where such occurrences exist on stream slopes extending twelve percent (12%), said slopes shall be contained and dedicated in a natural easement.

(G) Where roadway ditches or swales are permitted, such ditches or swales shall be completely included within the road rights-of-way.

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Where ditch or swale integrity requires additional protection, additional easements may be required either permanently or during construction. Unless lesser standards are approved due to special circumstances, drainage shall be improved as follows:

1. Slopes: Both front and back slopes shall not exceed a four to one ratio (4:1) ratio slope; and,

2. Grades: With grades to four percent (4%), ditches may have sod bottoms and banks; where ditch grades of four percent (4%) to eight percent (8%) occur, gradient control structures shall be used to maintain the ditch slope at four percent (4%) or less; with greater than eight percent (8%) grades, ditches or swales shall have riprap or be paved.

(H) Where crossroad culverts occur, the rights-of-way shall be sufficient to include any headwall or similar structure.

Floodplain data used in all design work shall be as per the Village of Arthur's Ordinance No. 19-88, "An Ordinance Regulating Development in Special Flood Hazard Areas".