

79-3

ORDINANCE

WHEREAS, at the present time, the County of Tippecanoe and the Tippecanoe County Drainage Board have no policy for the storm drains for new developments and sub-divisions in Tippecanoe County, Indiana; and

WHEREAS, Tippecanoe County and the Tippecanoe County Drainage Board have no design and construction criteria in Tippecanoe County, Indiana; and

WHEREAS, there is a drainage, storm drainage and storm water problem in Tippecanoe County and there is a need for storm drainage for all new developments and sub-divisions and there is also a need for a standard design and construction criteria for sewer systems in Tippecanoe County.

NOW, THEREFORE, BE IT ENACTED by the County of Tippecanoe State of Indiana, that the following shall be the guiding policy to be applied by the Tippecanoe County Drainage Board and all other units of government in Tippecanoe County in determining the adequacy of storm drainage for either individual, commercial or residential in Tippecanoe County, Indiana:

GUIDING POLICY FOR THE STORM DRAINAGE FOR ALL  
NEW DEVELOPMENT IN TIPPECANOE COUNTY, INDIANA

Anytime a land use is changed to a usage which may tend to create more or increase the rate of storm water runoff, the burden of proof that the change does not create harm to the neighbors or to the community must rest with the persons causing the change. Since topography and the availability and adequacy of outlets for storm runoff vary with almost every jobsite, the requirements for storm drainage tend to be an individual matter for each project; it is recommended that each proposed project be discussed with the Tippecanoe County Drainage Engineer at the earliest practicable time in the planning stage. By law, drainage approval by the Drainage Board is required on almost all land use changes within the jurisdiction of Tippecanoe County.

An outline of some of the premises or parameters which must be considered in the storm drain plan evaluation and approval are as follows:

- A. The plans for each development shall recognize the existing drainage pattern from other lands and shall adequately provide for upstream or uphill runoff and in a manner which will not block future development of offsite lands.
- B. Each project shall have a functioning primary system of storm drainage based on the runoff from a normal rainfall (usually 10 year) event; each project shall have by design a secondary or backup system of storm drainage adequate to protect buildings or other permanent structures or property in an unusual (such as 100 year) rainfall event.
- C. The outlet or outfall from the primary system of storm drainage shall connect to a ditch or stream which is available for public use, and the developer (sponsor of the land use change) shall obtain easement or other right of access for his system across any intervening lands.
- D. When a public drain is deemed inadequate to handle the added runoff from a proposed change in land use, the developer (sponsor of the land use change) may be required to rebuild or repair the public drain or portions thereof; where such repair or rebuilding of a stream, ditch, or drain is not practicable, the rate of runoff from the development shall be limited and controlled by means of an onsite detention basin or similar runoff tempering means having adequate capacity; no such detention means shall be deemed adequate unless it includes lawful and binding provisions for ongoing maintenance.
- E. The developer shall make definite provisions for the control of soil erosion, and shall be responsible for the correction

of any offsite erosion damage caused or encouraged by his development,

- F. Flood plains shall be respected,
- G. A greenway or greenbelt may be or may have been designated on certain watercourses; when such has been designated, it shall be respected,
- H. Each Subdivision developer must provide the necessary information and meet the requirements set out in the 1965 Indiana Drainage Code, as Amended thru 1978, for the establishment of a new Legal Drain.

The establishment of a new Legal Drain will be required unless it is determined by the Drainage Board that the need for such drain does not exist.

- I. The Drainage Engineer, with the consent of the Drainage Board, will determine the necessary easements for the adequate maintenance of any new Legal Drain.

BE IT FURTHER ENACTED by the Board of Commissioners of Tippecanoe County, State of Indiana, that the following shall be the standard requirements of the designs and construction of any sewer system for any development, either individual, commercial or residential in Tippecanoe County, Indiana, and new plans for any construction of any such development shall be approved by any unit of government of Tippecanoe County, Indiana, until the following Design and Construction Criteria for Sewer Systems is complied with:

TIPPECANOE COUNTY, INDIANA

DESIGN AND CONSTRUCTION CRITERIA FOR SEWER SYSTEMS

All designs shall conform to the requirements of the Indiana State Board of Health, and to Ten States Standards as specified in "Recommended Standards for Sewage Works" as approved by Great Lakes-Upper Mississippi River Board of State Sanitary Engineers.

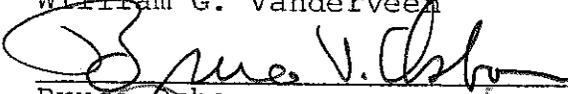
Plans for subdivision sewers shall be submitted for approval with submission of final plat. All plans shall be submitted for approval prior to any construction and construction shall be done in accord with approved plans. Plans shall be prepared to include and meet the following criteria:

1. North Arrows, date, scale, engineer or land surveyor's name and seal, description of nearest permanent BM with USCGS Datum which was used for this project.
2. Plans and profiles of all sewers, and plans, profiles and cross sections of all open storm water drains; with the scale 1" = 100' horizontal, and 1" = 5' vertical, except cross sections to be 1" = 5' in both planes. A location map shall be included within each set of plans and profiles; this map shall show the proposed sewers and/or open ditches together with the adjoining streets and lots - dedicated or proposed - and other property splits. Map to carry current lot number and final dimensions of streets, lots and tracts. In unusual special cases, other scales may be acceptable.
3. Invert elevations of all sewers to be given at manholes and at open drain structures. The grade and design flow of the proposed sewer shall be noted between manholes. At points where sewers cross or where the proposed sewer will cross a water main or other utility, the elevations of both shall be given and shown in profile.
4. The size, type and strength of pipe is to be specified and if any alternates are to be considered, they, too, shall be specified.
5. Manhole types, inlet or catch basin sizes, and type of castings are to be specified. Any manholes, inlets or catch basins which are not of County of Tippecanoe Standard, and all headwalls, spillways, etc. shall be shown in detail.
6. Complete design computations together with shed areas within and above the project shall be prepared and submitted for approval. Shed area map shall show increment drainage areas, direction of street and lot grades and proposed storm sewers with sizes. Except for special cases, street pavements shall not drain more than 600 feet without inlets and any street intersection shall have inlets to avoid valley gutters. In special cases, oversize inlets or special structures may be required.

7. Enclosed storm drainage to be designed on the ten year rainfall frequency curve for Lafayette. Open storm drainage, when permitted, to be designed from CFS equal to 1.6 times the shed area in acres ( $Q=1.6A$ ) or to flow data approved by the Tippecanoe County Drainage Engineer with velocity of flow determined from Manning's Equation. In the storm drainage design, the designer shall consider the entire watershed above the proposed project and shall allow for runoff from this area based on full development in accordance with present zoning.
8. Minimum velocities based on pipe flowing full for all storm sewers shall be  $2\frac{1}{2}$  FPS. Maximum average velocity for any culvert flowing full shall be 5 FPS unless otherwise shown in County Surveyor's Office standards.
9. Manning's Roughness Coefficients to be as follows: smooth bore VCP, RCP, ACP, and fully lined CMP - .013; CMP with paved invert - .020;  $\frac{1}{2}$ " deep corrugation CMP - .024; 1" or 2" deep corrugation CMP - .030; open ditches - .040.
10. Minimum slope of open ditch bottoms to be 0.001 (0.1%). Ditch bank slopes to be not steeper than 2:1; to have a proper stand of approved vegetation; and to have proper erosion control structures at inlets, outlets, and points of deflection.
11. The developer of the project shall be responsible to see that all work is done in accord with the approved plans, standards, and specifications, and such responsibility shall include the correction by cleaning of any pipes which become choked with dirt or other foreign matter, the correction of any damage to open ditches by erosion or other actions, and the maintenance of satisfactory vegetation on all open ditches. These responsibilities of the developer shall continue throughout the period of all construction within the project and until 75% of the development or of the homes are occupied, or until the proper public authority issues a release in writing from such responsibility.

Entered at Lafayette, Indiana, this 6th day of  
November, 1978.

BOARD OF COMMISSIONERS OF  
THE COUNTY OF TIPPECANOE

BY:   
William G. Vanderveen  
  
Bruce Osborn  
  
Robert F. Fields

ATTEST:

  
Michael E. Smith  
County Auditor