Subdivision Control Ordinance Article Six

Major Subdivision
Principles and
Standards of Design

Article Six

Principles and Standards of Design

6.1 Purpose and Use

A. The following pages state the design standards for all subdivisions. Each section is broken down into specific categories. These categories include:

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B. The purpose of these regulations is to:

- a. promote the proper arrangement of roads,
- b. prevent congestion of streets and promote traffic safety,
- c. secure adequate public spaces,
- d. insure proper densities of population,
- e. provide adequate utilities and public improvements,
- f. insure the accurate survey and proper preparation of plats, and
- g. protect the health, safety, and general welfare of the people.

General Standards

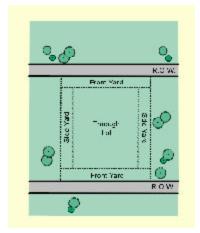
6.2 General Standards

- A. No land shall be subdivided for any use if the land is considered by the Plan Commission to be unsuitable for such use by reason of flooding or improper drainage, or objectionable earth or rock formations, topography or other features harmful to the health, safety and welfare of future residents or visitors and by the community as a whole.
- B. The Plan Commission may require either a general or operational soil survey, with interpretations, where it is not readily apparent from existing information that the land to be subdivided is not subject to flooding or does not contain poor drainage characteristics.
 - a. If required, the survey shall be conducted by a qualified person or agency acceptable to the Plan Commission. In the event that the Plan Commission finds the land to be subdivided unacceptable due to the results of the soils survey, the Plan Commission shall not approve the plat.
 - b. The Plan Commission may prescribe conditions that the subdivider must meet to obtain approval and these conditions may be incorporated into an agreement between the Plan Commission and the subdivider.
- C. The subdivision design and layout shall be such that it protects the health, safety, and general welfare of the residents in the jurisdiction of the Madison County Plan Commission.
- D. No Parent Tract (defined page 18 section "B" Subdivision Control Ordinance, paragraph 3.2A.a. shall be permitted unless public sewer and water systems are available and will be used by all lots to be created and any remaining tract.
- E. In addition to the requirements established herein, all subdivision plats shall comply with the following rules, laws, and regulations:
 - a. The local zoning ordinance, building and housing codes, and all other applicable laws of Madison County and the statutory provisions of the State of Indiana.
 - b. The current Comprehensive Plan and Thoroughfare Plan as adopted by the Board of County Commissioners.
 - c. The rules and regulations of the Indiana Department of Environmental Management, the Department of Natural Resources, the Aeronautics Commission, the Madison County Drainage Board, and other appropriate agencies.
 - d. The rules, regulations and standards of the Indiana Department of Transportation (if the subdivision or any lot contained therein abuts a state highway).
 - e. All applicable planning and regulatory guidelines, including access control, driveway manuals, parking and traffic control ordinances, and other applicable guides published or adopted by Madison County.
 - f. The "Indiana Manual of Uniform Traffic Control Devices" for placement and installation of traffic control devices.
- F. All subdivisions shall be designed on state plane coordinates

Lot Standards

6.3 Lot Standards

- A. All lot sizes, setbacks, widths, width to depth ratios, and other dimensions shall comply with the minimum standards provided by the Madison County Zoning Ordinance.
 - a. When not served by public water and sewer, the lot sizes and other dimensions shall also conform with any additional requirements for the adequate provision of sewage treatment and water supply as determined by the Madison County Health Department.
 - b. In cases where the provisions of the Zoning Ordinance and requirements of the Health Department are in conflict, the more restrictive shall apply.
- B. Side lines of lots shall be at approximately right angles to straight streets and on radial lines on curved streets. Some variation from this requirement is permissible, but irregular lots, such as flag lots shall be avoided.
- C. The lot size, width, depth, shape, grade, location, and orientation shall be in proper relation to the street and block design and to existing and proposed topographical conditions.
- D. Every lot shall abut on a public street consistent with the requirements of this Ordinance and the Madison County Zoning Ordinance.
- E. Double Frontage lots (also known as through lots, shown below) shall be avoided except where essential to provide separation of residential development from traffic arterials or to overcome specific disadvantages of topography and orientation.



- a. For all through lots, a landscaped common area shall be provided between the rear yard of the lots and the right-of-way of the adjacent street.
- b. The landscaped area shall be a minimum of 15 feet in width and meet the following requirements:
 - 1. A row of deciduous canopy trees shall be planted parallel to the adjacent street, within the common area with trees placed an average of 20 feet apart. The trees shall measure 2 1/2 inches in diameter at nursery height (6 inches above the rootball) at the time of planting.
 - 2. A 6 foot tall opaque wooden fence or brick or stone wall, a 4 foot tall undulating mound planted with shrubs, or a row of evergreen trees shall be placed within the landscape common area between the deciduous trees and the rear yard of the lots.
 - i. If an undulating mound is used to fulfill the requirements, 1 shrub for every 10 feet of continuous boundary shall be planted on the mound. All required shrubs shall measure 18 inches in height measured from grade at the time of planting.

Lot Standards

(continued)

- ii. If a row of evergreen trees is used to meet the requirements, 1 tree shall be placed every 10 feet along the common area. Evergreens shall measure 6 feet in height at the time of planting.
- F. Corner lots shall be required to provide front yard setbacks on both frontages, and shall be designed with adequate size and width to accommodate the required setbacks and adequate buildable area.
- G Lots shall be numbered consecutively throughout the entire subdivision and shall be consistent with any phasing that may be planned for the development.
- H. Lots abutting a watercourse, drainage way, channel, stream, or flood plain shall have additional minimum width or depth as required to provide an adequate building site and afford the minimum usable area required by the Zoning Ordinance from front, rear, and side yards.
- I. Direct vehicular access from lots to Arterial streets shall be prohibited. Lots in all developments shall generally be designed so as to prevent vehicles from having to back into any Collector Street. All non-residential lots (including multifamily residential lots) shall generally be designed so as to prevent vehicles from having to back into any public street.

Block Standards

6.4 Block Standards

- A. Blocks shall have sufficient width to provide for 2 tiers of lots of appropriate depth. Exceptions to this prescribed block width shall be permitted where reverse or double frontage lots are used in blocks adjacent to arterial or collectors streets, watercourses, or industrial or commercial areas.
- B. Block length, width, and acreage within bounding streets shall be such as to accommodate the size of lot required by the Zoning Ordinance for the district in which the subdivision is to be located, and to provide convenient access, circulation control, and safety of street traffic.
- C. Blocks shall not exceed 800 feet in length, nor be less than 300 feet in length. In the case of a block exceeding 400 feet in length, a pedestrian sidewalk a minimum of 5 feet in width shall be provided within an easement not less than 10 feet in the width near the center and entirely across the block to provide circulation or access to schools, playgrounds, common open space, shopping centers, transportation and other community facilities.
 - a. The sidewalks shall be constructed consistent with the sidewalks construction standards provided in Article 7 of this Ordinance.
 - b. An association of lot owners in the subdivision shall be responsible for the maintenance of the sidewalk and easement.

Street Location and Arrangement Standards

6.5 Street Location and Arrangement Standards

- A. **General Requirements:** The arrangement, character, extent, width, grade and location of all streets shall be correlated to existing and planned streets, existing topography, public convenience and safety, and the proposed uses of the land to be served by such streets.
 - a. Proposed streets shall be adjusted to the contour of the land so as to produce usable lots and streets of reasonable gradient.
 - b. The street layout shall provide adequate vehicular access to all lots and parcels of land within the subdivision.
- B. **Design Considerations:** In designing and approving subdivision streets, the following factors shall receive consideration:
 - a. accessibility for emergency vehicles and school buses;
 - b. safety for both vehicular and pedestrian traffic;
 - c. efficiency of service for all users;
 - d. connectivity between subdivisions and the development of complete communities;
 - e. liabilities or amenities as affected by traffic elements in the circulation system; and
 - f. economy of both construction and use of land.
- C. **Thoroughfare Plan Application:** All proposed subdivisions shall conform to the current Thoroughfare Plan adopted by the Board of County Commissioners. Whenever any tract to be subdivided embraces any part of the Thoroughfare Plan, that part of the public way shall be platted by the subdivider in the location and of the width recommended by the Thoroughfare Plan.
- D. **Street Arrangement:** The arrangement of streets in all subdivisions shall promote the continuation of existing streets, proposed future streets, and streets to be provided as a result of the subdivision construction.
 - a. <u>Continuation of Existing and Proposed Streets</u>: The arrangement of streets in all subdivisions shall provide for the continuation and projection of existing and proposed streets on immediately adjacent properties and in surrounding areas generally, or conform to a street plan of the general area approved and adopted by the Plan Commission.
 - b. Continuation of Subdivision Streets: Right-of-way of proposed streets shall be extended to the boundary lines of the proposed subdivision so that either (1) at least one connection may be made to each adjacent undeveloped property, or (2) at least one connection may be made for every 1,600 feet of property line shared between the subdivision and adjacent undeveloped property. In cases where these provisions are in conflict, that which provides the most points of connectivity shall apply.
 - 1. The Plan Commission may waive this requirement in cases where the Commission deems that any such extension is not feasible due to topography or other physical conditions, or the extension is not necessary or desirable for the coordination of existing and future streets or not appropriate for the development of adjacent property consistent with the Comprehensive Plan.
 - 2. No subdivision shall be designed so as to create or perpetuate the land-locking of any adjacent undeveloped tract.
 - c. <u>Temporary Dead-End Streets</u>: A temporary dead-end street shall be permitted in any case in which a street is designed to be extended to adjacent properties in the future.
 - 1. Any dead end street which extends more than 300 feet in length shall be provided with a temporary cul-de-sac or other turn-around consistent with the requirements of the County Engineer.

Street Location and Arrangement Standards (continued)

- 2. Any temporary turn-around shall be included in a roadway easement which shall be vacated to the property owners at the time the street is extended or the Board of County Commissioners, upon recommendation of the County Engineer and Planning Director, determines that the turn-around is no longer needed.
- 3. All temporary dead end streets shall be provided with street signage that indicate the road as being a "dead end". The subdivider shall assume all costs of the installation of the signs.
- E. **Traffic Separation Requirements:** Where a subdivision abuts or contains an existing or proposed arterial or collector street as shown in the Thoroughfare Plan, the Plan Commission may require:
 - a. marginal access streets;
 - b. reverse frontage contained in a nonaccess reservation along the rear property line having a minimum width of 5 feet:
 - c. lots with rear service ways, or
 - d. any other such other treatments as may be necessary for adequate protection of residential properties and to afford separation of through and local traffic.
- F. **Service Road Requirements:** Where a subdivision borders on, or contains an existing or proposed interstate or other limited access highway or arterial road as shown on the Thoroughfare Plan or a railroad right-of-way, the Plan Commission may require a street approximately parallel to, and on each side of the right-of-way, at a distance suitable for the appropriate use of the intervening land (such as for park purposes in residential districts).
 - a. Such distances shall be determined with due regard for the requirements of approach grades and future grade separations.
 - b. The Plan Commission may require that the intervening land strips be dedicated to the county or to a lot owners association for the subdivision in which it is located. The land strip shall be maintained by the involved government unit or lot owners association from the date of any such dedication.
- G **Half-Streets:** Half-streets shall be prohibited. Whenever a half-street is adjacent to a tract to be subdivided, the other half of the street shall be platted within the tract.
- H. **Improvement of Existing Streets:** Whenever a proposed subdivision borders or includes an existing street, the Commission may require, as a condition of plat approval, the reconstruction or widening of such street, the provision of sidewalks, and any other improvement consistent with the requirements of this Ordinance for new streets developed as a part of the subdivision.
 - a. Additional dedication of right-of-way shall be required consistent with the adopted Madison County Thoroughfare Plan.
 - b. Except for situations where a passing blister is required at the entrance to a subdivision, this provision shall not be interpreted as requiring the acquisition and dedication of right-of-way or the completion of improvements extending onto property on the opposite side of a street adjacent to the subdivision, where such property is not included in the street right-of-way and not owned or otherwise controlled by the subdivider.
- I. Access Requirements: Subdivisions of 20 lots or less shall be limited to one point of access onto any arterial or collector road. For subdivisions of greater than 20 lots, two or more streets, driveways, or points of vehicle access may be approved or required by the Plan Commission if such accesses are determined by the Plan Commission to be required for safe and efficient traffic circulation or the continuation of existing streets, or are otherwise recommended by the Madison County Thoroughfare Plan.

Street Location and Arrangement Standards (continued)

- J. **Private Streets:** Private streets shall be prohibited.
 - a. In no case shall this be interpreted as being in conflict with the shared drive requirements of Article 3 of this Ordinance.
 - b. When there is a situation of unusual physical conditions or a controlled design environment in evidence, and it can be satisfactorily demonstrated to the Commission that a waiver of the public street requirement, and the provision of a private street, is the only feasible solution, said private street may be permitted and shall be equal in all aspects of construction to like-classified public streets, including pavement section and width.
 - 1. A road way easement shall be provided which equates the right-of way requirements for like-classified public streets.
 - 2. Required setbacks from the private street roadway easements shall be equal to those which are required from the rights-of-way of like-classified public streets.
 - 3. Street lights, curbs and gutters, and sidewalks shall be provided for all private streets consistent with the requirements for like-classified public streets.
 - 4. Adequate covenant provisions shall be made for direct responsibility and control by the property owners involved to provide for the perpetual operation, liability, and maintenance of said private streets at no expense to any current or future governing jurisdiction.

Street Geometric Standards

6.6 Street Geometric Standards

- A. **General Requirements:** The classification of all streets shall be defined by the Thoroughfare Plan. The Plan Commission shall assign a classification, based on the provisions of the Thoroughfare Plan, to all proposed streets at the time of Preliminary Plat review and approval.
- B. Street Measurement: Street width shall be measured from back of curb to back of curb.
- C. **Intersection Requirements:** Street intersections shall be designed to promote the maintenance of the sight visibility triangle requirements of the Madison County Zoning Ordinance and shall be consistent with the following additional requirements;
 - a. Streets shall be laid out so as to intersect as nearly as possible at right angles. A proposed intersection of 2 new streets at an angle of less than 80 degrees shall not be acceptable. All streets shall intersect at 90 degrees whenever possible and maintain the 90 degree orientation for a minimum distance of 100 feet in residentially used and/or zoned areas and a distance of 300 feet in non-residentially zoned or used areas.
 - b. Not more than 2 streets shall intersect at any 1 point, unless specifically required to promote efficient and safe traffic movement or in response to a recommendation of the Thoroughfare Plan.
 - c. Proposed new intersections along 1 side of an existing street shall, whenever practicable, coincide with any existing or proposed intersection on the opposite side of such street. Street jogs with center line offsets of less than 200 feet shall not be permitted.
 - d. Local street intersections shall be rounded by radii of at least 25 feet. A radius of at least 35 feet shall be used at all intersections with an arterial road, and radius of at least 30 feet shall be used at all intersections with a collector road. The above minimum radii shall be increased as required by the County Engineer when the angle of street intersection is less than 90 degrees, and/or where necessary to accommodate a school bus or emergency vehicle.
 - f. Intersections shall be designed with a flat grade wherever practical. In hilly or rolling areas, at the approach to an intersection, a leveling area shall be provided having not greater than a two 2% grade at a distance of 100 feet in either direction, measured from the center line of the intersecting street.
 - g. At the intersection of any proposed Local Road with any existing street, acceleration and deceleration lanes, and passing or left turn lanes may be required by the Plan Commission and/or County Engineer.
- D. **Reverse Curve Requirements:** A tangent of at least 100 feet long shall be introduced between reverse curves on arterial and collector roads. All local roads shall have a tangent at least 50 feet long on reverse curves.
- E. **Sight Distance Requirements:** A clear sight distance, measure along the centerline of the road, shall be provided for a minimum 300 feet along all roads with speed limits greater than 45 miles/hour (MPH), 200 feet along all roads with speed limits between 30 and 45 mph, and 100 feet along all roads with a speed limits of 30 mph or less.
- F. **Vertical Grade Requirements:** The maximum vertical grade shall not a exceed a maximum of 5% for arterial roads, 7% for collector roads, and 8% for local roads. Such maximum grades shall be reduced by 50% on all roads within 200 feet of an intersection with another street or a railroad.

Street Geometric Standards (continued)

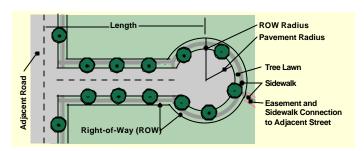
G **Street Geometric Design Requirements:** All streets shall conform to the minimum specifications for design established by the following table based on the classification provided by the Thoroughfare Plan or otherwise assigned by the Plan Commission. All alleys shall have a minimum pavement width of 16 feet and a minimum right-of-way width of 20. All alleys shall be consistent with the construction standards provided in this Ordinance for local roads.

Street Design Requirements							
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Danium Standard		all uses)		ector	Danidantial	Local Road	la diretalel
Design Standard Right-of Way Width (feet)	Divided 100	Non-divided 90	Residential 70	Non-Residential 80	Residential 60	Commercial 60	Industrial 70
, , ,							
Pavement Width (feet)	2 @ 24	48	36	36	26	26	28
Median (feet)	16	NA	NA	NA	NA	NA	NA
Curb & Gutter	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Minimum Sidewalk Width (feet)	8	8	5	8	5	8	8
Minimum Planting Strip (feet)	10	10	10	10	6	6	6
Maximum Grade	5%	5%	7%	7%	8%	8%	8%
Minimum Grade	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Minimum Tangent	100	100	100	100	50	50	50
Minimum Corner Radius (feet)	35	35	30	30	25	25	25

Cul-de-sac Standards

6.7 Cul-de-sac Standards

- A. General Requirements: Cul-de-sacs may be permitted by the Plan Commission only in locations where either of the following conditions exist:
 - a. the construction of a through street is not possible due to the presence of natural barriers, or
 - b. the construction of a through street is not possible due to the presence of an adjacent development which provides no opportunities for connecting any through street.
- B. All cul-de-sacs shall meet the following design requirements:
 - a. The maximum length of all cul-de-sacs shall be 300 feet, measured along the centerline from its intersection with the centerline of another street to the center of the turn-around right-of-way.
 - b. The minimum pavement radius of all cul-de-sacs shall be 60 feet.
 - c. The minimum right-of-way radius of all cul-de-sacs shall be 75 feet. Sufficient right-of-way shall be provided to allow a minimum of 12 feet of right-of-way between all sides of the cul-de-sac turn-around pavement and adjacent properties.
 - d. The intersection of the cul-de-sac street segement and cul-de-sac turn around shall be rounded by a radii of at least 30 feet.
 - e. A sidewalk 5 feet in width shall be provided around the entire turn-around of the cul-de-sac. A 6 foot wide tree lawn shall be provided between the back of curb of the cul-de-sac pavement and the sidewalk.
 - f. In no case may an arterial or collector road terminate in a cul-de-sac.
 - g. A sidewalk shall be provided between two lots located on the turn-around of the cul-de-sac connecting the sidewalks adjacent to the turn-around with those on adjacent streets and/or within adjacent developments.
 - 1. The sidewalk shall be a minimum of 5 feet in width and shall be located in an access easement which is a minimum of 10 feet in width.
 - 2. The sidewalks shall be constructed consistent with the sidewalks construction standards provided in Article 7 of this Ordinance.
 - 3. An association of lot owners in the subdivision shall be responsible for the maintenance of the sidewalk and easement.



C. Cul-de-sacs shall be distinguished from the shared drives required for administrative subdivisions in Article 3 of this Ordinance. Shared private drives shall be permitted serving a maximum of 4 lots, which are not part of a larger subdivision.

Curb & Gutter Standards

6.8 Curb & Gutter Standards

- A. **General Requirements:** Poured concrete 2-foot curbs and gutters shall be provided on all roads. Curbs shall be installed on each side of the street surface and are to be considered as part of the width of the street.
- B. Gutter Grade Requirements: The minimum grade of any street gutter shall not be less than 0.5%.

Sidewalk Standards

6.9 Sidewalk Standards

- A. General Requirements: Sidewalks shall be provided on all roads and shall meet the following design standards.
 - a. Sidewalks shall be provided on both sides of the road, including completely encircling the turn-around of any cul-de-sac.
 - b. A sidewalks shall measure a minium of 5 feet in width along all roads in residentially zoned or used areas and 8 feet in width in all commercial, industrial, and mixed use areas.
 - c. Sidewalks shall be separated from the back of curb of the adjacent road by a planting strip which is a minimum of 10 feet in width along arterial and collector roads and 6 feet in width along local roads. Generally, the back of the sidewalk shall not be located less than 1 foot inside of the right-of-way line for the adjacent road.
 - d. Smooth transitions (slow tapers) are required if a sidewalk is to be transitioned from one width to another.
 - e. The surface of any sidewalk when completed shall have a sufficient slope to drain toward the center of the street.
- B. Asphalt pedestrian paths, rather than concrete sidewalks are permitted when they are a part of a trail system linking common open spaces, public spaces, or natural features. All asphalt paths must be a minimum of 8 feet wide and meet the thickness and base requirements of the County Engineer.
- C. When sidewalks or pathways cross roads within or adjacent to the subdivision, safety devices such as painted crosswalks, alternative pavement types, signs, or traffic signals shall be installed.
- D. Easements of at least 10 feet in width shall be provided for sidewalks or pedestrian paths which are not completely included in public right-of-way adjacent to a road. Pedestrian paths and sidewalks which link common areas, public sites, or natural features as part of the subdivision's open space design shall be included in the subdivision's common area, and may not be located within an easement on private property.

Street Lighting Standards

6.10 Street Lighting Standards

- A. Street lights shall be provided by the subdivider at all intersections of roads within and adjacent to the subdivision and where necessary to provide continuous lighting on all subdivision streets.
- B. The specific locations of the street lighting shall be determined by the Plan Commission, the County Engineer, and the Board of County Commissioners, based on the lighting options made available by the appropriate local electric company.
- C. Street lights shall be located in the right of way, adjacent to the road. The light fixtures shall be located in the planting strip which separates the road pavement from the sidewalk.
- D. All costs related to the installation of the street lighting shall be the responsibility of the subdivider. All costs relating to the use and maintenance of the street lights shall be the responsibility of the lot owner's in the subdivision.

Subdivision and Street Name Standards

6.11 Subdivision and Street Name Standards

- A. The proposed name of the subdivision shall not duplicate, or too closely approximate phonetically, the name of any other subdivision in Madison County covered by these regulations. The Plan Commission shall have final authority to approve the name of the subdivision which shall be determined at the time of the Preliminary Plat approval.
- B. Street names shall not duplicate any existing name within Madison County except where a new street is a continuation of an existing street.
 - a. Streets which are designed and/or shall function as the extension of an existing street shall be named consistent with the existing street.
 - b. The term "court" shall be reserved for cul-de-sac streets. The terms "place" and circle" shall be reserved for circular streets which intersect with another street at two locations and cannot be divided into more than one street.
 - c. Street names that may be spelled different but sound the same as existing streets shall not be used.
 - d. All street names and addresses are subject to review and approval by the Plan Commission for consistency with the County 911 emergency phone system.
 - e. The Board of County Commissioners shall have final authority to name all streets at the time of acceptance of public improvements.

Easement Standards

6.12 Easement Standards

- A. General Requirements: Adequate areas of suitable size and location shall be provided as utility easements for the conveyance of utility systems to, and within the subdivision. Generally, easements shall be provided in the following manner:
 - a. Easements for water supply, telephone, cable television, electricity transmission, data networks, and natural gas shall be a minimum of 15 feet in width and provided in the front yard adjacent to the right-of-way of the public road. Water supply service may also be provided in the right-of-way.
 - b. The provision of sanitary sewer service shall be accomplished in the right-of-way.
- B. Drainage easements shall be a minimum of 15 feet in width, with 1/2 the width of the easement taken from each lot. In the case of lots extending to the boundary of the lands platted and not adjoining another plat, and front yard drainage easements, the full width of the easement shall be provided on such lots. Drainage easements shall:
 - a. provide continuity from block to block,
 - b. be located along rear, side, or front lot lines as necessary, and
 - c. generally be contiguous to the street at the end of the block to connect with adjoining blocks in the shortest direct line.
- C. Where a subdivision is traversed by a watercourse, drainage way, channel, or stream the subdivider shall designate drainage easements on both sides of the watercourse, the width to be determined by the Plan Commission and the County Engineer and, in the case of a legal drain, the Madison County Drainage Board.
- D. Easements to permit access for maintenance and repair of surface and subsurface drainage improvements established by law and utility installations, shall be provided on the Preliminary Plat, Construction Plans, and Final Plat.
- E. The location of all easements shall be reviewed by the County and/or its representatives along with the local utility companies through the Technical Review Committee process.
- F. When a proposed drainage system shall carry water across private lands outside the subdivision, appropriate drainage rights must be secured by the subdivider and indicated on all required plat drawings.

Public Sites and Open Space Standards

6.13 Public Sites and Open Space Standards

- A. **General Requirements:** In all subdivisions that include 20 or more acres, the subdivider shall be required to plat a minimum of 500 square feet of open space for each dwelling unit. The minimum amount of open space provided shall be 1 acre. For the purposes of this calculation, a dwelling unit shall be defined as a single-family home, condominium, or apartment/rental unit.
 - a. Easements, crosswalks, and road frontage to provide public access to the common open space shall be shown on all required subdivision plat drawings.
 - b. Easements, roadways, and rights-of-way cannot be considered open space.
 - c. All open space shall be usable spaces for normal recreation.
- B. **Design Requirements:** The required open space shall meet the following requirements:
 - a: Open space shall be concentrated at a minimum number of sites within each development to provide the maximum amount of usable space.
 - b. Common open areas may not include floodplains, detention ponds or other portions of the development which are undevelopable. Common open spaces should be located adjacent to such natural features when they are present in, or adjacent to, the development.
 - c. Existing natural features which add value to residential development and enhance the attractiveness of the community shall be preserved in the design of the subdivision and should be incorporated into designated open space.
 - d. Common open spaces within each development shall be linked with each other and with existing and future open spaces in adjacent developments through the required sidewalk system or through the use of pedestrian paths.
 - 1. All common open spaces shall have at least 10 feet of frontage on a public street which includes sidewalks, and be linked to that sidewalk system by either a sidewalk or pedestrian path
 - All required common open spaces shall be owned and maintained by the leasing company for tenant-occupied developments and a lot owners association for developments with individually owned dwelling units. In no case may an access easement be substituted for a required common open space.
 - e. Common areas being a minimum of 10 feet wide, and including a minimum 5 foot wide concrete sidewalk or 8 foot wide asphalt trail, shall be provided permitting access from natural site features such as floodplains, detention ponds, and historic sites to public streets with sidewalks.
 - f. Access easements shall be provided for any private sidewalks providing access to the common open space for persons outside the development.
 - g. All common open spaces shall be maintained for the enjoyment of the residents of the development and shall be free of weeds and other noxious vegetation.
- C. **Ownership Requirements:** The subdivider shall reserve the open space acreage for common use of residents and visitors to the subdivision. The land shall be deeded by the subdivider to a duly organized lot owners association within the subdivision.

Street Tree Standards

6.14 Street Tree Standards

- A. **General Requirements:** All subdivisions shall be required to provide street trees along all streets within and adjacent to the subdivision.
 - a. Street trees shall be planted either in the right-of-way, or within 5 feet of the right-of-way on adjacent property included in a street tree easement.
 - b. Street trees shall be provided in the right-of-way unless, in the opinion of the Planning Director, that location would present a hazard for underground or overhead utilities or public safety.
 - c. Existing trees on property located in the right-of-way of a public street may be considered as meeting the street tree requirement if such trees are in good health and are protected during the construction process.
 - 1. The Plan Commission shall determine whether or not existing trees may be used to satisfy the street tree requirement at the time of Preliminary Plat review.
 - 2. The Planning Director may require the provision of maintenance bonds consistent with Article 5 of this Ordinance for any existing trees preserved for use as street trees.
- B. **Planting Requirements:** One street tree shall be planted for every 40 feet of street frontage. Trees may be evenly spaced or grouped together. Street trees shall also meet the following requirements:
 - a. All street trees shall be a minimum of 2 1/2 inch calliper as measured consistent with the American Nursery Standards Institute (ANSI), 6 inches from the top of the rootball, at the time of planting.
 - b. No tree may be planted so that its center is closer than 2 feet to a sidewalk or curb, or edge of pavement if no curbs are present.
 - c. No tree shall be planted within 25 feet of the intersection of two street rights-of-way, within 10 feet of the intersection of a street and an entrance driveway, or within the Sight Visibility Triangle established by Article 6 of the Madison County Zoning Ordinance.
 - d. No tree shall be planted within 10 feet of any fire hydrant or 2 lateral feet of any underground utility service.
 - e. Street trees shall be of one or more of the species described in the table below:

Approved Street Trees					
	part 1 of 2				
Common Name	Scienfitic Name				
Hornbeam					
American Hornbeam	Carpinus Caroliniana				
Upright European Hornbeam	Carpinus Betulas "Fastigiata"				
American Elm					
Accolade Elm	Ulmus Japonica x Wilsoniana "Morton"				
Homestead Elm	Ulmus "Homestead" (complex hybrid)				
Frontier Elm	Ulmus Carpinifolia x Parvifolia "Frontier"				
Ash					
Green Ash	Fraxinus Pennsylvanica				
White Ash	Fraxinus Americana				
Ginko					
Fairmount Ginko	Ginko Biloba "Fairmount"				
Sentry Ginko	Ginko Biloba "Sentry"				
Upright Ginko	Ginko Biloba "Upright"				

Street Tree Standards

Approved Street Trees				
	part 2 of			
Honeylocust				
Majestic Honeylocust	Gleditzia Triacanthos Inermis "Majestic"			
Moriane Honeylocust	Gleditzia Triacanthos Inermis "Moriane"			
Shademaster Honeylocust	Gleditzia Triacanthos Inermis "Shademaster"			
Skyline Honeylocust	Gleditzia Triacanthos Inermis "Skyline"			
Sunburst Honeylocust	Gleditzia Triacanthos Inermis "Sunburst"			
Linden				
Greenspire Linden	Tilia Cordata "Greenspire"			
Chancellor Linden	Tilia Cordata "Chancellor"			
Swedish Upriaht Linden	Tilia Cordata "Swedish Upright"			
Silver Linder	Tilia Cordata "Silver"			
Basswood	Tilia Americana			
Maple				
Sugar Maple	Acer Sacchrum			
Armstrong Red Maple	Acer Rubrum "Autumn Flame"			
Red Sunset Red Maple	Acer Rubrum "Red Sunset"			
Tilford Red Maple	Acer Rubrum "Tilford"			
Cleveland Norway Maple	Acer Platanoides "Cleveland"			
Columnar Norway Maple	Acer Platanoides "Columnar"			
Crimson King Norway Maple	Acer Platanoides "Crimson King"			
Royal Red Norway Maple	Acer Platanoides "Royal Red"			
Summershade Norway Maple	Acer Platanoides "Summershade"			
Oak				
Basket Oak	Quercus Michauxis			
Single Oak	Quercus Inbricaria			
Red Oak	Quercus Borealis			
Willow Oak	Quercus Phellos			
Bur Oak	Quercus Macrocarpa			
Chinkapin Oak	Quercus Muehlenbergii			
River Birch	Betula Nigra			

Sanitary Sewer Standards

6.15 Sanitary Sewer Standards

- A. **General Requirements:** Lots in all major subdivisions, except those containing 6 lots or less consistent with Section 6.2(D) of this Ordinance, shall be served by sanitary sewers. The appropriate sanitary sewer system shall be designed and installed by the subdivider and dedicated to the appropriate sanitary sewer provider.
 - a. The system shall be provided with all necessary supplemental equipment or machinery (including, but not limited to, lift stations) and be in such lengths, sizes, dimensions and specifications as shall be required by the sanitary sewer service provider.
 - b. Sewer mains, transmission lines and structures, with the exception of any above ground structures such as lift stations or pumps, shall generally be located underground in the right-of-way provided along public streets. In all instances, the required drawings of these transmission lines shall be shown with the locations of any required street trees.
- B. **Plans and Specifications:** The plans for the installation of a sanitary sewer system shall be prepared by a registered professional engineer, be provided by the subdivider, be approved by the appropriate sanitary sewer service provider, and be in accordance with the Indiana State Board of Health and Indiana Department of Environmental Management (IDEM) regulations. Upon completion of the sewer installation, the plans "as-built" in paper (hard copy) and electronic format, shall be filed with the County Engineer and the appropriate sanitary sewer service provider.

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Water Supply Standards

6.16 Water Supply Standards

- A. **General Requirements:** Lots in all major subdivisions shall be served by a public water supplier. The appropriate public water supply system shall be designed and installed by the subdivider and dedicated to the appropriate water utility.
 - a. The water system shall include all necessary supplemental equipment and machinery including but not limited to all pipes, fire hydrants, and valves.
 - b. Water supply mains and transmission lines shall be located either in the right-of-way adjacent to public streets or in the front yard of lots in easements immediately adjacent to the rights-of-way.
- B. **Installation Standards:** The installation of the water supply system shall be done in accordance with the plans, profiles and specifications prepared by a registered professional engineer and shall be approved by the County and be in conformance with at least the minimum requirements of the Indiana State Board of Health and Indiana Department of Environmental Management (IDEM).
 - a. Distribution system: No pipe smaller than 6 inches in diameter shall be permitted. Six-inch pipe shall be limited to lengths of not over 800 feet unless looped. In high-volume districts, so designated for purposes of fire protection and prevention, distributors shall be not less than 8 inches and cross-connected within 800 feet. On arterials and for all long lines, distributors shall be 12 inches or larger.
 - b. Valves. Valves shall be installed so that no single accident, break, repair or extension will necessitate shutting down a length of pipe greater than 500 feet in high-volume districts, or greater than 1,000 feet in other districts so that flows may be maintained through arterial mains. All taps shall be installed at the same time as the water mains providing service for that development.
 - c. Hydrants: Fire hydrants shall be installed meeting the following requirements:
 - All hydrants, their setting, number, and size of outlets shall conform to standards and specifications of the American Insurance Association and the applicable policies of the fire protection district in which the subdivision is located.
 - 2. One hydrant shall be placed near each street intersection. Intermediate hydrants shall be placed where the distance between intersections exceeds 600 feet.
 - 3. In high-value districts, as now or hereafter designated for purposes of fire defense and protection, the distance between hydrants shall not exceed 450 feet.
 - 4. Dry fire hydrants shall be placed in existing and proposed water bodies consistent with the specific requirements of the appropriate local fire protection district.
- C. **Plans and Specifications:** The plans for the installation of water main supply systems shall be provided by the subdivider and approved by the appropriate water service provider. Upon completion of the water supply installation, the plans for such system "as built", in paper (hard copy) and electronic format, shall be filed with the County Engineer and the appropriate water service provider.

Private Utility Standards

6.17 Private Utility Standards

- A. **General Requirements:** All utility transmission lines providing service to the subdivision, including electrical power, gas, telephone, cable television, data transmission, sewer, and water shall be located underground throughout the subdivision. The location of utility lines shall be shown on the Preliminary Plat and on the Construction Plans.
- B. **Design Requirements:** Service lines for electrical power, natural gas, telephone, cable television, and data transmission utilities shall generally be located in the front yard of lots, included in easements as specified by this Article.

Environmental Standards

6.18 Environmental Standards

- A. **General Requirements:** The following measures to minimize erosion and sedimentation shall be included where applicable in the overall development plan.
 - a. Existing features which would add value to residential, commercial, natural, or man-made assets such as trees or other vegetation, streams, vistas, historically significant items, and similarly irreplaceable assets shall be preserved through careful and harmonious design.
 - b. Stripping of vegetation, regrading, or other development shall be done in such a way that will minimize erosion.
 - 1. The disturbed area and the duration of exposure shall be kept to a practical minimum.
 - 2. Temporary vegetation and mulching shall be used to protect environmentally sensitive areas during development.
 - 3. The permanent final vegetation and structural erosion control and drainage measures shall be installed as soon as practical in the development.
 - c. Development plans shall keep cut/fill operations to a minimum and ensure conformity with topography so as to create the least erosion potential and adequately handle the volume and velocity of surface water runoff.
 - d. Provisions shall be made to effectively accommodate the increased runoff caused by changed soil and surface conditions during and after development. Where necessary, the rate of surface water runoff will be structurally retarded.
 - e. Sediment in the runoff water shall be trapped until the disturbed area is stabilized by the use of debris basins, sediment basins, silt traps, or similar measures.
- B. **Maintenance Requirements:** Design and construction of the erosion control system shall be such that it will be durable and easy to maintain, meeting the requirements of the County Engineer. All erosion control methods shall be consistent with the Erosion Control Standards provided by Article 7 of this Ordinance.

General Drainage Standards

6.19 General Drainage Standards

- A. **General Requirements:** Drainage controls shall conform to the requirements of the Madison County Drainage Board, and shall meet the specifications of the Madison County Engineer and Surveyor.
 - a. A storm drainage system shall be designed and constructed by the subdivider to provide for the proper drainage of surface water of the subdivision and the drainage area which drains into the subdivision. All areas included in the drainage area shall be considered based on their present development conditions for the purposes of designing the necessary drainage facilities.
 - All streets shall be provided with an adequate storm drainage system consisting of curbs, gutters, storm sewers, and inlets consistent with the specifications of the Madison County Drainage Board.
 - c. All lots within each subdivision shall be provided with a drainage system connected to a working outlet such as a legal drain, a natural stream, a storm sewer, or an existing open ditch. In no case shall a field tile be considered an acceptable outlet.
- B. **Professional Design Requirements:** The plans for the installation of the storm sewer system shall be prepared by a registered professional engineer or licensed surveyor, be provided by the subdivider, and approved by the Plan Commission and the Madison County Drainage Board. In the approval of such plans, the Drainage Board may require off-site improvements of drainage outlets to adequately handle the run-off from the subdivision.
- C. **Detention/Retention Ponds:** To the extent possible, all subdivision detention/retention requirements shall be accommodated in the least number of ponds or dry areas. One large pond or area shall be preferred to a series of smaller ponds or areas. All detention and retention areas shall be placed in a common area under the responsibility of a lot owners association for the subdivision in which they are located. In no case, shall subdivision detention or retention ponds be dedicated to Madison County.
- D. **Floodway Development:** The Plan Commission shall not approve any proposed plat which includes lots platted with buildable areas located in any 100-year floodway. The 100-year floodway may be included as part of the lots, however, the required buildable are for each lot shall be provided outside of the floodway. All such floodways shall be placed within drainage easements.
- E. **Loss of Storage Capacity:** Loss of the 100-year floodplain water storage capacity due to building or filling shall not be allowed. No primary structures are permitted to be constructed in the 100-year floodway fringe unless explicitly permitted by the Madison County Zoning Ordinance. No building or filling is allowed at all in the 100-year floodway.
- F. **Positive Drainage from Structures:** All lots, tracts, or parcels shall be graded to provide proper drainage away from the buildings, and dispose of such water without ponding in locations other than intended dry or wet detention basins.
- G **Discharge Requirements:** It shall be illegal for sump pumps, down spouts, or foundation drains to outlet directly to the street or into the right-of-way of the street, or to be connected to the sanitary sewer.
 - a. Sump pumps shall be connected to the subsurface drainage system described in this Ordinance.
 - b. Down spouts shall not be connected directly to the subsurface drainage system, but shall outlet into the yard of the structure on which they are located.

Covenant Standards

6.20 Covenant Standards

- A. **General Requirements:** The following paragraphs shall be required to be present as restrictive covenants for all Final Plats to which the Planning Director determines that they apply:
 - a. No fence, wall, hedge, tree or shrub which obstructs sight lines between 3 and 8 feet above the grade of the adjacent road shall be placed or permitted to remain on any corner lot within the triangular area formed by the street right-of-way lines and a line connecting points along the street rights-of-way located:
 - 1. 35 feet from their intersection for road classified as arterial by the Madison County Thoroughfare Plan,
 - 2. 30 feet for roads classified as collectors by the Thoroughfare Plan,
 - 3. 15 feet for roads classified as local by the thoroughfare plan, and
 - 4. 10 feet for all private driveways.
 - b. No permanent structure shall be placed within a utility easement, with the exception that the property owner may construct a fence within the easement at his/her own risk. Such fences may be removed or accessed as necessary by any affected easement holder or utility without cost to that holder or utility.
 - c. No driveway shall be located within 40 feet of the intersection of two street right-of-way lines.
- B. **Drainage Covenant:** Each subdivision submitted for approval shall include on the Final Plat a covenant which states that: This subdivision is subject to all drainage system design and construction standards of the Madison County Subdivision Control Ordinance, which provides for the repair and maintenance of the system, including the assessment of owners of lots to maintain swales and participate in the cost of the maintenance of legal drains. All drainage easements shall run to the Madison County Drainage Board.

Flood Hazard Area Standards

6.21 Flood Hazard Area Standards

- A. Plans and materials for all subdivisions located within the 100-year floodplain shall be forwarded, by the developer, to the Indiana Department of Natural Resources for review and comment. The Plan Commission shall require appropriate changes and modifications to the subdivision in order to assure that:
 - a. it is consistent with the need to minimize flood damages;
 - b. all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage;
 - c. adequate drainage is provided so as to reduce exposure to flood hazards;
 - d. onsite waste disposal systems, if provided, will be so located and designed to avoid impairment of them or contamination from them during the occurrence of the regulatory flood.
- B. Subdividers shall indicate the 100-year flood elevation, the boundaries of the 100-year floodplain, and the boundaries of the 100-year floodway on all subdivision Preliminary and Final Plats containing any lands within a 100-year floodplain.
- C. All developers of subdivisions, all or a portion of which is located within the SFHA identified as Zone A on the community's FHBM or FIRM shall develop an evacuation plan for those lots located in the SFHA and file it with the Plan Commission and have it filed with and approved by the appropriate community emergency management authorities.

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