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CHAPTER 4
REQUIREMENTS FOR IMPROVEMENTS
RESERVATIONS, DESIGN

4.01 General Requirements

A. Conformance to Applicable Rules and Regulations.

In addition to the requirements established herein, all subdivision plats shall comply with the following laws, rules, and regulations:

1. all applicable State and Local statutory provisions;
2. the City/County Zoning Ordinance, Building and Housing Codes and all other applicable laws and ordinances of the appropriate jurisdictions;
3. the Comprehensive Plan, Official Map or Thoroughfare Plan, Public Utilities Plan, and Capital Improvements of the City/County including all streets, drainage systems, and parks shown on the Official Map or Comprehensive Plan as adopted;
4. the special requirements of these regulations and any rules of the Health Department and/or appropriate State Agencies;
5. the rules and regulations of the Indiana Department of Highways if the subdivision or any lot contained therein abut a State highway or State frontage road;
6. the highway and drainage standards and regulations adopted by the City/County Engineer and all boards, commissions, agencies, and officials of the City/County;
7. all pertinent standards contained within still valid planning guides published by the Plan Commission;

8. the phrase "the subdivider, or applicant shall provide" shall be interpreted to mean that the subdivider shall install the facility referred to, or whenever a private sewage disposal system, or an individual water supply system is to be provided, the subdivider shall be required, as a condition of the sale of each lot or parcel in the subdivision, to affirm that the facilities referred to in these sections shall be installed by the developer of the lots in accordance with these regulations.
- B. Subdivision Name.** The proposed name of the subdivision shall not duplicate, nor too closely approximate phonetically, the name of any other subdivision in the area covered by these regulations. The Commission shall have final authority to designate the name of the subdivision said name to be finalized at the time of second approval. All records thereafter shall reference the name, the Petition Number, and the date of the Petition Approval of the Subdivision.
- C. Plat Approval.** Plat approval may be withheld if a subdivision is not in conformity with the above guidelines and requirements or with the policies and purposes of these regulations established as follows:
1. This ordinance which is enacted pursuant to Indiana Home Rule and Planning Enabling Legislation (I.C. 36-1-3-4) and I.C. 36-7-4-700 series, as amended) authorizes the City/County Plan Commission to review, approve, and disapprove plats for subdivisions which show lots, blocks or sites with or without new streets or highways. This authority extends to the development or re-subdivision of undeveloped portions of already recorded plats;
 2. After the effective date of this Ordinance no Building Permit or Certificate of Occupancy shall be issued for any parcel or plat which was created by subdivision, or re-subdivision, unless the provisions of the subdivision regulations have been met; and no excavations of land or construction of any public or private improvements shall take place, or be started, except

in conformity with instructions contained herein and in conformance with construction standards adopted by the City/County.

3. No plat or re-plat of land located within the jurisdiction of the Commission shall be filed with the County Auditor and recorded by the County Recorder unless it has first been granted secondary approval by the City/County Plan Commission, and said approval been signed and certified on the plat by signature on the plat by the President and Secretary (or authorized person) of the Commission.

D. Self-Imposed Restrictions. If the owner places restrictions on any land contained in the subdivision greater than those required by the Zoning Ordinance or these regulations, such restrictions, or reference thereto shall be required to be indicated on the subdivision plat, or the Commission may require that the restrictive covenants be recorded with the County Recorder in a format approved by the City/County Plan Commission Attorney.

E. Plats Straddling Municipal Boundaries. Whenever access to the subdivision is required across land in another jurisdiction, the Commission shall request written assurance from the City/County Plan Commission Attorney that such access is legally established, and by the City/County Engineer that the access road is adequate or a Performance Bond has been duly executed and is in the amount that will cover the cost of construction of the access road. Lot lines shall be laid out so as not to cross municipal or township boundary lines.

4.02 Boundary Delineation. Monuments, Markers, Location, Design.

A. Before secondary approval may be granted, the boundary lines of the subdivision shall be defined by Monuments and Markers as installed under the supervision of an Inspector whose qualifications meet the approval of the Executive Director; and the cost of such supervision shall be borne by the subdivider.

1. **Monuments.** Monuments shall be placed so that the center of the bar or marked point shall coincide exactly with the

intersection of lines to be marked and shall be set so that the top of the monument is level with the finished grade. Monuments shall be set

- a. at the intersection of all lines forming angles in the boundary of the subdivision;
 - b. at the beginning and ending of all curves along street right-of-way lines;
 - c. at the intersection of street right-of-way lines;
 - d. at those points falling in a paved roadway. In this instance, they may be represented by road nails or railroad spikes, provide a witness monument is set.
2. **Markers.** Markers shall be placed so that the center of the bar or marked point shall coincide exactly with the intersection of lines to be marked and shall be set with the finished grade. Marker shall be set
- a. at all section corners;
 - b. at the intersection of street right-of-way lines;
 - c. at all points where lot lines intersect curved property lines, either front or rear;
 - d. at all angles in the property lines of lots;
 - e. at all lot corners not otherwise described herein;
 - f. at the beginning and ending of all curves along the right-of-way lines;
 - g. at those points falling in paved roadway where they may be represented by road nails or railroad spikes provided a witness marker is set.

3. **Subdivision Monuments Design.** Monuments shall be of stone or concrete (which may be poured in place), with a minimum dimension of four-inches by thirty-inches (4" x 30") set vertically in place. They shall be marked on top with a brass plug, or iron or copper dowel, at least three-eighths inches (3/8") thick, set with the top of the monument, deeply scored, with a cross. They shall be set following grading of each phase of the subdivision.
4. **Subdivision Marker Design.** Subdivision markers shall consist of iron pipes or steel pipes at least twenty-four inches (24") long and not less than five-eighths (5/8") inches in diameter (24" x 5/8"), and shall be identified by a cap or permanent label carrying the surveyor's registration number. They shall be set prior to the issuance of any Building Permit.
5. **Subdivision Benchmark Design and Location.** One benchmark shall be set in each subdivision containing 100 lots or fewer. One additional benchmark shall be set for each additional 100 lots or fraction thereof. The locations of benchmarks shall be approved by the City/County Surveyor/Engineer.
 - a. The applicant's land surveyor shall establish subdivision benchmark elevations by a closed level circuit from the nearest United States Geographical Section (U.S.G.S.) benchmark.
 - b. Each subdivision benchmark shall be installed behind the curbing at the intersection with the top of the benchmark level with the top of the curb, unless otherwise permitted by the City/County Surveyor/Engineer.
 - c. Each Subdivision benchmark shall be pre-cast or poured-in-place concrete with a 28-day compressive

strength of 4000-psi and six-percent (6%) air entrapment. Benchmarks shall be at least 12-inches square by thirty-six-inches (36") deep and shall be marked on top with a three-inch (3") diameter curved-head brass marker set flush with the top of the concrete.

4.03 Character of the Land

If the Commission finds that the property requested to be subdivided is unsuitable for development because of flooding, topography, inadequate water supply, inadequate sewage disposal, or other conditions which may endanger health, life, or property, the Commission shall not approve the land for subdivision. As a minimum, the Commission is empowered to approve the subdivision of land only after it finds that the land meets the following criteria:

- A. **Steep Slope.** For subdivisions with lots which will be served by individual sub-surface disposal systems, each lot shall contain a contiguous land area with slopes of less than ten-percent (10%) providing a suitable site for a filter field which contains at least the minimum lot area required by the Indiana Department of Health. The remainder of the lot may contain slopes of ten-percent (10%) or greater. Each lot shall contain sufficient area for a reserve filter field.
- B. **Water Bodies.** Each lot shall contain a contiguous land area providing a suitable building site which is at least 75-percent of the minimum lot size established by the Zoning Ordinance. The remaining twenty-five percent (25%) of the minimum lot size may have permanent or seasonal water bodies.

4.04 Water Services.

Sources for potable water shall be provided in the following manner;

- A. **Public Water System.** If the subdivision can be served by a public or community water system, the applicant shall install a complete water distribution system to the specifications of the Water Utility which will serve said subdivision and/or with all applicable regulations. The water systems shall include any

required water hydrants.

- B. **Private Wells.** If a private water supply is permitted, these individual wells shall be installed in accordance with State and County Board of Health Rules and Regulations.
- C. **Future Water Supply.** If the subdivided area is planned or scheduled to be served by a public or community water system in the future, the Commission may require the applicant to provide facilities for future connections.

4.05 Flood Hazards.

Each lot shall contain enough land which is not located in a floodway, as defined by the Zoning Ordinance (See Paragraph B that follows), to accommodate the permitted use(s) of the property and, if required, an individual sub-surface flood water disposal system. In general, lots consisting of land located in a flood hazard area shall not be approved for subdivision until allowable corrective measures have been taken. Consideration may be given to the possibility that there may be land outside the flood hazard area available from the parent tract to provide building sites.

- A. **Minimum Flood Damage.** Base flood elevations and its delineation shall be required for all subdivisions containing flood plains.
- B. **Seasonal Water Tables.** When designing lot layout for a specific area, attention to, not only flood hazards, but also areas of high seasonal water tables, floodway areas, floodway fringe areas as discussed in Chapter 8, The Flood Hazard Overlay District of the City/County Zoning Ordinance and by Handbook H-89-2, The Model County Subdivision Regulations (Revised December 1988).

4.06 Sanitary Sewers.

The subdivider shall provide the subdivision with sanitary sewage facilities in accordance with one of the following systems as detailed, or use Paragraph 5.6, Page 178 of the 1995 Model Subdivision Regulations.

- A. **Public Collection System.** Where access is possible, the developer shall construct a sewer system connected to a City sewer system if the subdivision is located in the service area of the City Utilities. The system shall be designed in accordance with the Columbia City Recommended Standards for Sewage Works.

Where the subdivision is located in the unincorporated territory or serviced by a sewer district, the developer shall construct a sewer system in accordance with The Whitley County Area Sanitary Design and Construction Specifications. Approval for the sanitary sewer facilities shall be obtained from the City Utilities Service Board and/or the Whitley County Health Officer as appropriate.

Service laterals shall be installed between the street main and the property line before the street is paved.

- B. **Local Treatment System.** Where it is not possible to connect the subdivision sanitary sewer system to a City sewer, as determined by the Commission, the subdivider shall construct a local treatment system consisting of the necessary house laterals, service mains, lift stations, and interceptors required to conduct the subdivision's sanitary sewage to a single treatment facility.

All aspects of such a system, including the treatment facility, shall be designed in accordance with Whitley County Area Sanitary Sewer Design and Construction Specifications, or the Columbia City Recommended Standards for Sewage Works, and the requirements of the Indiana Department of Environmental Management. Construction of the sanitary sewer facilities shall meet the approval of the Whitley County Health Officer or the City Utility Service Board.

- C. **Private Disposal System.** Where alternatives (A) and (B) above are not practical, the Commission may permit the subdivider to install on each lot an individual sewage disposal system consisting of a septic tank and tile absorption field or other approved disposal system. There shall be enough land area to permit a reserve filter field as stated previously.

The private disposal system shall be designed and constructed by the

subdivider in accordance with the "Recommended Standards for Individual Sewage Systems" and the requirements of the Whitley County Sanitation authority and the Indiana Department of Environmental Management.

The private disposal system shall not be permitted where soil conditions exist which would prevent percolation of effluent.

D. Future Sewer Service. If the subdivided area is planned or scheduled to be served by a public or community sanitary sewer system in the future, the Commission may require the Applicant to provide facilities for future connections, including, but not limited by, pumping stations, capped mains, and laterals, for each lot in the subdivision. Future public sewer facilities may be a contributor to sanitary sewer decisions if a reasonable time period for implementation of not more than two (2) years is a part of future planning by governmental units.

E. Summary of Sanitary Sewer Requirements. The plans for the sanitary sewage facilities shall be provided by the subdivider, prepared by a registered Professional Engineer, or a Registered Professional Land Surveyor. They shall be approved by the City Board of Works. All sources of approval, including approval by the Indiana Department of Environmental Management, shall be verified in writing.

Upon completion of sanitary sewer installation, two (2) sets of the as-built plans for said sewer system shall be filed with the City Utilities.

4.07 Soil Preservation, Grading, Seeding, Flora

A. General. This section includes ecological requirements covering soil preservation, landscape grading, and seeding of lots. The City/County Tree Board regulations shall apply and shall be a part of this Ordinance. Consultation with the Tree Board as to selection and planting of street trees and/or any other tree plantings shall be required.

1. Soil Preservation and Final Grading. No Certificate of Occupancy shall be issued until final grading has been

completed, in accordance with the approved construction plan, and the lot is re-covered with top soil having an average depth of at least six-inches (6"). The top soil shall contain no particles over two-inches (2") in diameter over the entire area of the lot; except for those portions of the lot covered by buildings or included in streets or where the grade has not been changed or natural vegetation seriously damaged. Top soil shall not be removed from residential lots or used as spoil, but shall be re-distributed so as to provide at least six-inches of cover between the sidewalks and the curbs. The top soil shall be stabilized by seeding, plantings, or similar methods.

2. **Lot Grade and Drainage.** Lots shall be laid out so as to provide positive drainage away from all buildings and individual lot drainage shall be coordinated with the general storm water drainage patterns for the area. Drainage shall be designed so as to avoid the accumulation of storm water on any one or more lots from adjacent lots. It shall be the responsibility of the lot owner to maintain the lot grade, as it applies to lot drainage, as provided for in the construction plans.

B. Lawn Grass Seed and Sod.

1. Lawn grass shall be sown between March 15 and September 30, the planting season.
2. The seed shall be tested for germination within one (1) year of the date of seeding. The date of testing shall be on the label containing the seed analysis.
3. The seed shall be sown at not less than four-pounds (4#) to each 1000 square feet of land area.
4. The seed shall consist of a minimum of ten percent (10%) rye by weight and ninety percent (90%) of permanent bluegrass and/or fescue grass by weight.
5. All lots shall be seeded from the road (street) side edge

of the unpaved right-of-way back to a distance of 25 feet behind the principle residence on the lot.

6. No Certificate of Occupancy shall be issued until re-spreading of soil and seeding of the lawn have been completed; however, if the seeding of the lawn is not done during the planting season, a Letter of Intent shall be written to the Executive Director with the signatures of the developer and the owner, stating that the task shall be done during the immediately following planting season.
 7. To insure completion of the requirement, a cash escrow account in an amount specified by the Executive Director, shall accompany the Letter of Intent.
 8. Sod may be used to comply with any requirement of seeding set forth herein.
- C. **Existing Flora.** The subdivider shall protect and retain all existing healthy trees of 12-inch caliber or larger, measured four feet (4') above the ground, not actually lying in public roadways, drainage-ways, soil absorption and waste disposal areas, paths and trails.
- These trees shall be protected and preserved during construction in accordance with the conservation practices recommended by the United States Department of Agriculture in "Agricultural Information Bulletin No. 285, Protection of Trees Against Damage From Construction Work", United States Government Printing Office, 1964, as amended. Two (2) copies of this document are incorporated by reference into this ordinance and shall be on file in the office of the County Soil and Water Conservation District Office for public inspection. These trees are to be preserved by well islands or retaining walls whenever abutting grades are altered.
- D. **Tree Cutting.** Tree cutting and shrubbery clearing shall be conducted in a manner that will prevent erosion and sedimentation and will preserve and improve scenic qualities. Review of cutting, clearing, and earth movement shall be requested of the County Soil and Water Conservation District Supervisors, the State Department of Natural Resources, and the State Stream Pollution

Control Board by the Commission as it deems appropriate.

E. Street Trees for Residential and Apartment House Subdivisions.

The following requirements were adopted by the Street Tree Committee February 10, 1994, and are incorporated into this Ordinance.

1. Street trees shall be planted by the developer/property owner in all new residential and apartment house subdivisions including single-family dwellings, stores, offices, and industry within the City/County, including land abutting any street/road previously opened as well as those opened for the subdivision. Installation shall be made under the guidance of the Street Tree Director, or his representative.
2. The number, size, species, and locations of the street trees planted at all new residences, offices, apartments, etc., shall be specified by the Street Tree Director or designee.
3. The Plan Department shall not grant a Building Permit unless a street tree planting permit has been issued and a bond, or cash deposited with the Plan Department (Street Tree Director) to ensure compliance with this ordinance and regulations adopted hereunder.
4. The bond or cash deposit shall equal the cost, as determined by the Street Tree Director, for purchasing and planting the required number of trees.
5. The subdivider shall comply with the street tree regulations or request that the Street Tree Director contract the work on public bid.
6. The amount of the bond or the cash deposit shall be increased if required. Any unused amount shall be returned to the provider.
7. Street trees shall be planted by the subdivider or contractor

within two (2) years from the issuance of Street Tree Permit. Failure to plant the trees shall be a default and the bond or cash deposit shall be forfeited. Any funds derived from a default shall be expended by the Street Tree Director to plant the required trees.

Any trees that die within the first two (2) growing seasons shall be replaced by the developer or contractor. (Reference City/County Ordinances.)

4.08 Water Bodies and Water Courses.

If a tract being subdivided contains a water body, or portion thereof, lot lines shall be drawn as to distribute fees over the entire ownership of the water body. The Commission may approve an alternative allocation of interests whereby the ownership and the responsibility for safe maintenance of the water body is so placed that it will not become a local government responsibility. No part of the minimum area of a lot required under the Zoning Ordinance may be satisfied by land which is under water during a normal season. Where a water course separates the buildable area of a lot from the street/road to which it has access, provisions shall be made for installation of a culvert or other structure, of design approved by the City/County Engineer.

4.09 Storm Water Drainage.

- A. **General Requirements.** The Commission shall not recommend for approval any subdivision plat which does not provide adequate provision for storm or flood water run-off channels, basins, or improved water drainage systems. The storm water drainage system shall be separate and independent of any sanitary sewer system. A drainage report shall be provided by the Developer.

- B. **Drainage Report.** The drainage report shall identify the applicable areas of concern and problem areas as listed on the selection matrix contained in the Erosion Control Handbook and shall indicate the control strategies for these problem areas. The report shall indicate the existing and proposed drainage conditions and the individual practices to be used to accomplish the objectives of this Ordinance. Methods selected to control drainage shall be consistent with the

Handbook. The report shall evaluate the ability of the proposed water course or facility, channels, drainage tiles, farm tiles, storm sewers, culverts, or other improvements to handle the run-off. A Registered Professional Engineer or Land Surveyor shall prepare the report. The report shall include:

1. **Estimates of Water Entering the Subdivision.**
These estimates shall assume that the upper watershed will be fully developed according to the current land use plan;
 2. **Conditions of the Watershed.**
This may affect run-off such as sub-soil type, positive drainage channels, obstructions and so forth;
 3. **Quantities of Flow** at each pickup point or culvert;
 4. **Description of Minor and Major Drainage Systems.**
The minor system will usually consist of but is not limited to, storm sewers, drainage ditches, drainage swales, storm inlets or infiltration structures. The minor system shall be designed to handle a ten (10) year storm. The major system will usually consist of, but be not limited to, roadways, culverts, bridges, or overflow drainage ways. The major system shall be designed to handle a fifty (50) year storm;
 5. **The Location of All Existing Sub-Surface Drainage Tiles,** and a plan to preserve or relocate the tiles;
 6. **Proposals Which Include Lagoons, Storm-Water Ponds,** or infiltration facilities shall be prepared by a Registered Professional Engineer and shall include data coordinating field tests with design assumptions and estimates of expected annual maintenance costs.
- C. **Erosion Control.** Any disturbed or graded area shall be protected from erosion in accordance with the Erosion Control Handbook. This may include de-silting or sediment basins, temporary seeding, grassed waterways (swales) diversions, grade stabilization structures, mulching, and any other provision necessary to effectively accom-

moderate the increased run-off caused by changed soil and surface conditions during and after development. Areas of concern as listed on the selection matrix contained in the Erosion Control Handbook shall be addressed and control strategies detailed for providing erosion control. Methods selected to control erosion shall be consistent with the Handbook.

D. Retention Ponds. The Commission may require retention ponds to regulate the flow of the outfall of storm water. Such ponds shall be protected from erosion in accordance with the Erosion Control Handbook. Such ponds shall be designed and constructed to enable adequate access for maintenance. Retention ponds shall be provided with adequate safeguards against mishaps by means of fencing, curbing, warning signage, and lighting sufficient to illuminate the area.

E. Nature of Storm Water Facilities.

1. Location. The applicant may be required by the Commission to carry away by pipe or open ditch any spring or surface water that may exist, either prior to, or as a result of the subdivision. Such drainage facilities shall be located in street/road right-of-way where feasible, or in perpetual, unobstructed easements of appropriate width, and shall be constructed in accordance with the City/County construction standards and specifications.

2. Connection to Existing Systems. Connection to a State drainage system is allowed only with written approval from the Indiana State Highway Department. Connections to a County legal drain is allowed only with written approval in accordance with the Indiana Code requirements for legal drains. Connection to a County road ditch is allowed only with written approval of the County Engineer. Connection with City facilities shall require written approval of the City Board of Public Works.

3. Accessibility to Public Storm Sewers.

a. When a public storm sewer is accessible, the applicant

shall access the storm water facilities, or if no outlets are within a reasonable distance, adequate provision shall be made for the disposal of storm water, subject to the specifications of the City/County Engineer. However, in subdivisions containing lots less than 15,000 square feet in area and in business and industrial districts, underground storm water sewer systems shall be constructed throughout the subdivision and be conducted into an approved outfall. Inspection of the facilities shall be conducted by the City/County Engineer or an approved authority.

- b. If a connection to a public storm sewer will be provided eventually, as determined by the City/County Engineer and the Commission, the developer shall make arrangements for future storm water disposal by the public utility system at the time the plat receives final approval. Cost provision(s) shall be incorporated by inclusion in the amount of the performance bond, or equivalent document, required for the subdivision plat.
- c. Alternative methods of storm drainage may be approved by the City/County Engineer.

4. **Accommodation of Upstream Drainage Areas.**

A culvert or other drainage facility shall be, where needed, large enough to accommodate potential run-off from the entire upstream drainage area, whether inside or outside the subdivision. The City/County Engineer shall determine the necessary size of the facility, based on the provisions of the required construction standards and specifications assuming conditions of maximum potential watershed development permitted by the Zoning Ordinance.

5. **Effect on Downstream Drainage Areas.** The City/County Engineer shall determine the effect of each proposed subdivision on existing facilities outside the area of the subdivision. County drainage studies, together with such other studies as may be available and appropriate, shall

serve as a guide to needed improvements.

Where it is anticipated that the additional flooding incidental to the development of the subdivision will overload an existing downstream drainage facility, the Commission may withhold secondary approval of the subdivision until provision (such as a storage facility) has been made by the Developer.

No subdivision shall be approved unless adequate drainage from it will be provided to an adequate drainage water course or facility.

**FIGURE 4-1. BUILDABLE LOT AREA
ADJACENT TO WATER BODIES**

FIGURE 4-2 FLOOD PLAIN DELINEATION

6. **Areas of Poor Drainage.** Areas which are not in the Flood Plain but contain soils which are subject to flooding may be approved for subdivision by the Commission, provided that the subdivider fills the affected area of said subdivision to an elevation sufficient to place building sites and streets two-feet above ponding levels.
7. **Areas of High Seasonal Water Tables.** In areas characterized as having a high seasonal water table as determined by the Whitley County Soil and Water Conservation District, lots shall be limited to slab-type construction unless the Commission determines that appropriate engineering techniques will be applied to alleviate the subsurface problem.
8. **Floodway Areas.** If a subdivision of land is proposed within the Flood Plain, Floodways shall be preserved and not diminished in capacity by filling or obstruction, except as approved, in writing, by the Natural Resources Commission of Indiana. No residential building site may be located within the Floodway (See Chapter 8, The Flood Hazard Overlay District of the Zoning Ordinance). (See Figures 4-1, 4-2.)
9. **Floodway Fringe Areas.** Where a subdivision is proposed within an area of the Flood Plain designated as a Floodway Fringe, the Commission may approve such subdivision

provided that: all streets are elevated sufficiently to be above the Regulatory Flood Elevation; all lots for residential usage have a Flood Protection Grade two-feet (2') above the Regulatory Flood elevation; where provided, water and sanitary sewer facilities are constructed to eliminate contamination of, or by, flood water; and, approval to fill the area from the Indiana Natural Resources Commission has been obtained in writing. Lands below the Regulatory Flood elevation shall not be used for computing the area requirement for any lot.

10. **Flood Plain Areas.** When a subdivision within an area of the Flood Plain for which Floodway and Floodway Fringe designations have not been made, the Commission shall not approve such subdivision unless all streets are raised sufficiently to be above the Regulatory Flood elevation; all lots for residential usage have a Flood Protection Grade of two-feet (2') above the Regulatory Flood elevation; where provided, public water and sanitary sewer facilities are constructed to eliminate contamination of, or by, flood water; and, filling to achieve the above will not raise the level of the Regulatory Flood Elevation more than one-tenth (1/10) of one (1) foot for that reach of the stream. All filling in the Flood Plain must be approved in writing by the Indiana Natural Resources Commission. Lands below the Regulatory Flood Boundary and elevation shall not be used for computing the area requirement for any lot.

11. Recording of Plats in the Flood Plain and Floodway

Fringe. All final plats having within their boundaries areas whose elevation is below that of the Regulatory Flood Plain shall show and label the Regulatory Flood Boundary and elevation, as of the date the final plat is drawn, on the final plat for recording with the County Recorder.

F. Dedication of Drainage Easements.

1. **General Requirements.** When a subdivision is traversed by a drainage course, drainage way, channel, or stream, a storm water easement or drainage right-of-way shall be

provided, granted or dedicated to the City/County conforming substantially to the lines of such watercourse, and of such width as will be adequate for the purpose of both drainage and maintenance of the right-of-way. Wherever possible, it is desirable that the drainage be maintained by an open channel with landscaped banks and adequate width for maximum potential volume of flow. A minimum of 10- feet of seeded land shall be planted in the area horizontal to the side-slope of the drainage way.

2. **Drainage Easements.**

- a. **Perpetual Unobstructed Easements.** Where topography or other conditions are such as to make impractical the inclusion of drainage facilities within street rights-of-way, perpetual unobstructed easement at least twenty-five feet (25') in width for such drainage facilities shall be provided across property outside the right-of-way lines and with satisfactory access to the street. Easements shall be indicated on the plat. Drainage easements shall be carried from the street to a natural watercourse or to other drainage facilities.
- b. **Dedication of Perpetual Easements.** The Applicant shall dedicate, either in fee or by drainage or conservation, easement land on both sides of existing watercourse of a width to be determined by the Commission and, in the case of legal drains, the County Drainage Board.
- c. **Drainage Rights.** When a proposed drainage system will carry water across private land, appropriate drainage rights must be secured and indicated on the plat.
- d. **Preservation of Low-lying Lands.** Low lying lands along watercourses subject to flooding or overflowing during storm periods, whether or not included in areas for dedication, shall be preserved and retained in their natural state as drainage ways. Such land or

lands subject to periodic flooding shall not be included in the computations for determining the number of lots allowable under average density procedures nor for computing the area requirements for any individual lot.

G. Drainage of Lots and Blocks. Lots and blocks shall be so graded as to eliminate depressions that would accumulate storm water. Grades at building sites shall bear such relationship to roadway and curb grades as to prevent flooding during heavy storms of basement windows or floor levels in the absence of basements. Where deemed necessary, the Commission may require the subdivider to submit working drawings showing contours to which property is to be graded to provide for the requirements of this paragraph.

H. Drainage Pipe Selection. Pipe used for draining shall be of corrugated metal, concrete or vitrified clay of an approved design, size and strength to meet the requirements of specific conditions which may be encountered. Culverts on existing streets shall be enlarged wherever necessary by reason of diverted or increased concentration of drainage. Minimum diameters of pipe to be used shall be as follows:

Roadway cross-drains	12" Minimum
Entrance culverts	10" Minimum
Perforated under-drains	8" Minimum

I. Storm Sewers and the Rational Method. Storm sewers shall be designed by the Rational Method, or other methods as approved by the Commission and the County Drainage Board, and a copy of the design computation shall be submitted along with the plans. (The Rational Method is described in Chapter 3 of the COUNTY STORM DRAINAGE MANUAL by Christopher B. Burke, Project for Indiana Counties and Cities, School of Civil Engineering, Purdue University, West Lafayette, May 1981, herinafter referred to as Drainage Manual.)

- J. Street Drainage.** All streets/roads abutting or included within the property to be subdivided shall be provided with drainage systems in accordance with the standards in this Ordinance. Prior to the construction of street or alley surfaces and pavements, adequate drainage facilities shall be installed by the subdivider, prepared by a Registered Professional Engineer or a Registered Land Surveyor and approved by the Board of Public Works and/or the County Engineer. A storm drainage analysis based upon a 10-year, one hour rainfall shall be used as the basis for the drainage system. A copy of the analysis shall be submitted to the Commission along with the drainage facility plans.

Inlets to the storm water facility shall be provided so that surface water is not carried across any intersection, nor, for a distance of more than six-hundred-feet (600') in the gutter or when the encroachment of storm water into the street disrupts traffic (Drainage Manual p. 5-27). When calculations indicate that curb capacities are exceeded at a point, catch basins or inlets shall be used to intercept flow at that point. Surface water drainage patterns shall be shown for each and every lot and block.

- K. Shallow Swales.** Where curbs and gutters are not provided in the street, shallow swales with low points at least 12-inches below the subgrade of the pavement may be required by the Commission and/or Board of Public Works.
- L. As-Built Plans.** Upon completion of the street improvement, a minimum of two (2) sets of as-built plans and profiles shall be filed with the Commission, or the appropriate authorities.

4.10 Miscellaneous Requirements for Subdivision Approval.

- A. Subdivisions Crossing Municipal or County Boundaries.** Lots which straddle municipal or county boundaries should be avoided wherever practical. If a subdivision is located in more than one jurisdiction, approvals from all plan commissions in affected jurisdictions shall be required. If access to a subdivision is required across land in another jurisdiction, the application shall provide evidence that such access is legally established, and such access shall be permitted only if the City/County Engineer finds

that the access road is adequately improved or a performance bond has been duly executed to assure the construction of the access road.

- B. Maintenance of Improvements.** Before approving any subdivision, the Commission shall review the improvement plans and shall insure that there are adequate methods to maintain all such improvements. Such improvements include but are not limited to recreation facilities, common open space, private pedestrian ways, private sewer and private water systems, and drainage facilities. Establishment of a lot-owners association with responsibility to set and collect fees for maintenance of facilities shall be required if deemed appropriate by the Plan Commission.
- C. Off-Site Improvements.** In reviewing an application for approval of a subdivision under this section, the Commission shall consider the adequacy of existing City/County roads and other facilities to serve the proposed subdivision and may require the subdivider to make and pay for improvements deemed necessary by the Commission. In no case shall the City/County be obligated to make improvements for the purpose of making private land suitable for development.
- D. Oversized Improvements.** The Commission may require the installation of oversized improvements where it deems such improvements to be in the best interests of the City/County. In the event that such improvements are required, the City/County shall be responsible for the additional cost related to the over-sizing of the required improvements.
- E. Access to Streets/Roads.** Under no circumstance shall one developer/property owner obstruct legitimate and reasonable access to another developer or property owner's right to access to any public street/road.

4.11 Commercial, Industrial, and Multi-Family Subdivisions

- A. General.** Any proposed subdivision containing land zoned or otherwise intended to be used for commercial, industrial, or multi-family uses is subject to the design standards contained in this section, in addition to those standards applying to all subdivisions of land.

- B. Arrangement of Lots and/or Blocks.** Proposed commercial, industrial, multi-family parcels shall be laid out in such a manner as to provide safe access; harmonious arrangements of land uses; separation of different modes of transportation; areas for drainage runoff and, utilities.
- C. Frontage on Public Road.** Each lot or parcel shall have the full required frontage on a public road meeting the minimum standards of this Ordinance. Off-street parking areas shall be encouraged. Multiple ingress/egress accessways shall be minimized.
- D. Street to Comply with Usage.** If access will be required for large trucks and/or heavy loads, the Commission may increase the construction and design requirements upon recommendation of the City/County Engineer. Roads serving primarily non-residential traffic, especially truck traffic, shall not normally be extended to the boundary with adjacent tracts used or zoned for residential purposes, nor shall primarily residential roads be used for access to industrial subdivisions. Multi-family dwelling complexes shall be designed so as to discourage vehicular traffic from using streets designed and constructed primarily for single-family residential use.
- E. Large Development: Commercial, Industrial Tracts.** In large tracts of land for development of commercial and/or industrial development a street across the tract shall be indicated for immediate construction or scheduled construction over a given period of time. When a proposed street is found to be inappropriate for continuation in light of unforeseen developments, changes may be made if approved by the Plan Commission. A peripheral street shall be provided when large parking lots have a customer access street immediately adjacent to the place of business. Said street shall have no less than two (2) traffic lanes and shall be appropriately delineated by ornamental islands described in the off-street parking requirements of the Zoning Ordinance. Two (2) or more traffic outlets, separated from each other by no less than 200-feet is appropriate (this does not eliminate the use of combined ingress/egress access for lots adjacent to each other).
- F. Unit Shopping Centers.** Wherever possible, unit shopping centers,

based on sound development standards, shall be designed in contrast to the platting of lots for individual commercial use.

- G. Alleys.** Alleys may be permitted by the Commission to provide loading and service areas. Such alleys shall have a right-of-way width of at least 30 feet and a pavement width of at least 16 feet.
- H. Loading Docks and Parking.** Loading docks, truck parking and/or truck turn-around areas shall be designated by the use of signed and pavement markings. These areas shall be separated from parking and access areas used by automobiles or pedestrian traffic. Public streets shall not be used for truck parking, standing, or backing.
- I. Fire Lanes.** Fire lanes shall be required at all entrances and exits to structures and storage areas and at all locations of hydrants, siamese connections, sprinkler controls, or other locations deemed appropriate by the Commission. Fire lanes shall be marked by signs and pavement markings in accordance with current standards and specifications.
- J. Parking Lots.** Parking lots shall have a hard, dust-free surface and shall be designed to provide safe, well-defined points of ingress and egress. The Commission may require such physical barriers, pavement markings, signs, and landscaping as it deems necessary to properly channel traffic to designated parking entrances and exits. (See Chapter 10, Off-Street Parking and Loading Requirements, Columbia City Zoning Ordinance.)
- K. Buffers.** Subdivisions containing land zoned for commercial or multi-family use shall contain landscaped buffer areas at least 15 feet in depth along all lot lines abutting land zoned for single-family or two-family residential use. Subdivisions containing land zoned for industrial use shall contain landscaped buffer areas at least 25 feet in depth along all lot lines abutting land used or zoned for residential use. The subdivision plans must show the planting details, including the type(s) and height of vegetation and the caliper of trees to be planted. Such landscaped buffer shall be at least 6 feet in height and shall consist of materials which will form a dense screen within two years, or an opaque fence shall be constructed to accomplish this purpose. The design and materials of such fence shall be shown on the plans.

- L. **Drainage.** A drainage plan meeting the requirements contained in Paragraph 4.09 shall be submitted. Such system shall be designed so as to minimize the disposal of storm water off-site. Such system shall make maximum use of on-site retention ponds or detention basins to minimize the downstream impact of the drainage from the site.

- M. **Snow Storage.** Developments which have parking, loading, and driveway areas in excess of 40,000 square feet shall contain snow storage areas. Drainage plans shall include plans for the disposal of melt water.

- N. **Water and Sewer Facilities.** The Commission may impose such requirements as it deems necessary on the installation of water and sewer facilities.

4.12 Debris and Waste.

No cut trees, timber, debris, rocks, stones, or other waste material of any kind shall be buried in any land, or left deposited in any vacant lot or street at the time of occupancy within the subdivision, nor shall any be left or deposited in any area of the subdivision at the time of expiration of the performance bond, or maintenance bond or dedication of public improvements, whichever is sooner.

4.13 Fencing.

Each subdivider and/or developer shall be required to furnish and install fences wherever the Commission determines that a hazardous condition may exist. The fences shall be constructed according to standards established by the City/County Engineer and shall be noted as to height and material. No Certificate of Occupancy shall be issued until said fence, improvements have been duly installed. If privacy and/or ornamental fences are part of the subdivision amenities, they shall be no more than six (6) to eight (8) feet in height and architecturally compatible with the type of housing scheduled for the subdivision. However, no screening type

of fencing or hedging shall exceed three (3) feet in height within fifteen (15) feet of the public highway not shall it encroach into the front yard of a housing unit. Ornamental fencing, plantings, or rock gardens may be used to define the corners of a lot, however, they shall not impair visibility at intersections of driveway with the street, and street with street.

4.14 **Lots.**

- A. **Lot Placement.** All lots shall abut on a street or cul-de-sac. Generally, the depth of a residential lot shall not exceed three (3) times the lot frontage. Some deviation from this provision may be permissible for topographical and drainage purposes, but not for the purpose of splitting a large tract into deeper than normal lots so that the provision of streets for proper access to lots can be avoided. Unusually deep lots or numerous "pipe stem" lots (lots with minimal lot frontage adjacent to one another) shall be discouraged, in subdivisions. (See Figure 4-3 for typical layout of residential subdivision.)
- B. **Shape of Lot.** Lots shall be designed to provide suitable building sites and related yard areas. Reference is made to Figure 4-1 and 4-2, which illustrate the manner in which buildable area is defined by the topography of the adjacent area, namely, a water body. Generally, the depth-to-width ration of a lot is 3.0 to 1.0, except when prevailing topographic or other natural conditions would so reduce the portion of the lot that can be used fore residence and accessory purposes as to make the lot unusable. The maximum depth-to-width ratio shall apply to such portion of the lot which is usable for residential purposes. The Commission may deviate from these requirements where it seems the proposed shape of the lot is more appropriate to the site conditions. Consideration shall be given not only to topography, but also ponds, wooded areas, natural features, provisions for open spaces, savings on public improvements, and the advisability of a Planned Unit Development (P.U.D.).
- C. **Widths and Areas of Lots.** Widths and areas of lots shall not be less than that provided in the City Zoning Ordinance for single

family dwellings for the district in which the subdivision is located.

- D. Lot Frontage.** Each lot shall have its full frontage on a dedicated street or approved access easement. To the fullest extent practicable, residential lots shall front on residential subdivision streets in such a manner as to provide neighborhood cohesiveness. Along arterial and collector streets, multiple access points shall be held to a minimum by utilizing common access to cross-easement driveways serving two (2) or more individual lots.
- E. Double Frontage Lots.** Double frontage lots shall be avoided. Such lots may be approved by the Commission where it is determined that such lots are essential to provide separation of residential development from certain streets such as arterial, collector (feeder), or other similar uses, and where subdivision lots abut commercial or industrial districts. Such lots shall be provided with a landscape buffer area ten (10) feet in depth which will provide a visual screen and prevent vehicular access to one of the two frontages. Particular care shall be made to landscape the non-access frontage in a visually pleasing manner. (See Figure 4-4.)
- F. Corner Lots.** Corner lots shall be sufficiently larger than interior lots to allow maintenance of setback lines on both streets on which the lot abuts. Interior residential lots abutting a corner lot shall be wider than the average interior lot in order to permit a wider sideyard adjacent to the corner lot.
- G. Lot Dimensions.** Lot dimensions shall comply with the minimum standards in the Zoning Ordinance. Where lots are more than double the minimum required area for the zoning district, the Commission may require that such lots be arranged so as to allow further subdivision and the opening of future streets where they would be necessary to serve all such potential lots in compliance with the Zoning Ordinance and these regulations. In general, side lot lines shall be at right angles to the street lines (or radial to curving street lines) unless a variation from this rule will give better street or lot plan.

Depth and width of properties reserved or laid out for business, commercial, or industrial purposes shall be adequate to provide for

all of the off-street parking and loading facilities required for the type of use and development contemplated, as established in the Zoning Ordinance.

Figures 4-3, 4-4, and 4-5 illustrate a preliminary subdivision plat, a lot and frontage example to visually define the types of lots, and a visual representation of yard areas, setbacks, right-of-way and planting strips within a right-of-way, respectively.

4.15 Lot Access. Access for subdivision lots shall meet the standards of this section.

A. General. Generally, one driveway access shall be permitted per lot except for corner lots where one driveway per road is permitted and except where common easements of access may be required as provided below.

FIGURE 4-3 PRELIMINARY SUBDIVISION PLAT

FIGURE 4-4 LOT TYPES AND FRONTAGE EXAMPLES

FIGURE 4-5 YARD AREAS AND STREET IMPROVEMENTS

- B. Pipe stem Lots.** To achieve more creative planning and preservation of natural property features, pipe stem lots are permitted provided each has exclusive unobstructed private access easement of at least 50 feet width to a public road. Two pipe stem lots with no more than one dwelling on each lot may share a common access easement of at least 50 foot width. Pipe-stem lots are defined as those lots far removed from a public street or road due to natural impediments therefore requiring an access road to reach the buildable area.
- C. Driveways in Common, For Two Lots.** The Commission may require common driveways to be shared by two (2) adjoining non-pipe stem lots if it deems it appropriate for the purpose of highway access safety or design.
- D. Driveway Access For Four Lots.** Access easements providing legal access to more than two (2) pipe stem lots or more than one regular lot shall be at least 50 feet in width and shall have the capability of providing suitable locations for future public streets meeting the standards set forth in this Ordinance. Generally, up to four (4) lots may receive access from a private access easement if by reason of topography, traffic safety, or other condition peculiar to the property, the Commission finds it appropriate. The subdivision plat shall be properly noted that the access easement is private and a plan for maintenance shall be filed with the plat. The Commission shall approve a plan for maintenance and the proposed access easement road improvements.
- E. Driveway Access to More Than Four Lots.** An access easement serving more than four (4) lots shall be considered a street and must be constructed according to the City/County Street Standards, even if the street remains private. In this case the subdivider must submit a plan for maintenance for approval by the Commission.

F. **Driveway Access to Arterials.** Lots in residential subdivisions shall not in general have access directly from an arterial. Where a subdivision borders on or contains an existing or proposed arterial the Commission may require that access to such streets be limited by one or more of the following means:

1. The subdivision of residential lots so that they back onto the arterial and front onto a parallel subdivision street; no access shall be permitted to the collector or arterial from any lots, and screening may be required in a planting strip inside the rear property line of such lots;
2. A series of cul-de-sacs, U-shaped streets, or short loops entered from and designed generally at right angles to such a parallel street, with the rear lines of their terminal lots backing onto the arterial;
3. A marginal access or service road, i.e. a perimeter street, separated from the arterial by a planting or grass strip and having access thereto at suitable points, however, marginal access or service roads shall generally be discouraged in residential subdivisions.

4.16 **Blocks.**

- A. **Block Arrangement.** The lengths, widths, and shapes of blocks shall be such as are appropriate for the locality and the type of development permitted. Block lengths in residential areas shall not exceed sixteen hundred (1600) feet nor be less than four hundred (400) feet in length. Wherever practical, blocks along arterial and collector streets shall not be less than one thousand (1000) feet in length. Irregularly shaped blocks may be approved by the Commission if it finds that such a pattern is appropriate to the land to be subdivided and is properly designed.
- B. **Block Widths.** Blocks shall be of sufficient width to permit two (2) tiers of lots of appropriate depth, except where an interior street parallels a limited access highway or an arterial street, or a railroad right-of-way, or water course.

- C. **Pedestrianways/Crosswalks.** In blocks over one thousand (1000) feet in length, the Commission may require at or near the middle of the block a public walk connecting adjacent streets or other public areas. Such walks shall have at least twelve (12) feet in width or right-of-way with six (6) feet of pavement, and shall be intended for use of pedestrians only. In determining whether pedestrianways are required, the Commission shall consider methods of maintaining such ways and their usefulness in providing access to any common open space, water areas, recreation areas, schools, churches, and other surrounding uses.

4.17 Streets; Layout; Design.

- A. **General.** No land shall be subdivided for residential, commercial, or industrial uses until adequate access to the land, over streets or thoroughfares, passable at all times to normal traffic, exists or will be provided by the subdivider. The land shall not be subdivided if the Commission finds it is unsuitable for use by reason of flooding, improper drainage, objectionable earth and rock formations, topography, or other features deemed harmful to the health, and safety of future residents or uses and the community as a whole.

The arrangement and character of all streets and alleys (where permitted) shall be laid out to best serve the public interest of efficiency, safety, and economy. Proposed streets shall be extended to the boundary line(s) of the tract if deemed appropriate by the Commission.

Where streets (and alleys) cross other streets (and alleys) they shall intersect at right-angles to each other.

The subdivider, or the Commission, may require that the subdivision have more than one point of ingress/egress in the interest of safety and/or convenience.

In residential subdivisions the "gridiron" pattern of street layout shall be avoided with preference given to unique design.

The overall arrangement of streets shall be compatible with the

Official Thoroughfare Plan of the City/County and their respective Comprehensive Plans. Figures 4-5 and 4-6 show cross-sections of urban streets and rural streets. The road surface is defined as to the area measured between the inner edge of the curb and gutter not the back edge, therefore, when the chart or figure expresses Pavement Width/Curb and Gutter 26 ft. it is to be interpreted as 26 ft of paved (or traveled) surface plus the two feet (2-ft.) of curb and gutter on each side of the paved surface.

**FIGURE 4-6 TYPICAL URBAN
CROSS SECTIONS FOR MAJOR STREETS**

B. Governing Specifications for Streets, and Associated Structures.

Governing specifications for streets and associated improvements shall be constructed in accordance with Federal, State, and Local Specifications, with the most stringent specifications taking precedent, subject to the local conditions as deemed appropriate by the Commission.

1. **Streets.** Streets, and alleys where provided, shall be completed to the specifications shown on plans, profiles, and cross sections, provided by the subdivider and prepared by a registered professional engineer and approved by the Commission.
2. The streets shall be graded, surfaced, and improved to the dimensions required by such plans, profiles, and cross

sections and the material types used and the work performed shall be in the manner prescribed in the Indiana State Highway Commission Standards Specifications (current issue).

**FIGURE 4-7 TYPICAL RURAL CROSS SECTIONS
FOR MAJOR STREETS**

3. The street or alley shall not be surfaced until the subgrade has been adequately constructed in the manner prescribed in the current issue of the Indiana Highway Commission Standard Specifications.
4. Compacted base or grade shall be extended two feet beyond each edge of the proposed pavement when curb and gutter are to be added.
5. Prior to placing the street or alley surfaces, adequate subsurface drainage for the street shall be provided by the subdivider. Subsurface drainage pipe, when required, shall be coated corrugated pipe or a similar type not less than 12 inches in diameter approved by the Commission. On the completion of the street and alley improvements, plans and profiles as built shall be filed with the Commission.
6. Where curbs and gutters are not required, berms shall be provided, or gravel, asphalt emulsion, or other material approved by the Plan Commission applied over the same aggregate or stone base as used for the traveled portion of the road.
7. If concrete pavement is used, contraction joints must be placed every twenty feet, as well as at every catch basin and manhole, and must extend through any curbing to the full width of the pavement.

8. Minimum and maximum specifications for street design and associated structure designs for Columbia City are provided in Section 4.18 of this Ordinance.
 9. Materials specifications for streets and associated structures, as they apply to Columbia City, are provided in Section 4.19 of this Ordinance.
 10. Streets and roads outside the corporate limits of the City of Columbia City, but within its jurisdictional area, shall conform with the requirements of Whitley County Ordinance 0-92-11 dated December 21, 1992, entitled GENERAL AND DETAILED SPECIFICATIONS FOR ROADS AND STREETS, SIDEWALKS, CURBS, GUTTERS, DRAINAGE STRUCTURES, AND OTHER MISCELLANEOUS ITEMS, and amendments thereto as they relate to streets/roads.
- C. **Street Plan.** All street plans shall be constructed in accordance with the approved engineering plans submitted by the developer. In the event construction is not initiated within two (2) years and work is not completed within three (3) years after the approval of the final engineering plan, such plans shall be presented to the appropriate highway department for re-review and certain design features may have to be changed to reflect changes in design criteria. The applicant for any development projected to generate more than 1,000 vehicle trip ends per day shall submit a traffic impact analysis.
- D. **Dedication of Street Right-of-Way by Plat.** Dedication of street right-of-way by plat shall conform to City/County Subdivision Control Ordinance and any applicable amendments thereto.

The dedication of the street right-of-way shall be made by the appropriate authority on a form acceptable to the City/County authority and placed on file with the Whitley County Highway Department and/or the City Street Commissioner.

The legal description for the right-of-way shall be prepared and signed by a land surveyor registered in the State of Indiana.

The right-of-way shall conform to the standards of the City/County

subdivision and/or the respective zoning ordinances.

Plans and specifications for the proposed improvement shall be presented to the City/County highway department and approved by the City/County highway engineer.

Upon execution of the dedication form and subsequent approvals by the involved agencies, the dedication form shall be recorded by the City/County highway department and copies of the recorded document shall be distributed to the grantor and to all appropriate agencies having a probable interest in the dedication.

- E. New Perimeter Streets.** Street systems in new subdivisions shall be laid out so as to eliminate or avoid new perimeter half-streets. Where an existing half-street is adjacent to a new subdivision, the other half of the street shall be improved and dedicated by the subdivider. The Planning Commission may authorize a new perimeter street where the subdivider improves and dedicates the entire required street right-of-way width within its own subdivision boundaries.
- F. Widening and Realignment of Existing Roads.** Where a subdivision borders an existing narrow road or when the Master Plan, Official Map, or zoning setback regulations indicate plans for realignment or widening a road that would require use of some of the land in the subdivision, the applicant shall be required to improve and dedicate at its expense those areas for widening or realignment of those roads. Frontage roads and streets as described above shall be improved and dedicated by these subdivision regulations when the applicant's development activities contribute to the need for the road expansion. Land reserved for any road purposes may not be counted in satisfying yard or area requirements of the Zoning Ordinance whether the land is to be dedicated to the municipality in fee simple or as an easement granted to the Local Government.
- G. Bridges.** Bridges of primary benefit to the applicant, as determined by the Planning Commission, shall be constructed at the full expense of the applicant without reimbursement from the Local Government. The sharing expense for the construction of bridges, not of primary

benefit to the applicant as determined by the Planning Commission, will be fixed by special agreement between the Governing Body and the applicant. The cost of bridges that do not solely benefit the developer shall be charged to the developer pro rata based on the percentage obtained by dividing the service area of the bridge into the area of the land being developed by the subdivider.

H. Street and Alley Location and Arrangement.

1. **Arterial and Collector Streets.** An arterial street (or road) is designed to handle large volumes of traffic movement. Certain arterial streets may be classed as Limited Access Highways to which entrances and exits are provided only at controlled intersections and access is denied to abutting properties. Such a street may also be referred to as a major street when the rules of access are less stringent.

A collector street (or road) is designed to facilitate the collection of traffic from residential streets or other streets of a more local community and to provide circulation within neighborhood areas and convenient ways for traffic to reach arterial streets.

Arterial and collector (or feeder) streets shall be properly related to special traffic generators such as business districts, industrial districts, schools, churches, and shopping centers; to population densities, and to the pattern of existing and proposed land uses.

2. **Access to Primary Arterials.** Where a subdivision borders on, or contains an existing or proposed primary arterial, the Commission may require that the access to it be limited by one of the following means:
 - a. the subdivision of the lots so that the lot backs onto the primary arterial and fronts onto a parallel local street. No access shall be provided from the primary arterial. Screening shall be provided within a 10-foot strip of land along the rear property line (next to the primary

arterial right-of-way line) of such lots;

- b. a series of cul-de-sacs, of loop streets, entered from, and generally designed to be at right-angles to an access street that is some distance from and parallel to the arterial street, with rear lot lines backing onto the arterial;
 - c. a marginal access or service road having access thereto at widely spaced suitable points of entry/exit. The service road shall be separated from the primary arterial by landscaped screening flora or by a decorative fenced grassed strip.
 - d. the Commission may require that driveways be designed and arranged so as to avoid the necessity for vehicles to back into traffic on arterial, collector, or local streets.
3. **Local and Residential Streets.** Local and residential streets shall be laid out so as to discourage through traffic in residential areas; and in such a manner as to permit efficient drainage systems and utility systems. Excessive traffic generators shall not be permitted on minor or local streets.
4. **Stub Streets/Dead-End Streets.** A permanent dead-end or stub street, other than a cul-de-sac, shall not be permitted. The purpose of a stub-street is to provide for a continuation of an existing street or the beginning of a new street when future development takes place. It shall be only one (1) lot long and should the need for it be abandoned, the land it occupies shall revert to the adjacent property owners and such action duly noted on the subdivision plat. A stub street shall be provided with a temporary turn-around space when subdivision is constructed in phases.
5. **Cul-de-sacs.** Cul-de-sacs shall not be longer than 600 feet plus a turn-around which shall be provided at the closed-end with an outside radius of at least 60 feet and an inside radius

of not less than fifty (50) feet. The maximum grade of the turn-around portion of the cul-de-sac shall be five percent (5%). Termination of the cul-de-sac shall not be nearer than five (5) feet from the rear property line. There shall be a minimum thirty-five (35) foot lot frontage on the radius of the turn-around.

TYPE - 2
Turn-Around

600 feet

Street Intersected

**FIGURE 4-8 Cul-de-Sac Turn-Around
Plus Distance to Intersection with Street**

6. Street Intersections.

- a. **Intersections.** Streets shall be laid out so as to intersect as nearly as possible at right angles. A proposed intersection of two (2) new streets at an angle of less than seventy-five (75) degrees shall not be acceptable. An oblique street should be curved approaching an intersection and should be approximately at right angles for at least one hundred (100) feet therefrom. No more than two (2)

streets can intersect at any one point unless specifically approved by the Planning Commission.

- b.** Proposed new intersections along one side of an existing street shall, wherever practical, coincide with any existing intersections on the immediately opposite side of such street. Street jogs with center-line offsets of less than 150 feet shall not be permitted, except where the intersected street has separated dual drives without median breaks at either intersection. Where streets intersect major streets, their alignment shall be continuous without jogs. Intersection of major streets shall be at least eight hundred (800) feet apart. The minimum distance between the centerline of parallel or approximately parallel streets intersecting a cross street from opposite directions shall be 250 feet unless it is an in-line, cross-street intersection.
- c.** Minimum curb radius at the intersection of two (2) local streets shall be at least twenty (20) feet; and minimum curb radius at an intersection involving a collector street shall be at least twenty-five (25) feet. Alley intersections and abrupt changes in alignment within a block shall have the corners cut off in accordance with standard engineering practice to permit safe vehicular movement. Property line corners shall be rounded by a 15 foot arc radius. The sight triangle of Paragraph 10.03 (C) of Chapter 10, Zoning Ordinance shall be required.
- d.** 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 percent (2%) rate at a distance of sixty (60) feet, measured from the nearest right-of-way line of the intersecting street.
- e.** Where any street intersection will involve earth banks or existing vegetation inside any lot corner that would

create a traffic hazard by limiting visibility, the developers shall cut such ground and/or vegetation (including trees) in connection with the grading of the public right-of-way to the extent deemed necessary to provide an adequate sight distance.

- f. The cross-slopes on all streets, including intersections, shall be three percent (3%) or less.
 - g. At alley intersections, property line corners shall be rounded by an arc at least ten (10) feet in radius.
7. **Right-of-Way.** When a property is located on an existing street, the owners of said property shall dedicate any additional right-of-way necessary to comply with the minimum standards of the Thoroughfare Plan. Where topography design features, or other conditions necessitate additional right-of-way or easements to permit construction of a street to the established standards for such street, the Commission may require dedication of such right-of-way or establishment of such easements.
8. **Alleys.** Alleys shall not be permitted in residential subdivisions. The Commission may permit alleys in commercial and industrial subdivisions if it finds that alleys are the best means of serving the commercial and industrial subdivision. Such alleys shall have a minimum right-of-way width of 30 feet and a minimum hard surface width of 16 feet exclusive of gutters and parking spaces.
9. **Half-Streets.** Wherever there exists a dedicated or platted portion of a street or alley adjacent to the proposed subdivision, the remainder of the street or alley to the prescribed width shall be platted within the proposed subdivision.
10. **Streets Near Public Institutions.** Streets leading to schools

and other public meeting places should be straight so as to give a more direct access from the nearest arterial or major street. It shall be provided with room for school buses and semi-trailer maneuverability.

11. **Streets Parallel to Railroads/Highways.** Whenever a proposed subdivision contains or is adjacent to railroad/highway, provision shall be made for a street parallel to that railroad/highway right-of-way. Said street shall provide frontage to the one tier of lots. A buffer strip, in lieu of a tier of lots, shall be provided along the right-of-way. The lots or the buffer strip shall be landscaped with evergreen trees spaced 30-feet on center to center.
12. **Street Arrangement and Topography.** Where appropriate to the topography, streets shall be arranged so as to provide building sites which are at or above the grades of the streets to the maximum practical extent. Grades of streets shall conform as closely as possible to the original topography.
13. **Reserve Strips of Land.** There shall be no reservation of strips of land that prevent or limit access to land dedicated or intended to be dedicated to public use. Where a new development requires a street to be developed adjacent to an undeveloped area, the developer shall bear the cost of the street development with the condition that future property owners bordering that street shall reimburse the original developer with half the cost of the street improvement.
14. **Street Trenches.** All trenches crossing street right-of-ways shall first be coordinated with the City/County Engineer and appropriate street and/or highway department. Such street trenches shall be back-filled and compacted and further improved to the satisfaction of the appropriate authorities.
15. **Business and Industrial District Streets.** In business and industrial developments, the streets and other access ways shall be planned in connection with the groupings of buildings; location of railroad or highway facilities; and the position of alleys, truck loading and maneuvering areas, walkways, bikeways and parking areas so as to minimize

conflict of movement between vehicular and pedestrian traffic. Consideration shall be given to the provision of a two-lane driveway along the periphery of large parking lots. In large shopping areas, cross-easements and coordinated traffic patterns shall be encouraged. The use of common double entrances shall be encouraged for smaller commercial businesses along major or arterial streets.

16. **Frontage on Improved Streets.** No subdivision shall be approved unless the area to be subdivided has frontage on and access from an existing street shown on the Official Map, unless such street is:
 - a. an existing State, County, or Township highway, or
 - b. a street shown upon a plat approved by the Commission and recorded in the office of the County Recorder of Deeds. Such street or highway must be suitably improved as required by the highway rules, regulations, specifications, or orders; or be secured by a performance bond required under these regulations, with the width and right-of-way required by these regulations, or as indicated on the Official Map or Thoroughfare Plan. Whenever the area to be subdivided is to use an existing street frontage, such street shall be suitably improved at the developer's cost.

17. **State Highways.** If any subdivision or any lot therein abuts a State highway evidence of compliance with all applicable regulations of the Indiana Department of Highways shall be required.

18. **Street Names.** No street name in a subdivision shall be given the same name as an existing street in a previously recorded subdivision unless the new street is a direct continuation of

the existing street. No street shall be named a descriptive term commonly used in civil engineering e.g. dead-end, stub, cul-de-sac, etc. Street names shall not closely resemble other street names unless directly related to them e.g. South Parkway, North Parkway, Azalea Court, Adelia Court, etc., in the City or the County.

19. **Street Patterns.** Rigid rectangular "gridiron" patterns are, generally, to be avoided, and the use of casually curvilinear streets, cul-de-sacs, or loop streets shall be encouraged where such use will result in a more desirable layout and relate better to the existing topography. On flat land, innovative geometrical street patterns shall be encouraged where they are likely to enhance visual interest and a sense of order for those persons using them. An effort shall be made to design the street pattern in such a manner as to facilitate access to a particular address from the entrance to the subdivision. In using these street layouts, allowance shall be made for on-street parking which will not interfere with line-of-sight visibility on streets having potential for greater traffic due to population density and/or close proximity to major or minor arterial streets.
20. Minimum street and alley widths, maximum grades, minimum sight distances on vertical curves, minimum tangents between reversed curves drainage requirements, and other design standards are shown in Paragraphs 4.18 through 4.21. These are to be interpreted as absolute maxima and minima; more stringent requirements may be imposed by the Plan Commission in individual cases.
21. Parking on arterial, collector or local streets shall be in accordance with the requirements as stated on each chart.

4.18 Columbia City Street Minimum Design Standards

A. Arterials/Columbia City

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Chapter 4**

Average Daily Traffic (ADT)	1,000 or more trips
Minimum R-O-W Width	60 ft.
Pavement Width (City)	44 ft.
Curb and Gutter (Each Side)	2 ft.
Pavement Width (Rural)	44 ft.
Berm (Each Side)	8 ft.
Maximum Grade	4%
Sight Distance: On Hill (minimum)	600 ft.
Stopping	350 ft.
Intersection	500 ft.
Minimum Centerline Radius	500 ft.
Tangent Between Reverse Curves	300 ft.
Minimum Angle at Intersections	90 degrees
Design Speed	50 MPH
Bridge Width	44 ft.
Minimum Radius of Curves	100 ft.

Additional Standards and Comments:

1. The pavement cross slope shall be between 1/4 inch per foot and 3/8 inch per foot.
2. The shoulder cross slope shall be between 1/2 inch per foot and 1 inch per foot.
3. For all streets 4 foot of the shoulders shall be stoned and paved.
4. The R-O-W shall be adequate for construction and maintenance of pavement, shoulders, ditches, curbs, gutters, sidewalks where required. The Commission may require additional R-O-W if necessary.
5. 45% parking allowable on one side only.

Note: ADT shall be estimated based on 8 trips per day per lot on the street.

B. Collector Streets/Columbia City.

Average Daily Traffic (ADT)	500-999 trips
Minimum R-O-W Width	60 ft.
Pavement Width (City)	36 ft.
Curb and Gutter (Each Side)	2 ft.
Pavement Width (Rural)	24 ft.
Berm (Each Side)	8 ft.
Maximum Grade	6%
Sight Distance: On Hill (minimum)	400 ft.
Stopping	310 ft.
Intersection	200 ft.
Minimum Centerline Radius	300 ft.
Tangent Between Reverse Curves	200 ft.
Minimum Angle at Intersections	80 degrees
Design Speed	45 MPH
Bridge Width	36 ft.
Minimum Radius of Curves	100 ft.

Additional Standards and Comments:

1. The pavement cross slope shall be between 1/4 inch per foot and 3/8 inch per foot.
2. The shoulder cross slope shall be between 1/2 inch per foot and 1 inch per foot.
3. For all streets 4 feet of each shoulder shall be stoned or paved.
4. The R-O-W shall be adequate for construction and maintenance of pavement, shoulders, ditches, curbs, gutters, sidewalks, where required. The Commission may require additional R-O-W if necessary.
5. When a street connects one collector street with another collector street, in a high-density subdivision, it shall be considered a collector street rather than a local street and as such it shall be constructed in accordance with the requirements of a collector street.
6. Parallel parking allowed on one side only.

Note: ADT shall be estimated based on 8 trips per day per lot on the street.

C. Local Streets/Columbia City.

Average Daily Traffic (ADT)	100-499 trips
Minimum R-O-W Width	50 ft.
Pavement Width (City)	26 ft.
Curb and Gutter (Each Side)	2 ft.
Pavement Width (Rural)	24 ft.
Berm (Each Side)	8 ft.
Maximum Grade	8%
Sight Distance: On Hill (minimum)	200 ft.
Stopping	310 ft.
Intersection	450 ft.
Minimum Centerline Radius	200 ft.
Tangent Between Reverse Curves	100 ft.
Minimum Angle at Intersections	80 degrees
Design Speed	45 MPH
Bridge Width	30 ft.
Minimum Radius of Curves	100 ft.

Additional Standards and Comments:

1. The pavement cross slope shall be between 1/4 inch per foot and 3/8 inch per foot.
2. The shoulder cross slope shall be between 1/2 inch per foot and 1 inch per foot.
3. For all streets 4 feet of each shoulder shall be stone or paved.
4. The R-O-W shall be adequate for construction and maintenance of pavement, shoulders, ditches, curbs, gutters, sidewalks, where required. The Commission may require additional R-O-W if necessary.
5. When a local street in a high-density subdivision connects one collector street with another collector street and when

it is anticipated high traffic flow due to the high-density nature of the subdivision, it shall be constructed in accordance with the requirements of a collector street.

6. Parking on either side of street is prohibited.

Note: ADT shall be estimated based on 8 trips per day per lot on the street.

D. Alleys/Columbia City.

Average Daily Traffic (ADT)	--
Minimum R-O-W Width	30 ft.
Pavement Width (City)	16 ft.
Curb and Gutter (Each Side)	2 ft.
Pavement Width (Rural)	12 ft
Berm (Each Side)	8 ft.
Maximum Grade	10%
Sight Distance: On Hill (minimum)	100 ft.
Stopping	--
Intersection	--
Minimum Centerline Radius	100 ft.
Tangent Between Reverse Curves	50 ft.
Minimum Angle at Intersections	70 degrees
Design Speed	--
Bridge Width	--
Minimum Radius of Curves	--

Additional Standards and Comments:

1. The pavement cross slope shall be between 1/4 inch per foot and 3/8 inch per foot.
2. The shoulder cross slope shall be between 1/2 inch per foot and 1 inch per foot.
3. For all streets 4 feet of each shoulder shall be stone or paved.
4. The R-O-W shall be adequate for construction and maintenance of pavement, shoulders, ditches, curbs, gutters,

sidewalks, where required. The Commission may require additional R-O-W if necessary.

Note: ADT shall be estimated based on 8 trips per day per lot on the street.

E. Cul-de-Sacs/Columbia City.

Average Daily Traffic (ADT)	80-99 trips
Minimum R-O-W Width	60 ft.
Pavement Width (City)	32 ft. res.subd.
Curb and Gutter (Each Side)	2 ft.
Pavement Width (Rural)	--
Berm (Each Side)	--
Maximum Grade	5%
Sight Distance: On Hill (minimum)	--
Stopping	--
Intersection	--
Minimum Centerline Radius	--
Tangent Between Reverse Curves	100 ft.
Minimum Angle at Intersections	90 degrees
Design Speed	20 MPH
Bridge Width	28 ft.
Minimum Radius of Curves	100 ft.

Additional Standards and Comments:

1. The pavement cross slope shall be between 1/4 inch per foot and 3/8 inch per foot.
2. The shoulder cross slope shall be between 1/2 inch per foot and 1 inch per foot.
3. For all streets 4 feet of each shoulder shall be stone or paved.
4. The R-O-W shall be adequate for construction and maintenance of pavement, shoulders, ditches, curbs, gutters, sidewalks where required. The Commission may require additional R-O-W if necessary.

5. Cul-de-sac length and other details in Paragraph 4.16 (H) (5).

Note: ADT shall be estimated based on 8 trips per day per lot on the street.

F. Private Drives/Columbia City.

Average Daily Traffic (ADT)	--
Minimum R-O-W Width	50 ft.
Pavement Width (City)	24 ft.
Curb and Gutter (Each Side)	--
Pavement Width (Rural)	24 ft.
Berm (Each Side)	8 ft.
Maximum Grade	14%
Sight Distance: On Hill (minimum)	--
Stopping	--
Intersection	--
Minimum Centerline Radius	--
Tangent Between Reverse Curves	--
Minimum Angle at Intersections	70 degrees
Design Speed	--
Bridge Width	--
Minimum Radius of Curves	100 ft.

Additional Standards and Comments:

1. The pavement cross slope shall be between 1/4 inch per foot and 3/8 inch per foot.
2. The shoulder cross slope shall be between 1/2 inch per foot and 1 inch per foot.
3. For all streets 4 feet of each shoulder shall be stone or paved.
4. The R-O-W shall be adequate for construction and maintenance of pavement, shoulders, ditches, curbs, gutters, sidewalks, where required. The Commission may require additional R-O-W if necessary.

Note: ADT shall be estimated based on 8 trips per day per lot on the street.

G. Pedestrianways/Crosswalks/Columbia City.

Average Daily Traffic (ADT)	--
Minimum R-O-W Width	15 ft.
Pavement Width (City)	**
Curb and Gutter (Each Side)	--
Pavement Width (Rural)	**
Berm (Each Side)	--
Maximum Grade	--
Sight Distance: On Hill (minimum)	--
Stopping	--
Intersection	--
Minimum Centerline Radius	--
Tangent Between Reverse Curves	--
Minimum Angle at Intersections	--
Design Speed	--
Bridge Width	--
Minimum Radius of Curves	--

* Pedestrian-way/Crosswalk width is variable and shall be determined by usage e.g. greater width to accommodate greater on-foot traffic or to adjust to the width of the sidewalks associated with them.

FIGURE 4-9 Pedestrianway/Crosswalk

H. Road Surfacing and Improvements/Columbia City. After sewer and water utilities have been installed by the developer, the developer shall construct curbs and gutters and shall surface or cause to be surfaced roadways to the widths prescribed in these regulations. All surfacing shall be of a character as is suitable for the expected traffic and in harmony with similar improvements in the surrounding areas. Types of pavement shall be as determined by the Local Government Engineer. Adequate provision shall be made for culverts, drains, and bridges. All road pavement, shoulders, drainage improvements and structures, curbs, turn-arounds, and sidewalks shall conform to all construction standards and specifications adopted by the Planning Commission, Local Government Engineer, or Governing Body and shall be incorporated into the construction plans required to be submitted by the developer for plat approval.

4.19 Material for City Streets.

A. Arterials/City:

1. **Rigid Concrete.** 8 inch concrete; 3 inch #73 or approved aggregate or gravel.
2. **Full Depth Asphalt.** 11 inches.
3. **Base Plus Flexible Asphalt.** 2 inch asphalt top; 5 inch hot asphalt base; 6 inch #73 or appropriate aggregate or gravel; 8 inch #2 stone or approved aggregate or gravel.

B. Collectors/City:

1. **Rigid Concrete.** 7 inch concrete; 3 inch #73 or approved aggregate or gravel.
2. **Full Depth Asphalt.** 9 inches.
3. **Base Plus Flexible Asphalt.** 1 inch hot asphalt top; 3 inch hot asphalt base; 4 inch #73 aggregate or approved aggregate

or gravel.

C. **Locals/City:**

1. **Rigid Concrete.** 6 inch concrete; 3 inch #73 or approved aggregate or gravel.
2. **Full Depth Asphalt.** 7 inches.
3. **Base Plus Flexible Asphalt.** 1 inch hot asphalt top; 3 inch hot asphalt base; 2 inch #73 aggregate or approved aggregate or gravel; 6 inch #2 stone or approved aggregate or gravel.

D. **Alleys/City:**

1. **Rigid Concrete.** 5 1/2 inch concrete; 3 inch #73 or approved aggregate or gravel.
2. **Full Depth Asphalt.** 7 inches.
3. **Base Plus Flexible Asphalt.** 1 inch hot asphalt top; 3 inch hot asphalt base; 2 inch #73 aggregate or approved aggregate or gravel; 6 inch #2 stone or approved aggregate or gravel.

E. **Cul-de-sacs/City:**

1. **Rigid Concrete.** 6 inch concrete; 3 inch #73 or approved aggregate or gravel.
2. **Full Depth Asphalt.** 7 inches.
3. **Base Plus Flexible Asphalt.** 1 inch hot asphalt top; 3 inch hot asphalt base; 2 inch #73 aggregate or approved aggregate or gravel; 6 inch #2 stone or approved aggregate or gravel.

F. **Private Streets, Roads, Drives** shall be constructed as for local streets.

- G. **Pedestrianway/Cross-walks** shall be constructed as for local streets.

4.20 **Construction Inspection for City Streets.**

All street construction is subject to the following conditions:

- A. **Engineering Plan Approval.** Work shall not be started until engineering plans have been approved by all agencies having jurisdiction over the phase of construction;
- B. **Highway Authority Authorization.** The developer, owner, or authorized representative shall notify the highway authority at the following stages of construction:
 - 1. at the completion of all subgrades for concrete streets (the subgrade may be considered bare soil or the compact aggregate leveling course.) For deep lift asphalt, the subgrade may consist of bare soil.
 - 2. the anticipated time of the application of any materials.
 - 3. at the completion of the placing of the compacted aggregate base and immediately prior to placing bituminous materials.
- C. **Advance Notice of Construction.** The period of notice prior to the anticipated time of application of any materials shall not be less than forty-eight (48) hours or more than ten (10) days.
- D. **Highway Engineer Obligation.** The highway engineer shall not be obligated to accept any work which is not in compliance with the above inspection policy and the department has been satisfied that all affected work and construction conforms to the approved engineering plans and to these specifications. Non-compliance may also result in extended maintenance bonds on affected construction or other requirements as may be determined by the highway engineer or the respective City/County authorities.

E. Inspection of Streets Prior to Recording of Plat. In the event a request is made for inspection of streets in a preliminary plat or a final plat prior to the recording of the plat, the developer or subdivider must provide:

1. Final engineering plans for the street(s) and storm drainage which have received final approval from the highway engineer and/or the applicable storm drainage agency;
2. A properly executed application to the highway engineer requesting inspection of the street(s) in the affected plat;
3. An agreement to meet all provisions, conditions and procedures of this Ordinance.

F. Acceptance of Work. Neither the Highway Department nor any affected agency shall be obligated to accept any work started prior to approval of the engineering plans or any work which is not in accordance with the approved engineering plans and these specifications.

G. Material Testing. Any testing of materials required by the highway engineer shall be performed by an independent testing laboratory at the developer's expense. The Highway Engineer may retain the right to perform the tests.

4.21 Whitley County Roads Minimum Design Standards.

A. Arterial Roads/Streets; Whitley County

Average Daily Traffic (ADT)	1000 or more trips
Minimum R-O-W Width	80 ft.
Pavement Width (City)	--
Curb and Gutter (Each Side)	--
Pavement Width (Rural)	36 ft.
Berm (Each Side)	8 ft.
Maximum Grade	7.5%
Sight Distance: On Hill (minimum)	--

Stopping	350 ft.
Intersection	500 ft.
Minimum Centerline Radius	--
Tangent Between Reverse Curves	--
Minimum Angle at Intersections	--
Design Speed	50 MPH
Bridge Width	36 ft.
Minimum Radius of Curves	--

Additional Standards and Comments: (See Section 4.21-E)

B. Collector Roads/Streets; Whitley County

Average Daily Traffic (ADT)	500-999 trips
Minimum R-O-W Width	70 ft.
Pavement Width (City)	See Para. E.
Curb and Gutter (Each Side)	See Para. E.
Pavement Width (Rural)	24 ft.
Berm (Each Side)	8 ft.
Maximum Grade	10%
Sight Distance: On Hill (minimum)	--
Stopping	310 ft.
Intersection	450 ft.
Minimum Centerline Radius	See Para. E.
Tangent Between Reverse Curves	--
Minimum Angle at Intersections	See Para. F.
Design Speed	45 MPH
Bridge Width	30 ft.
Minimum Radius of Curves	See Para. F.

Additional Standards and Comments: (See Sec. 4.21 - E.)

C. Local Roads/Streets; Whitley County

Average Daily Traffic (ADT)	100-499 trips
Minimum R-O-W Width	60 ft.
Pavement Width (City)	See Para. E.
Curb and Gutter (Each Side)	See Para. E.
Pavement Width (Rural)	24 ft.

Berm (Each Side)	8 ft.
Maximum Grade	12%
Sight Distance: On Hill (minimum)	--
Stopping	275 ft.
Intersection	400 ft.
Minimum Centerline Radius	See Para. E.
Tangent Between Reverse Curves	--
Minimum Angle at Intersections	See Para. F.
Design Speed	40 MPH
Bridge Width	30 ft.
Minimum Radius of Curves	See Para. F.

Additional Standards and Comments: (See Sec. 4.21 - E.)

D. Subdivision Roads/Streets, Whitley County

Subdivision Average Daily Traffic (ADT)	<100 trips
Minimum R-O-W Width	50 ft.
Pavement Width (City)	See Para. E.
Curb and Gutter	See Para. E.
Pavement Width (Rural)	24 ft.
Berm (Each Side)	8 ft.
Maximum Grade	12 %
Sight Distance: On Hill (minimum)	--
Stopping	200 ft.
Intersection	300 ft.
Minimum Centerline Radius	See Para. E.
Tangent Between Reverse Curves	--
Minimum Angle at Intersections	See Para. F.
Design Speed	30 MPH
Bridge Width	28 ft.
Minimum Radius of Curves	See Para. F.

Additional Standards and Comments: (See Sec. 4.21 E.)

E. Additional Standards and Comments - County Design Standards for Streets and Roads.

1. The pavement cross-slope shall be between one-fourth (1/4) inch per foot and three-eighths (3/8) inch per foot.

2. The shoulder cross-slope shall be between one-half (1/2) inch per foot and one (1) inch per foot.
3. The minimum grade shall be 0.10 percent.
4. The arterial and collector streets, at least two (2) feet of the berm shall be stone or paved.
5. The right-of-way shall be adequate for construction and maintenance of pavement, berm, and ditches. The Commission may require such additional right-of-way as it deems necessary for these purposes, or may reduce the required right-of-way widths if the applicant provides justification deemed adequate by the Commission.
6. The pavement widths shown on the tabulation in Paragraphs A through D of this Section are for streets and roads having typical berm section. For each parking lane, an additional two (2) feet of pavement shall be provided, and for curb and gutter an additional two (2) feet (total 4 feet) shall be provided. At least one parking lane shall be provided on all roads/streets with curb and gutter.
7. Residential subdivision streets shall be designed according to the traffic volumes shown in the Paragraphs A through D of this Section, assuming eight (8) trips per lot per day.
8. The berm width for arterial shall be eight (8) feet; for collectors eight (8) feet; for local and subdivision eight (8) feet, or as determined by the County Engineer..
9. Pavement markings for arterials shall be centerline with no parking zoned and edge lines; for collectors centerlines; for local and subdivision, none.

F. Whitley County Intersection Design Standards.

DESIGN CRITERIA

STANDARD

Maximum Approach Speed

25 MPH

Vertical Alignment with Intersection	50% of approach grade
Angle of Intersection	90% (In no case <75 degrees)
Minimum Curb Radius	
Subdivision-Subdivision	25 ft.
Local-Subdivision	25 ft.
Local-Local	25 ft.
Local-Collector	25 ft.
Collector-Collector	25 ft.
Minimum Centerline Offset of Adjacent Roads	
Subdivision-Subdivision	150 ft.
Local-Subdivision	200.ft.
Local-Local	200 ft.
Local-Collector	300 ft.
Collector-Collector	600 ft.
Collector-Arterial	1320 ft
Maximum Number of Roads at Intersections	2 (4 approaches)

G. Whitley County Ordinance 0-92-11. Reference is made to Whitley County Ordinance 0-92-11 dated December 21, 1992, entitled, "General and Detailed Specifications for Roads and Streets, Sidewalks, Curbs, Drainage Structures and Other Miscellaneous Items," Whitley County Highway Department, Columbia City, Indiana as amended. Said ordinance takes precedence over any related data shown in the Subdivision Ordinance unless specific data specifies otherwise.

4.22 Street Signs

The developer shall provide the subdivision with acceptable City or County street signs at the intersections of all streets (roads):

- A. State and Federal Specifications.** Signs must meet State and Federal Specifications for size, shape, construction and placement;
- B. Sign Material.** Signs must be constructed of eighty-hundredths-inch (0.80") minimum thickness aluminum;
- C. Sign Faces.** Sign faces must be reflective material and clear-coated for protection.

1. Stop signs must be high-intensity reflective material.
 2. All other regulatory signs must be engineer grade reflective material.
- D. Stop Signs.** The size of all stop signs will be thirty (30") inch; regulatory signs will be twenty-four (24") inch by thirty (30") inches. Street name signs will be extruded aluminum six (6") inches by twenty-four (24") inches with reflective (green) backing and four (4") inch white letters.
- E. Sign Posts.** Sign posts shall be 2-lb. per foot (minimum) steel with galvanized coating and fourteen (14) feet long.
- F. Sign Hardware.** A 9/16" x 1/8" plastic washer will contact all sign surfaces. Bolts 5/16" x 2 1/2" long with flat washer and lock washer with nut shall be used as fasteners.

4.23 Street Lights

The subdivider shall provide the subdivision with street lights. The quantity, quality, type, and location of the street lights shall be determined by the City Board of Works or the County Engineer, as the case may be.

FIGURE 4-10 Paraplegic and Bicycle Ramp Detail Example

4.24 Sidewalks

A. General.

1. On streets in the vicinity of schools or other public or private meeting places, the Commission may require the installation of sidewalks for the protection of both pedestrian and vehicular traffic.
2. Sidewalks on both sides of the street shall be required when the subdivision contains four (4) or more lots averaging less than one (1) acre per lot. They shall be placed so as to provide a green space between the curbing and the outer edge of the sidewalk.
3. Sidewalks shall be provided on each side of any public or private bridge where a sidewalk exists entering onto the bridge..
4. Crosswalks/Pedestrianways within blocks, or other places as deemed necessary, shall be improved with at least a four (4) foot wide walk at street intersections and mid-block when desirable.
5. Wheelchair ramps shall be provided at all intersections of sidewalks with the corner of blocks and at other locations as deemed appropriate by the Commission. (See Figure 4-10).
6. Those subdivisions located in the County's jurisdictional area

shall be governed by the desires of the County Plan Commission as to the acceptance of the requirements specified in these conditions.

7. Sidewalks shall be constructed of concrete if deemed appropriate by the Commission.
8. The Commission may waive the provision for sidewalks for good cause.
9. Sidewalks shall be in accordance with City Ordinance Paragraphs 97.10 through 97-28 with modification for paraplegic and bicycle ramp detail in Figure 4-8.
10. Where access to a new subdivision requires the construction of a new street, sidewalks on both sides of said street shall be constructed to the end of the property line of each lot abutting it.

B. Residential Area Sidewalks.

1. Residential sidewalks shall be made of Portland Cement Concrete six (6) feet wide and four (4) inches thick, except in driveways where a seven (7) inch thickness shall be required.
2. New residential subdivisions within the City limits shall be provided with sidewalks on both sides of the street.
3. New residential subdivisions contiguous with the corporate limits of the City shall provide sidewalks on both sides of the street.
4. The outer edge of a residential area sidewalk shall be located no closer than two (2) feet from the outer edge of the curbing and adjacent to the property line.

C. Nonresidential Area Sidewalks.

1. Nonresidential Sidewalks shall be made of Portland Cement Concrete with a minimum width of six (6) feet. A greater width may be recommended by the City Board of Works or County and/or the County Commissioners or County Engineer. The thickness of the sidewalk shall be seven (7) inches where accommodation must be made for heavy truck traffic.
2. Sidewalks in commercial or industrial districts shall be provided with sidewalks where deemed necessary for the protection of pedestrian traffic.

4.25 Curb and Gutter.

A. General.

Curb and gutter requirements are dependent on the size (Large Lot Subdivision or Small Lot Subdivision) discussed in the paragraph on small-lot subdivisions. When provided, curb and gutter shall be one of the two (2) types shown in Figure 4-11. The curb and gutter shall be constructed according to the following specifications:

1. The base for the curb and gutter shall be well compacted on the existing base or grade.
2. The minimum specification shall be shown for the two (2) types of cross-section shown in Figure 4-11.
3. All concrete used in the curb and gutter shall meet the Indiana Standard Specification.
4. The Commission may waive the provision for curb and gutter for good cause.

B. Large Lot Subdivisions Consideration.

The Plan Commission may waive the requirements for curb and gutter in "large lot" subdivisions provided the application guidelines are met:

1. The subdivision creates lots with a minimum width at the building line of 225 lineal feet. Lots of comparable acreage to those proposed but fronting on the circular bulb of a cul-de-sac need not meet this requirements.
2. The subdivision does not lie adjacent to or between other developments where curb and gutter have been provided.
3. The waiver request applies only to minor streets internal to the subdivision and does not include existing arterial or collector streets or extensions of the same where curb and gutter exist or have been planned for installation.

These guidelines must be met in order to request a waiver, and are NOT criteria, which if met, denote automatic approval. Approval of the waiver shall be considered a completely discretionary decision on the part of the Commission and shall be noted on the recorded final plat.

FIGURE 4-11 COLUMBIA CITY CURB AND GUTTER DETAIL

C. Small Lot Subdivisions.

Whenever a proposed subdivision is within the corporate limits; immediately adjacent to the city limits; is adjacent to or between other subdivisions which have been provided with curb and gutter; or whenever the proposed subdivision will have lots which average one (1) acre in area for lots included in the subdivision, the Commission shall require curb and gutter to be installed on each side of the street surface. Gutters may also be required along the boundaries of parking bays as necessary for drainage control or public safety. Plans shall be approved by the City Board of Works or the County Engineer as appropriate.

D. Applicability to Private Streets.

The County Board of Commissioners or the City Board of Works recognizes that there are justifiable reasons for inclusion of privately maintained streets in new subdivisions such as privacy and security. The County Board of Commissioners and the City Board of Public Works also recognize that the inclusion of privately maintained streets in new subdivisions for the purpose of evading the respective road specifications is not a justifiable reason for such purposes, therefore all streets proposed to be privately maintained shall be required to meet the same specifications, requirements and procedures required by this Ordinance for publicly maintained

streets during their construction and through the required maintenance period.

4.26 Driveway Entrances.

A. Driveway Approaches.

The subdivider shall install approaches for each driveway connection to a street with a hard surface between the street roadway surface and when the street is provided with curb and gutter the subdivider shall install curb returns on the driveways. Driveway construction regulations shall be as indicated in City Ordinance specifications referenced in Paragraph 97.20 (Page 33 ordinance for streets and sidewalks).

B. Driveway Surface Drainage.

Driveways shall be constructed so as not to impede the surface drainage system and where curbs are not required the subdivider shall provide one of the following types of improvement:

1. A corrugated metal or approved plastic pipe at least twelve (12) inches in diameter and fourteen (14) feet in length for each driveway approach.
2. A properly dipped or swaled concrete pavement fourteen (14) feet in length, at least six feet (6') in width and seven (7) inches thick at the entrance to each driveway, designed so as not to create a hazard to automobiles or other vehicles.

4.27 Easements for Utilities, Access, Drainage.

A. Access Easements. The width of an access easement to a lot or tract of land shall be at least 50 feet.

B. Utility Line Location and Easements. All utility lines, including but not limited to gas, electric power, telephone and CATV cables shall be located underground throughout the subdivision subject to the granting of a waiver by the Plan Commission. Wherever existing lines are located above ground, except on public roads and right-of-ways, they shall be removed and placed underground. All utility lines and other facilities existing

and proposed throughout the subdivision shall be shown on the preliminary plat or sketch plan in the case of a minor subdivision requiring no major improvements such as new streets, sanitary sewers, City water lines, etc. Underground service connections to the street property line of each platted lot shall be installed at the subdivider's expense. At the discretion of the Commission the requirement for service connections to each lot may be waived in the case of adjoining lots to be retained in single ownership intended to be developed for the same primary use.

1. Easements centered on rear lot lines shall be provided for utilities (private and municipal). Such easements shall be at least 10 feet wide on either side of a common lot line. Proper coordination shall be established between the subdivider and the applicable utility companies for the coordination of utility easements with those established in adjoining properties.
2. Where topographical or other conditions are such as to make impractical the inclusion of utilities along the rear lot lines, perpetual unobstructed easements at least ten (10) feet in width shall be provided along side lot lines for a total of twenty (20) feet, with satisfactory access to the road or rear lot lines. All easements shall be indicated on preliminary and final plats. Each lot shall be provided with no more than two (2) areas set aside for the aforementioned reasons.

- C. **Drainage Easements.** Where a subdivision is traversed by a watercourse, drainage way, ditch, water channel, or stream, there shall be adequate storm water easement or drainage right-of-way conforming substantially with the lines of such watercourse. Each drainage way shall be provided, where necessary, with a means of minimizing runoff of herbicides and/or soil from the yard and/or field. Each drainage easement shall be at least ten (10) feet on either side of the centerline of the drainage way. Where a subdivision is traversed by a legal drain, the easement for the drain shall be in accordance with the Indiana code requirements for legal drains.

There shall be a drainage easement of at least 10 feet in width on each side of any street which has a right-of-way of less than 50 feet.

- D. Alley Easement Alternative.** Where alleys are not provided, easements for public services (utilities etc.) shall be provided. Such easements shall have minimum widths of 20 feet, and where located along lot lines one-half (1/2) of the width shall be taken from each lot. Before determining the location of such easements, the subdivider shall consult with the appropriate agency(s).
- E. Cross-Easement Agreements.** Where adjacent property owners have common traffic arrangements between adjoining lots, each of the owners shall have responsibility for reaching an agreement for common usage of the area involved with maintenance, and general upkeep for that portion of the common use area serving their respective lots. Where possible, parking areas shall be designed so as to minimize the requirement for vehicles to back into through traffic internal to the property or the traffic lanes of collector streets and/or primary and arterials. A common through-traffic lane along the border of each lot sharing a common parking area and furthest from the entrance(s) to buildings, shall be provided.
- F. Legal Drain Easements.** Maintenance easements along legal drains shall be provided in consultation with the Drainage Board of Whitley County and in accordance with the Indiana Code on Legal Drains. Where appropriate, the Commission shall require maintenance easements not specified by governmental authority, if deemed appropriate for the specific area.
- G. Farm Tile Easements.** Where there are farm tiles which are to remain on property proposed for subdivision, an easement of at least 20 feet in width shall be provided for the protection and maintenance of such tiles. The Commission may require larger easements when it deems such larger easement is necessary.
- H. Farm Access Easements.** All parcels, including agricultural property, shall have legal access meeting the minimum standards of this ordinance. In addition to the legal access, access easements at least 25 feet in width for farm machinery and other agricultural purposes, may be provided.

- I. Construction Access Easement.** While construction is on-going, a temporary access may be provided for entry on to the property being subdivided. The access opening shall be provided with a gate which shall be locked during non-construction hours and which shall be made a permanent closure when construction is completed. If construction is not completed within five (5) years the temporary access road shall be removed and the area it occupied shall be equally divided among the property owners adjacent to it or to the property owner through which it passes. If the construction activity terminates prior to the five (5) year deadline, the action described shall be acted upon.
- J. Street Tree Maintenance Easement.** The local government has the right to plant trees within the street right-of-way bordering the lot line of the property adjacent to the street. To provide an area for the maintenance of said trees, the local government shall be granted a limited access authority to enter the property for the purpose of maintaining the trees in a safe and beneficial manner. Maintenance and removal of the trees, if necessary, shall be the responsibility of the local government.
- K. Easements for Public Services.** Each lot in a subdivision shall have an easement(s) for sanitary sewers, storm water sewers, potable water lines, public utilities such as electrical, gas, telephone, and cable television (CATV).
1. The easement shall be a minimum twenty (20) feet in width with the common lot line dividing the easement equally between the two (2) properties. Where the easement merges into the main easement along a street or a non-developed area the total twenty (20) foot width easement shall be along the lot line adjacent to the street or non-developed area.
 2. Easements shall run along the rear lot lines unless approval has been given for another location.
 3. Easements shall be aligned to provide a continuous straight strip; easements in new subdivisions shall align with existing easements.

4. Every plat shall contain a statement as follows: "All utility and drainage easements as dedicated on the face of this plat shall be kept free of all permanent structures and the removal of any obstructions by a utility company shall in no way obligate the utility company in damages or to restore the obstruction to its original form."
5. Under no circumstances shall trees or shrubbery be planted within the easement area.
6. The developer shall provide the buyer of the property with a copy of the layout of the lot showing and describing the easements. Said layout shall also show the location of the various utility service lines serving the principle building and any accessory structures as well as any statutory laws that affect the use of the easement(s).

4.28 Open Space

1. If a proposed development will include at least 40 units (in one phase or a combination of phases), the subdivider shall be required to plat a minimum of one (1) acre of open space for each forty (40) dwelling units to be constructed when the gross density of such development is 2.5 dwelling units per acre or greater. A dwelling unit shall be defined as a single-family home, condominium, apartment/rental unit, or villaminium.
2. The subdivider shall permanently dedicate the open space acreage for public use. The land may be deeded by the subdivider to the City of Columbia City, the School Corporation, or to a duly organized homeowner's association within the subdivision. The Plan Commission shall have final approval as to the use of dedicated open space.
3. Easements, crosswalks, and road frontage to provide public access to the open space shall be shown on the Secondary Plat.
4. 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 may be incorporated into dedicated open space.

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End of Chapter 4