

SUBDIVISION DESIGN STANDARDS

152.55 - GENERAL STATEMENT

The regulations in Sections 152.56 to 152.76, inclusive, shall control the manner in which streets, lots, and other elements of a subdivision are arranged on the land. These design controls shall help insure convenient and safe streets, creation of useable lots, provision of space for public utilities, and reservation of land for recreational uses. The planning of attractive and functional neighborhoods shall be promoted, minimizing the undesirable features of unplanned, haphazard growth.

The Planning Commission has the responsibility for reviewing the design of each future subdivision early in its design development. The Commission shall insure that all of the requirements of Sections 152.56 to 152.76, inclusive, are met.

152.56 - CONFORMITY TO DEVELOPMENT PLANS AND ZONING

The arrangement, character, width, and location of all thoroughfares or extensions thereof shall conform with the City's Major Thoroughfare Plan. Thoroughfares not contained in the aforementioned plan shall conform to the recommendation of the Planning Commission based upon the design standards set forth in Sections 152.57 to 152.68, inclusive. In addition, no final plat of land within the area in which an existing zoning ordinance is in effect shall be approved unless it conforms with such ordinance.

152.57 - SUITABILITY OF LAND

If the Planning Commission finds that the land proposed to be subdivided is unsuitable for subdivision development due to flooding, bad drainage, topography, inadequate water supply, and other such conditions which may endanger health, life, or property; and, if from investigations conducted by the public agencies concerned, it is determined that in the best interest of the public the land should not be developed for the purpose proposed, the Commission shall not approve the land for subdivision unless adequate methods are advanced by the subdivider for solving the problems that will be created by the development of the land.

152.58 - STREET DESIGN

The arrangement, character, extent, width, grade construction, and location of all streets shall conform to the Major Thoroughfare Plan for the City of West Carrollton, or subsequent amendments thereto, and shall be considered in their relation to existing and planned streets, topographical conditions, and public convenience and safety; and in their appropriate relation to the proposed uses of the land to be served by such streets. The street pattern shall discourage through traffic in the interior of a subdivision. The subdivider shall provide within the boundaries of the subdivision plat the necessary right-of-way for the widening, continuance, or alignment of such streets in conformity with the Major Thoroughfare Plan.

152.59 - STREET DESIGN STANDARDS FOR CUL-DE-SACS AND LOOP TYPE LOCAL STREETS

The design and improvement standards contained herein are minimums for cul-de-sacs and loop type local streets in residential subdivisions. All such streets shall be designed and constructed in accordance with standards as specified in Table 1.

152.60 - STREET DESIGN STANDARDS FOR ALL LOCAL STREETS EXCEPT CUL-DE-SACS AND LOOP TYPE STREETS

The design and improvement standards contained herein are minimums for all local type streets, except cul-de-sacs and loop type streets, in residential subdivisions. All such streets shall be designed and constructed in accordance with the standards as specified in Table 2.

152.61 - COLLECTOR STREET DESIGN STANDARDS

The design and improvement standards contained herein are minimums for all collector streets. All such streets shall be designed and constructed in accordance with the standards as specified in Table 3.

152.62 - OFFICIAL THOROUGHFARE DESIGN STANDARDS

- A. The design standards of and the required improvements to arterial streets and roads are contained in Table 4. Construction design criteria on these streets are not specified in these regulations but are to be determined by the City Engineer when and if such a street abuts or crosses the proposed subdivision. Certain improvements may be waived after review and approval by the Planning Commission. In all cases right-of-way dedications shall be required
- B. The subdivider shall be responsible for all required improvements, including the required pavement width measured back to back of curb on an undivided street. On a divided street, the subdivider shall be responsible for the sidewalk, one curb, one-half (1/2) of the required pavement measured from back of curb to back of curb and storm drainage.
- C. When developing along one side of an existing street or roadway which is included in the Major Thoroughfare Plan, the subdivider shall be responsible for one (1) sidewalk, one (1) curb, pavement widening to thoroughfare width of his side, all necessary adjustments to existing pavement, and storm drainage for the street in accordance with an agreement with the City. Where sight distance or other engineering requirements make it imperative, the pavement adjustment responsibility shall include the replacement up to the entire existing pavement.
- D. Where marginal access streets are used to provide access to major arterials, improvements on those thoroughfares will be waived

TABLE 1

STREET DESIGN STANDARDS FOR CUL-DE-SACS AND LOOP TYPE LOCAL STREETS

TERRAIN CLASSIFICATION Development Density	LEVEL			ROLLING			HILLY		
	Low	Med	High	Low	Med	High	Low	Med	High
Right-of-way (ft.)	50	60	60	50	60	60	50	60	60
Pavement width (ft.)*	30	41	41	30	41	41	30	41	41
Sidewalk width (ft.)	4	4	4	4	4	4	4	4	4
Minimum Stopping Distance (ft.)	200	200	200	150	150	150	150	150	150
Maximum Grade	4%	4%	4%	8%	8%	8%	12%	12%	12%
Maximum Cul-de-Sac Length	700	500	500	600	500	500	500	500	500
Minimum Cul-de-Sac Radius (ROW)	50	50	50	50	50	50	50	50	50
Minimum Cul-de-Sac Radius (Pavement)	40	40	40	40	40	40	40	40	40
Minimum Centerline Radius of Streets with an Angle turn of:									
(1) 80 to 100	125	125	125	125	125	125	125	125	125
(2) Less than 80 or more than 100	200	200	200	200	200	200	200	200	200

*Pavement width from back of curb to back of curb

TABLE 2

STREET DESIGN STANDARDS FOR ALL LOCAL STREETS AND PUBLIC ACCESS
EASEMENTS EXCEPT CUL-DE-SACS AND LOOP TYPE STREETS

TERRAIN CLASSIFICATION Development Density	LEVEL			ROLLING			HILLY		
	Low	Med	High	Low	Med	High	Low	Med	High
Right-of-way (ft.)	50	60	60	50	60	60	50	60	60
Pavement width (ft.)*	30	41	41	30	41	41	30	41	41
Sidewalk width (ft.)	4	4	4	4	4	4	4	4	4
Minimum Stopping Sight Distance	200	200	200	150	150	150	150	150	150
Maximum Grade	4%	4%	4%	8%	8%	8%	12%	12%	12%
Minimum Centerline Radium of Streets with an Angle of Turn of:									
(1) 80 to 100	125	125	125	125	125	125	125	125	125
(2) Less than 80 or more than 100	200	200	200	200	200	200	150	150	150

*Pavement width from back of curb to back of curb

NOTE: Exceptions to the standards contained in this table are permitted under certain Conditions for large lots.

TABLE 3
COLLECTOR STREET DESIGN STANDARDS

TERRAIN CLASSIFICATION Development Density	LEVEL			ROLLING			HILLY		
	Low	Med	High	Low	Med	High	Low	Med	High
Right-of-way (ft.)	60	60	66	60	60	66	60	60	66
Pavement width (ft.)*	41	41	45	41	41	45	41	41	45
Sidewalk width (ft.)	5	5	5	5	5	5	5	5	5
Minimum Stopping Sight Distance	250	250	250	200	200	200	150	150	150
Maximum Grade	4%	4%	4%	8%	8%	8%	10%	10%	10%
Minimum Spacing when Intersection with Arterial	1320	1320	1320	1320	1320	1320	1320	1320	1320
Minimum Centerline Radius	350	350	350	230	130	130	150	150	150

TABLE 4
THOROUGHFARE STREET DESIGN STANDARDS

R/W WIDTH (ft.)	Sidewalks (ft.)	Planting Strip (ft.)	Median (ft.)	Pavement Width (ft.)
70	5	8	None	44
82	5	5	14	48
90	5	9	14	48
120	5	12	14	72

152.63 - HORIZONTAL ALIGNMENT

When there is an angle of deflection of more than ten (10) degrees between two (2) centerline tangent sections of a street, a curve of adequate radius shall connect them (see Sections 152.59 to 152.62 inclusive). Between reverse curves, a minimum tangent of fifty (50) feet shall be introduced.

152.64 - VERTICAL ALIGNMENT

All changes of grade shall be connected by vertical curves of a minimum length in feet equal to twenty (20) times the algebraic difference in the rate of grade for arterials and industrial streets; for collector and local streets, fifteen (15) times.

- A. Minimum vertical visibility shall conform to the Ohio Department of Transportation regulations in effect on the date of the approval of the preliminary plat.
- B. No street grade shall be less than 0.5 percent and on stop streets grade shall not exceed 2 percent positive or 3 percent negative within one hundred (100) feet of an intersection unless otherwise approved by the City Engineer.

152.65 - INTERSECTION DESIGN STANDARDS

- A. The design and improvement standards for intersections are suggested minimums for all street intersections in subdivisions. All such intersections shall be designed and constructed in accordance with the standards as specified in Table 5.
- B. Multiple intersections involving junctions of more than two (2) streets shall be avoided.
- C. Four-way intersections of local streets should be avoided and three-way or T-intersections should be encouraged wherever possible.
- D. Individual grades for each curb shall be provided on a stop street when the grade on the through street exceeds two (2) percent.
- E. Low points which would result in water ponding or poor visibility shall not be permitted.

TABLE 5
INTERSECTION DESIGN STANDARDS

TERRAIN CLASSIFICATION	LEVEL	ROLLING	HILLY
Maximum Approach Speed (MPH)	25	25	25
Clear sight distance (ft.) (Length along each approach leg)	90	90	70
Minimum of Angle of Intersection Streets shall remain in the angle of Intersection for at least 100 feet Beyond the point of intersection.			75° (90° preferred)
Minimum Curb Radius (ft.)			
a. Local – Local	25	25	25
b. Local – Collector	25	25	25
c. Collector – Collector	30	30	30
d. Collector, marginal access - arterial	35	35	35
Minimum Centerline, offset of Adjacent intersections (ft.)			
a. Local – Local	150	150	150
b. Local – Collector	200	200	200
c. Collector – Collector	300	300	300
d. Collector, marginal access - arterial	1320	1320	1320

152.66 - SPECIAL STREET TYPES

The following requirements shall apply to special street types.

- A. Permanent dead-end streets shall not be permitted. Temporary deadend streets shall be permitted only as part of a continuing street plan.
- B. Dedication of new half-streets shall not be permitted. Where a dedicated or platted half-street exists adjacent to the tract being subdivided, the other half of said half-street shall be platted.
- C. Where a subdivision abutts or contains an existing or proposed arterial street, the Planning Commission may require marginal access streets, reverse frontage with screen planting contained in a non-access reservation along the rear property line, or other such treatment as may be necessary for adequate protection of residential properties and to afford separation of through and local traffic. There shall be no direct vehicular access from residential lots to such arterial streets or highways.
- D. Alleys shall not be approved in residential subdivisions except where justified by extreme conditions. Alleys may be required in commercial and industrial districts if other provisions cannot be made for adequate service access. The minimum widths for alleys shall be twenty (20) feet for the right-of-way and twenty (20) feet for the pavement width.

152.67 - STREETS FOR COMMERCIAL SUBDIVISIONS

Streets serving business developments and accessory parking areas shall be planned to connect with arterial streets so as not to generate traffic on local streets. The intersections of driveways from parking areas with arterial or collector streets shall be located so as to cause the least possible interference with traffic movement on the streets, and shall be located not less than one hundred (100) feet from the intersection of an arterial or collector street with any other street, and shall be spaced not less than two hundred (200) feet from each other. The Commission may require marginal access streets to provide maximum safety and convenience.

152.68 - STREETS FOR INDUSTRIAL SUBDIVISIONS

Collector streets for industrial subdivisions shall be planned to serve industrial areas exclusively and shall connect with arterial streets so that no industrial traffic will be directed into any residential streets. The intersections of service streets from parking areas with arterial or collector streets shall not be less than one hundred (100) feet from the intersection of the arterial or collector street with any other street.

Streets shall be planned to be extended to the boundaries of any adjoining land planned for industry, except for severe physical conditions or if the Commission finds such extension is not in accord with the approved plan of the area.

152.69 - SIDEWALKS

- A. Sidewalks shall be required on both sides of a street in all residential subdivisions. Sidewalks shall be required to be constructed along secondary or main highways as indicated in the Major Thoroughfare Plan and these regulations.
- B. Public sidewalks shall be required for all commercial lots.
- C. The Planning Commission may waive public sidewalks for industrial lots.

152.70 - BLOCKS

The following regulations shall govern the design and layout of blocks:

- A. The arrangement of blocks shall be such as to conform to the street planning criteria set forth in Sections 152.58 to 152.69 inclusive, and shall be arranged to accommodate lots and building sites of the size and character required for the district as set forth in these subdivision regulations or the Zoning Ordinance and to provide for the required community facilities.
- B. Irregularly shaped blocks, those intended for cul-de-sacs or loop streets, and those containing interior parks or playgrounds, may be approved by the Commission if properly designed and located and if the maintenance of interior public spaces is covered by agreements.
- C. No block shall be longer than fifteen hundred (1,500) feet and the block width shall accommodate two (2) tiers of lots, except where unusual topography or other exceptional physical circumstances exist.
- D. Where blocks are over nine hundred (900) feet in length a crosswalk easement not less than ten (10) feet in width at or near the halfway point may be required, if necessary, to provide proper access to schools, recreational areas, shopping centers, and other facilities.

152.71 - LOTS

The following regulations shall govern the design and layout of lots:

- A. The lot arrangement and design shall be such that all lots will provide satisfactory building sites, properly related to topography and the character of the surrounding development.
- B. Each lot shall have its full frontage on a dedicated street or public access easement. The minimum lot sizes and frontage shall be as specified in the Zoning Ordinance. Where soil conditions are of such nature that proper operation of wells and septic tanks may be impaired, the Planning Commission may increase the size of any or all lots in the subdivision above the minimum required by the Zoning Ordinance.

- C. All side lot lines shall be at right angles to street lines and radial to curved street lines, except where the Commission determines that a variation to this rule would provide a better layout.
- D. Lots with double frontage shall be avoided except where the Commission determines that it is essential to provide separation of residential development from arterial streets.
- E. No corner lot shall have a width at the building of less than seventy-five (75) feet.
- F. The maximum depth of a lot shall not be greater than three times the width of the lot, except lots which contain an area of five (5) acres or more. Lots containing over five (5) acres shall not be less than three hundred (300) feet in width at any location; they should be of such shape and dimensions as to render the possible subdivision of any such parcels at some later date into lots and streets which meet the requirements of these regulations.
- G. Fifty (50) feet of additional lot depth may be required where a residential lot in a subdivision backs up to a railroad right-of-way, a high pressure gasoline or gas line, open draining ditch, arterial street, an industrial area or other existing land use which may have a detrimental effect on the residential use of the property, and where no street is provided at the rear of such lot. Where a residential lot has its side lot line adjacent to any of the aforementioned an appropriate additional width may also be required.

152.72 - EASEMENTS

- A. Utility Easements: Public utility easements at least ten (10) feet in total width split between abutting lots may be required along the rear and sides of lots where needed for the accommodation of a public utility, drainage or sanitary structures or any combination of the foregoing. Where deemed necessary by the Planning Commission an additional easement width shall be provided.
- B. Watercourses: The subdivider shall dedicate rights-of-way or provide easements for storm drainage purposes which conform substantially with the lines of any natural watercourses, channels, streams, or creeks which traverse the subdivision or for any new channel which is established to substitute for a natural watercourse, channel, stream, or creek. Such rights-of-way or easements shall be of a width which will provide for the maintenance of the channel and incidental structures as determined by the Planning Commission.

152.73 - PHYSICAL CONSIDERATIONS

Natural Land Uses: Subdivisions should be planned to take advantage of the topography of the land, to economize in the construction of drainage facilities, to reduce the amount of danger, to minimize the destruction of trees and topsoil and to preserve such natural features as watercourses, unusual rock formations, large trees, sites for historical significance and other assets which, if preserved, will add attractiveness and value to the subdivision and the community.

152.74 - FLOODPLAIN

- A. As a safety measure for the protection of the public health, safety and welfare, the Planning Commission shall not approve any subdivision located in areas subject to periodic flooding. If the subdivision is located in said area or an area having other physical impairment, the Commission may approve the subdivision provided the developer or subdivider agrees to perform such improvements as will render the area substantially safe for residential, commercial or industrial uses; and further, provide that in lieu of the improvements, the subdivider shall furnish a surety bond or a certified check covering the estimated cost of such improvements. Prior to acting on a proposed subdivision located in a flood plain, the Commission shall secure the advice of the Miami Conservancy District.
- B. Street Easement: If a stream flows through, or adjacent to, the proposed subdivision, the plat shall provide for a storm water easement or drainage right-of-way along the stream for a floodway of at least ten (10) feet. For the smaller streams, the plat shall provide for channel improvement to enable them to carry all reasonable floods within banks. The floodway easement shall be wide enough for future enlargement of the stream channels as adjacent areas become more highly developed and runoff rates are increased.
- C. Streets: Approval shall not be given for streets within a subdivision which would be subject to flooding. All streets must be located at elevations which will make them flood free in order that no portion of the subdivision would become isolated by floods.

152.75 - PUBLIC OPEN SPACES AND SITES

Where a park, playground, school, or public access to water frontage which is shown in the Comprehensive Plan is located in whole or in part in the proposed subdivision, the Commission shall request the dedication of such area within the subdivision. The subdivider shall pay for only that portion of the cost of the public site that benefits his subdivision as determined by the Commission. The Commission shall wherever possible establish the preservation of all natural features which add value to residential developments and to the community, such as large wooded areas, water courses, beaches, areas of historical significance and similar irreplaceable assets.

152.76 - PARK LAND DEDICATION OR FEE IN LIEU OF LAND

For the purpose of providing parks, playground, or other recreational areas, the Commission shall require that land be dedicated or a fee in lieu of land be paid. The Commission shall make the decision as to the appropriate method of providing parks.

- A. Park Land Dedication - Land dedicated for park purposes shall be based on the criteria of providing 2.5 acres of neighborhood parks for each 1,000 population. The procedure for the land dedication shall be:
 - 1. Procedure - The Planning Commission shall refer any subdivision proposed to contain a dedicated park to the Parks and Recreation Board for a recommendation. All land to be reserved for dedication to West Carrollton for park purposes shall have prior approval of the City Council and shall be marked on the plat "Reserved for Park and/or Recreation Purposes".
 - 2. The Amount of Land Dedicated - The number of acres to be reserved shall be determined by multiplying the number of lots created for single family houses by .008. For multi-family residential developments the number of units permitted by the Zoning Ordinance shall be multiplied by .008 to determine the acreage required for parks
 - 3. Park Sites - Land reserved for recreation purposes shall be of a character and location suitable for use as a playground, playfield, or other recreation purposes, and shall be relatively level and dry; and shall be improved by the developer to the standards required by the Planning Commission, which improvements shall be included in the performance bond. A recreation site shall have a total frontage on one or more streets of at least two hundred (200) feet, and no other dimension of the site shall be less than two hundred (200) in depth.
 - 4. Minimum Size - In general, land reserved for recreation purposes shall have an area of at least two (2) acres. When less than two (2) acres are created, the commission may require that the recreation area be located at a suitable place on the edge of the subdivision so that additional land may be added at such time as the adjacent land is subdivided. In no case shall an area of less than one (1) acre be reserved for recreation purposes if it will be impractical or impossible to secure additional lands in order to increase its area.
- B. Money in Lieu of Land - In subdivisions where the Commission has determined that it is not feasible or practical to dedicate land, a fee in lieu of land shall be paid to the City. This fee shall be equal to one-half of one percent of the estimated cost of construction, to be paid on each building permit issued for the construction of a residential building.

- C. Applicability to Planned Unit Developments Residential - Planned Unit Developments shall not be exempt from the provisions of this section, except as to such portion of land which is actually dedicated to the City for park and recreation purposes. If no further area, other than the area to be reserved as required by the Zoning Ordinance, is required by the Planning Commission, the full fee shall be paid as required in 152.76 (B).
- D. Other Recreation Reservations - The provisions of this section are minimum standards. Nothing in this section shall be construed as prohibiting a developer from reserving other land for recreation purposes in addition to the requirements of this section.

152.77 - WHEELCHAIR RAMPS

Wheelchair ramps shall be provided at all corners and where required walkways intersect with streets.