

Section 710. Hillside Development.

A. **Purpose.** It is the purpose of this Section to establish regulations which recognize that development of land in hilly or mountainous areas involves special considerations and unique situations which result from the slope of the land. These special considerations and unique situations include but are not limited to increased hazards to development from rock falls, storm water runoff, geologic hazards, increased limitations on vehicular travel, and increased difficulties in providing public services. In addition, steeply sloped lands introduce design limitations to roadways, cuts and fills, and building sites. In general, the more steeply the land slopes, the greater potential hazard and development limitation. Additionally, since hilly or mountainous areas within the city offer a desirable setting, visible to the entire city, they are an unique natural asset. It is intended through these regulations to preserve the visual integrity and character of hillside areas, while allowing reasonable development which is both safe and functional.

Additional hillside development standards are included in Section [32-32](#) of the Subdivision Ordinance.

B. Applicability.

1. In all zoning districts, wherever the natural terrain of any lot or parcel or any portion thereof has a slope of ten percent (10%) or greater, that lot or parcel or that portion of the lot or parcel shall be considered to be in a hillside development area. The hillside development area shall commence at the midpoint of the one hundred (100) foot horizontal dimensions used to determine the slope as illustrated by Figure 1, attached hereto and by this reference made a part hereof.
2. Development of land in any zoning district within a hillside development area shall also be regulated by the provisions of Section [32-32](#) of the Phoenix City Code, whether subdivided or not, and shall be subject to the following special conditions:
3. Slope analysis/density study.
 - a. A slope analysis/density study must be prepared for all land determined to contain slopes greater than ten percent (10%) in accordance with the following criteria:
 - (1) Prior to or concurrent with the submittal of a rezoning application.
 - (2) Prior to or concurrent with the submittal of a preliminary plat, preliminary site plan submittal or property division if a rezoning action is not required.
 - (3) Prior to or concurrent with the submittal of a grading and drainage plan or application for building permit if a rezoning, plat, site plan, or property division is not required.

C. Standards.

1. **Hillside development area density.** Special density requirements for single-family and multi-family residential development in the hillside development area in any zoning district shall be as follows:

a. The maximum number of lots, or dwelling units into which hillside development area land shall be the sum of the number of lots or dwelling units allowed by the zoning district or the sum of the number of lots or dwelling units allowed in each category of land as shown by the following table whichever is the lesser number:

| Category Slope of Land | Maximum Number of Lots or Dwelling Units Per Gross Acre or as Allowed by Zoning District, Whichever is Less |
|-----------------------------------|--|
| 10% to 14.9% | 1.80 |
| 15% to 19.9% | 1.10 |
| 20% to 24.9% | 0.70 |
| 25% to 29.9% | 0.50 |
| 30% to 34.9% | 0.30 |
| 35% and over | 0.20 |

There shall be no more lots or dwelling units created than permitted by the slope category, except that lots or dwelling units not placed in a slope category may be placed in a lower slope category so long as the total number of lots or dwelling units in the hillside development area shall not exceed the sum of the lots or dwelling units permitted in each slope category.

2. **Hillside development area standards.** Special yard, height, area, and coverage requirements for developments in the hillside areas in any zoning district shall be as follows:

Table 1

| HILLSIDE DEVELOPMENT AREA STANDARDS | | | | |
|--|--|--|--|--|
| DEVELOPMENT OPTION | a. Single-family Residential (Conventional, Standard and Average Lot Options) | b. Single-family Residential (Planned Residential Development Option, and Planned Area Development) | c. Multi-Family Residential | d. Any Non- Residential Zoning District |
| MINIMUM LOT AREA | 18,000 square feet* | As required by zoning district | as required by zoning district | As required by zoning district |

Table 1

| HILLSIDE DEVELOPMENT AREA STANDARDS | | | | |
|--|---|--|------------------------------------|---|
| DEVELOPMENT OPTION | a. Single-family Residential (Conventional, Standard and Average Lot Options) | b. Single-family Residential (Planned Residential Development Option, and Planned Area Development) | c. Multi-Family Residential | d. Any Non-Residential Zoning District |
| | <p>*Lot areas of more than eighteen thousand (18,000) square feet may be required in order to provide a suitable building site meeting the grading standards of Section 32-32 of the Phoenix City Code.</p> <p>In no case shall residential lots contain an area less than the minimum area required by the zoning district in which such lots are located.</p> | | | |
| MINIMUM LOT DIMENSIONS | | | | |
| <ul style="list-style-type: none"> • WIDTH • DEPTH | <p>120*</p> <p>120'*</p> <p>*Unless in conformance with Section 32-32(M) of the City Code</p> | As required by zoning district | As required by zoning district | As required by zoning district |

Table 1

| HILLSIDE DEVELOPMENT AREA STANDARDS | | | | |
|--|---|--|--|--|
| DEVELOPMENT OPTION | a. Single-family Residential (Conventional, Standard and Average Lot Options) | b. Single-family Residential (Planned Residential Development Option, and Planned Area Development) | c. Multi-Family Residential | d. Any Non-Residential Zoning District |
| REQUIRED SETBACKS | | | | |
| • FRONT YARD | As required by zoning district | As required by zoning district | Minimum 30'* | As required by zoning district or minimum 30'* |
| • REAR YARD | As required by zoning district | As required by zoning district | Minimum 30'* | Minimum 30'* |
| • SIDE YARDS | As required by zoning district or ten (10) feet, whichever is greater | As required by zoning district or ten (10) feet, whichever is greater | Minimum 15'**.Building heights greater than fifteen (15) feet: required yard plus one (1) additional foot for each foot of building height exceeding 15' measured from exterior boundaries | Minimum 15'*, whichever is greater*.Building heights greater than fifteen (15) feet: required yard plus one (1) additional foot for each foot of building height exceeding 15' measured from exterior boundaries |
| MAXIMUM COVERAGE UNDER ROOF | The main building and all accessory buildings shall not occupy more than twenty-five percent (25%) of | The main building and all accessory buildings shall not occupy more than twenty-five percent (25%) of | The main building and all accessory buildings shall not occupy more than twenty-five percent (25%) of | The main building and all accessory buildings shall not occupy more than twenty-five percent (25%) of the hillside portion |

Table 1

| HILLSIDE DEVELOPMENT AREA STANDARDS | | | | |
|--|--|--|--|--|
| DEVELOPMENT OPTION | a. Single-family Residential (Conventional, Standard and Average Lot Options) | b. Single-family Residential (Planned Residential Development Option, and Planned Area Development) | c. Multi-Family Residential | d. Any Non-Residential Zoning District |
| | the hillside portion of the lot or parcel | the hillside portion of the lot or parcel | the hillside portion of the lot or parcel | of the lot or parcel or as required by zoning district, whichever is less |
| MAXIMUM BUILDING HEIGHT | No building shall exceed a height of two (2) stories, not to exceed thirty (30) feet above the natural grade of the lot or parcel at any section through the structure | No building shall exceed a height of two (2) stories, not to exceed thirty (30) feet above the natural grade of the lot or parcel at any section through the structure | No building shall exceed a height of two (2) stories, not to exceed thirty (30) feet above the natural grade of the lot or parcel at any section through the structure | No building shall exceed a height of two (2) stories, not to exceed thirty (30) feet above the natural grade of the lot or parcel at any section through the structure |

3. Slope analysis/category determination.

a. Hillside slope analysis and slope category determination may be conducted by either a manual analysis or computer generated analysis in accordance with the following criteria:

(1) **Manual slope analysis.** To calculate the number of acres in each slope category:

(a) Determine those locations where slopes of ten percent (10%), fifteen percent (15%), twenty percent (20%), twenty-five percent (25%), thirty percent (30%), and thirty-five (35%) begin by application of one hundred (100) foot straight lines.

(b) Connect the midpoints of each series of one hundred (100) foot lines of the same slope category to establish the limits of that slope category.

(c) Measure the areas resulting between each series of straight lines to determine the areas in each slope category.

(d) Figure 2, attached hereto and by this reference made a part hereof, illustrates the method used in calculating the slope categories.

(e) The topographic map shall be at a scale of one hundred (100) feet or less to the inch and shall contain labeled contours at two (2) foot intervals but may contain contours at five (5) foot intervals for grades of more than fifteen percent (15%).

(f) Application for slope category determination shall be made to the Planning and Development Department. If the application meets the criteria of this Section, the City shall accept an applicant's slope category analysis. If the analysis is not acceptable, the applicant may accept either a slope category analysis by staff, or he may add any number of additional one hundred (100) foot lines to the staff analysis for a more precise determination of the slope category lines.

(2) Computer generated slope analysis.

(a) Utilize digital topographic information with contours shown at a maximum of two (2) foot intervals for areas with less than twenty percent (20%) slope. areas containing slopes of more than twenty percent (20%) may utilize digital topographic information with contours shown at five (5) foot intervals. contours must be labeled.

(b) Utilizing a slope generating software application, slope categories shall be determined utilizing the slope categories established under Section 710C.1.a.

(c) Computer generated slope analysis shall be prepared utilizing the following modeling parameters:

(1) Maximum two (2) foot slope contour intervals for slopes less than twenty percent (20%).

(2) Maximum five (5) foot slope contour intervals for slopes more than twenty percent (20%).

(3) The slope analysis shall utilize the above noted slope contour intervals through the modeling basis of grid evaluation to determine slope facets or contours.

(4) The analysis shall utilize a fifty (50) foot grid system.

(d) All data generated through the use of a computer generated slope analysis shall be presented in both chart and graphical formats. The presentation of all graphical slope information shall be presented in a clear and easily understandable format as approved by the Planning and Development Department.

(e) The applicant shall manually draw the slope category lines.

(f) The final map shall be plotted at 1"=100' (or as approved by staff) and submitted to the Planning and Development Department for review. If the Planning and Development Department finds the analysis acceptable, the final slope determination map shall be approved.

4. **Gradable area.** The area occupied and enclosed by fences or walls located within a hillside development shall be considered graded area and shall be shown on the grading and drainage plan as required by Section [32-32](#) of the City Code.

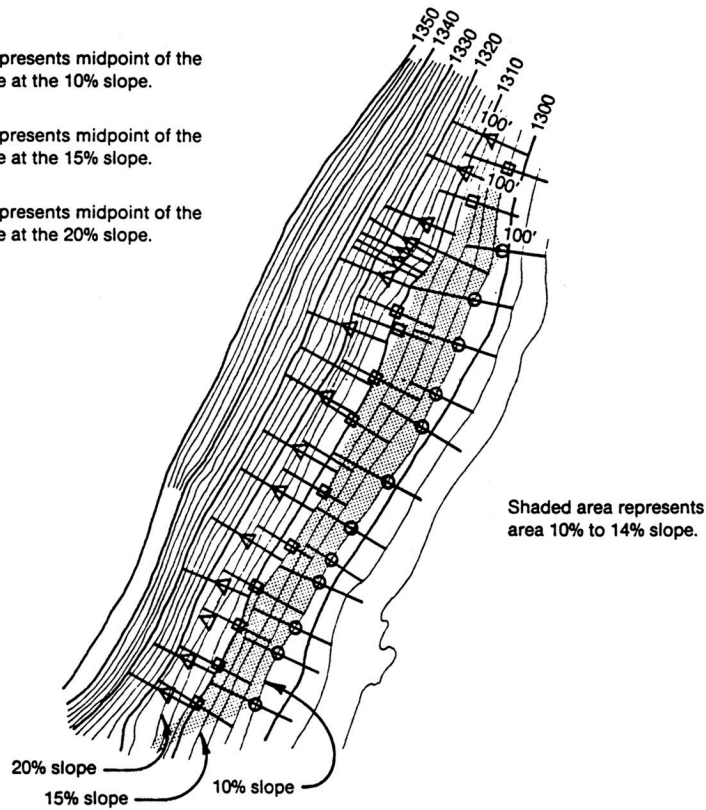
D. **Density Waivers.** Neither the Zoning Administrator nor the Board of Adjustment shall have jurisdiction over the density requirements of this section. The Zoning Hearing Officer and Planning Commission may recommend and City Council may grant in accordance with Section [506.B.4](#). a., b. and c., waivers to the density provisions where such waivers would be in furtherance of the purposes of this section and where there exist unusual conditions relating to the property such as drainage or flood hazards, peculiarity of the size or shape of the site, or geology, and where approval of the waivers would promote the general welfare of the neighborhood.

E. **Variances.** Variances affecting the above regulations other than density shall be regulated by Section [307](#) of this ordinance.

F. **Enforcement.** Maintaining premises in violation of hillside regulations after annexation or the effective date of hillside ordinance (9/12/72) provision shall be grounds to prohibit the issuance of additional building permits until violations are corrected.

HILLSIDE DEVELOPMENT

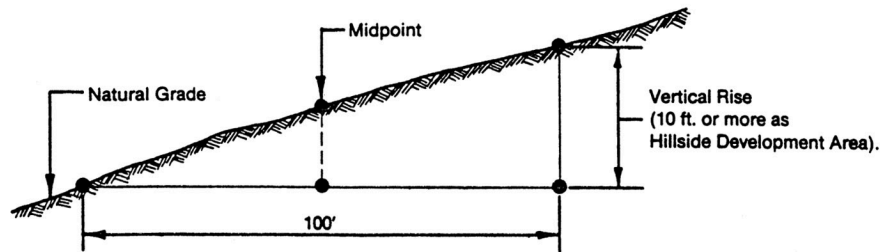
- Represents midpoint of the line at the 10% slope.
- Represents midpoint of the line at the 15% slope.
- △ Represents midpoint of the line at the 20% slope.



Notes:

- 1.) Straight 100' lines are to be about 75 feet apart except where irregular topography requires closer spacing to enable determination of slope line.
- 2.) Straight 100' lines are to be most nearly perpendicular to contour lines.
- 3.) Hillside computations shall not include isolated topographic features, such as hills, pits, or washes, where the feature is less than 100 feet wide.

SLOPE CALCULATION



Hillside Development

(Ord. No. G-3553, 1992; Ord. No. G-3711, 1993; Ord. No. G-4553, 2003)

The Phoenix Zoning Ordinance is current through Ordinance G-7174, and legislation passed through January 24, 2024.

Disclaimer: The City Clerk's Office has the official version of the Phoenix Zoning Ordinance. Users should contact the City Clerk's Office for ordinances passed subsequent to the ordinance cited above.

[City Website: www.phoenix.gov](http://www.phoenix.gov)

[Hosted by Code Publishing Company, A General Code Company.](#)