Slope-Density Calculation

This form must be completed and submitted with applications related to lot line adjustments and subdivisions where zoning requires slope-density calculations to determine minimum lot size and density requirements. These calculations must be performed by either a registered Civil Engineer or licensed Land Surveyor. Topography for these calculations may be based on USGS data such as the 1:24000 quadrangle topographic maps.

APPLICATION INFORMATION: (print)

Owner/Applicant: _____

Engineer/Surveyor: _____

Project Name/Street Location: _____

File Number/APN(s): _____

CALCULATION OF AVERAGE SLOPE:

Calculations are performed using the following formula, $S = (0.00229 \times IL)/A$, where:

S = average slope in percent of the aggregate property proposed for subdivision;

0.00229 = the multiplier used to convert square feet into acres;

I = the contour interval measured in feet

L = the summation of individual contour lengths in scale feet

A = the gross area of the aggregate property in acres

CALCULATION OF MINIMUM LAND AREA PER DWELLING / MINIMUM LOT SIZE ('a'):

The formulas for determining the minimum land area per dwelling (designated 'a') are specified within the regulations of each base or combining zoning district. The table below summarizes the various formulas.

Designation	Formula	Applicability
1s	$a = \dfrac{1}{1.2 - (0.02 \times S)}$	RHS (2.30.040), or combining district
1.75s	$a = \dfrac{1}{0.6809 - (0.010952 \times S)}$	RHS (2.30.040), or combining district
2.5s	$a = \dfrac{1}{0.475 - (0.0075 \times S)}$	RHS (2.30.040), or combining district
5s	$a = \dfrac{1}{0.24375 - (0.004375 \times S)}$	"-5s" combining district
5/20s	$a = \dfrac{1}{0.2375 - (0.00375 \times S)}$	RR, or by "-5/20s" combining district
20s	$a = \dfrac{1}{0.0609375 - (0.00109375 \times S)}$	AR and HS, or "-20s" combining district

CALCULATION OF NUMBER OF PARCELS/DWELLING UNITS ALLOWED IN A SUBDIVISION:

The maximum number of parcels/dwelling units which may be allowed in a subdivision is determined by dividing the gross land area ('A') by the minimum land area per dwelling unit ('a'), computed to the third

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significant decimal figure, and rounded down to the nearest whole number. See Section 1.20.030, Precision of Numbers/Rounding, Article 1, Zoning Ordinance, for other applicable provisions regarding lot area measurement. For certain districts, the minimum land area per dwelling equates with the minimum parcel size, unless cluster provisions are utilized, or there are additional provisions governing minimum lot size.

(over)

Additional provisions regarding subdivision, minimum lot size, and related provisions in the various zoning districts are contained in Chapters 2.20 for Rural Base Districts, Ch. 2.30 for Urban Base Districts, Ch. 2.50 for Special Purpose Districts, and Ch. 3.10 for Lot Size Combining Districts. Cluster permit provisions are contained in Section 5.45 of the Zoning Ordinance.

CALCULATIONS SUMMARY:

Insert calculated values in the appropriate spaces below, and certify with professional stamp, signature, and date, below:

$I =$ _____   <u>Affix stamp below:</u>

$L =$ _____

$A =$ _____

$S =$ _____

$a =$ _____

Number of dwellings/parcels allowed, $A/a =$ _____ , rounded down to the nearest whole number.

_____   _____
Signature of Engineer/Surveyor   Date

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