



King County
Department of Local Services
Permitting Division
206-296-6600
www.kingcounty.gov

**Residential Density
Worksheet**

For alternate formats, call 206-296-6600.

This worksheet will assist you in applying specific portions of the zoning code related to allowable density and will be used to determine if a proposal meets the density provisions of the King County Zoning Code (Title 21A). It is required for all residential development proposals, including but not limited to subdivisions, short subdivisions, multi-family apartments, townhomes, and mixed-use developments.

Pre-application conferences are required prior to submittal of a subdivision or short subdivision and may be useful for other types of projects. These conferences help to clarify issues and answer questions. To find out if a pre-application conference is needed for your proposal and how a pre-application conference can be arranged call 206-296-6600.

DATE: _____
NAME OF DEVELOPMENT: _____ FILE NO. _____
COMPREHENSIVE PLAN LAND USE DESIGNATION: _____
ZONING DESIGNATION(S): _____

If more than one Comprehensive Plan Land Use designation or zone classification exists on the property or site, the site plan must show the boundary between the zones and the area within each. In such cases, the transferring of density across zones on the site may be permitted subject to the provisions of KCC 21A.12.200.

Please complete only the applicable portions of the form.

I. Site Area in Acres (KCC 21A.06.1172 and 21A.12.080):

- a. Determine the total horizontal site area (in square feet) of the project site.
- b. Divide the total site area by 43,560 to determine the site area in acres.

_____ / 43,560 = _____
Site area in square feet Site area in acres

When calculating the site area for parcels in the RA Zone, if the site area results in a fraction of an acre, the following shall apply: Fractions of .50 or above shall be rounded up to the next whole number and fractions below .50 shall be rounded down. Example: If the site area in acres is 19.5 acres the site area can be rounded up to 20 acres. No further rounding is allowed. (See KCC 21A.12.080)

II. Base Density (KCC 21A.12.030 - .040 tables):

The base density is determined by the zone designation(s) for the lot.

_____ / _____
Base density (dwelling units/acre) for the zone

III. Allowable Dwelling Units, Floor Area and Rounding (KCC 21A.12.070):

The base number of dwelling units is calculated by multiplying the site area by the base density in dwelling units per acre (from KCC 21A.12.030 - .040 tables). If proposing mixed use development, also see KCC 21A.14.130.

$$\text{_____ site area in acres (from Section I)} \times \text{_____ base density (from Section II)}$$

$$= \text{_____ allowable dwelling units}$$

The allowed floor area, which excludes structured or underground parking areas and areas housing mechanical equipment, is calculated by multiplying the site area by the floor to lot area ratio (from KCC 21A.12.040).

$$\text{_____ site area in square feet (from Section I)} \times \text{_____ floor to lot area ratio (KCC 21A.12.040)}$$

$$= \text{_____ allowed floor area in square feet}$$

When calculations result in a fraction, the fraction is rounded to the nearest whole number as follows:

- a. Fractions of .50 or above shall be rounded up; and
- b. Fractions below .50 shall be rounded down.

For RA zoned parcels, no rounding is allowed when calculating the allowable number of dwelling units. For example, if the calculation of the number of dwelling units equaled 2.75, the result would be 2 dwelling units. Rounding up to 3 is not allowed. (See KCC 21A.12.070 E.)

IV. Required On-site Recreation Space (KCC 21A.14.180):

A proposal is required to provide recreation space when more than four dwelling units are proposed in any residential development in the UR and R-4 through R-48 zones, stand-alone townhouses in the NB zone on property designated Commercial Outside of Center in the urban area, or within any mixed use development of more than 4 units. When recreation space is required, the total recreation space area must be computed by multiplying the recreation space requirement per unit type by the proposed number of such dwelling units (KCC 21A.14.180). NOTE: King County has the discretion to accept a fee in lieu of all or a portion of the required recreation space per KCC 21A.14.185.

Residential subdivisions, townhouses, and apartments developed at a density greater than eight units per acre, and mixed use proposals must provide recreational space as follows:

90 square feet	X	_____ proposed number of studio and one bedroom units		
		_____ proposed number of single family dwellings, and two		
170 square feet	X	_____ or more bedroom units	+	_____
Recreation space requirement				= _____

Residential subdivisions, townhouses, and apartments developed at a density less than eight units per acre must provide recreational space as follows:

390 square feet X _____ proposed number of units = _____

Mobile home parks shall provide recreational space as follows:

260 square feet X _____ proposed number of units = _____

V. Net Buildable Area (KCC 21A.06.797):

This section is used to determine the site area to use when calculating minimum density (in Section VI) and must be completed if the site is located within the R-4 through R-48 zones and designated Urban by the King County Comprehensive Plan. The net buildable area is the site area (from Section I) less the following areas:

- _____ areas within a project site which are required to be dedicated for public rights-of-way in excess of sixty feet (60') of width
- + _____ critical areas and their buffers, to the extent they are required by KCC 21A.24 to remain undeveloped
- + _____ areas required for above ground stormwater control facilities including, but not limited to, retention/detention ponds, biofiltration swales and setbacks from such ponds and swales
- + _____ areas required to be dedicated or reserved as on-site recreation areas (see Section IV)
- + _____ regional utility corridors, and
- + _____ other areas, excluding setbacks, required by King County to remain undeveloped
- = _____ **Total reductions**

Calculation:

$$\begin{aligned}
 & \text{_____ site area in square feet (from Section I)} \\
 - & \text{_____ Total reductions} \\
 = & \text{_____ net buildable area in square feet} \quad \text{NOTE: convert site area in square feet to acres by dividing by 43,560} \\
 = & \text{_____ net buildable area in acres}
 \end{aligned}$$

VI. Minimum Urban Residential Density (KCC 21A.12.060):

The minimum density requirement applies only to the R-4 through R-48 zones in areas designated Urban by the King County Comprehensive Plan. Minimum density is determined by multiplying the base density in dwelling units per acre (from Section II) by the net buildable area of the site in acres (from Section V) and then multiplying the resulting product by the minimum density percentage from the KCC 21A.12.030 table. The minimum density requirements may be phased or waived in certain cases (KCC 21A.12.060). Minimum density does not apply to properties zoned R-4 in the rural town of Fall City (KCC 21A.12.030 B.23).

Calculation:

$$\begin{aligned}
 & \text{_____ base density in du/ac (from Section II)} \times \text{_____ net buildable area in acres (from Section V)} \\
 = & \text{_____} \times \text{minimum density \% set forth in KCC 21A.12.030 or as adjusted in Section VII.} \\
 = & \text{_____ minimum dwelling units required.}
 \end{aligned}$$

The minimum density requirements may be waived by King County if the applicant can demonstrate one or more of the following:

1. The proposed layout of the lots in a subdivision or the buildings in a multiple dwelling development will not preclude future residential development consistent with the minimum density of the zone;
2. The non-sensitive area of the parcel is of a size or configuration that results in lots that cannot meet the minimum dimensional requirements of the zone;
3. In the R-12 through R-48 zones, the area of the parcel required to accommodate storm water facilities exceeds ten percent of the area of the site;
4. The site contains a national, state or county historic landmark.

Waiver requests must be accompanied by a written justification, along with a graphic representation of how one or more criteria above are met.

VII. Minimum Density Adjustments For Moderate Slopes (KCC 21A.12.087):

Residential developments in the R-4, R-6 and R-8 zones may modify the minimum density factor in KCC 21A.12.030 based on the weighted average slope of the net buildable area of the site (from Section V). To determine the weighted average slope, a topographic survey is required to calculate the net buildable area(s) within each of the following slope increments and then multiplying the number of square feet in each slope increment by the median slope value of each slope increment as follows:

_____	sq. ft	0 - 5% slope increment	X	2.5% median slope value	=	_____		
+	_____	sq. ft	5 - 10% slope increment	X	7.5% median slope value	=	_____ +	
+	_____	sq. ft	10 - 15% slope increment	X	12.5% median slope value	=	_____ +	
+	_____	sq. ft	15 - 20% slope increment	X	17.5% median slope value	=	_____ +	
+	_____	sq. ft	20 - 25% slope increment	X	22.5% median slope value	=	_____ +	
+	_____	sq. ft	25 - 30% slope increment	X	27.5% median slope value	=	_____ +	
+	_____	sq. ft	30 - 35% slope increment	X	32.5% median slope value	=	_____ +	
+	_____	sq. ft	35 - 40% slope increment	X	37.5% median slope value	=	_____ +	
_____	Total square feet in net buildable area					=	_____	Total square feet adjusted for slope

Calculation:

_____ total square feet adjusted for slope divided by _____ total square feet in net buildable area
 = _____ weighted average slope of net buildable area
 = _____ % (Note: multiply by 100 to convert to percent - round up to nearest whole percent)

Use the table below to determine the minimum density factor. This density is substituted for the minimum density factor in KCC 21A.12.030 table when calculating the minimum density as shown in Section VI of this worksheet.

Weighted Average Slope of Net Buildable Area(s) of Site:	Minimum Density Factor:
0% - less than 5%	85%
5% - less than 15%	83%, less 1.5% for each 1% of average slope in excess of 5%
15% - less than 40%	66%, less 2.0% for each 1% of average slope in excess of 15%

EXAMPLE CALCULATION FOR MINIMUM DENSITY ADJUSTMENTS FOR MODERATE SLOPES:

_____	sq. ft	0 - 5% slope increment	X	2.5% median slope value	=	_____		
+	10,000	sq. ft	5 - 10% slope increment	X	7.5% median slope value	=	750 +	
+	20,000	sq. ft	10 - 15% slope increment	X	12.5% median slope value	=	2,500 +	
+	_____	sq. ft	15 - 20% slope increment	X	17.5% median slope value	=	_____ +	
+	_____	sq. ft	20 - 25% slope increment	X	22.5% median slope value	=	_____ +	
+	_____	sq. ft	25 - 30% slope increment	X	27.5% median slope value	=	_____ +	
+	_____	sq. ft	30 - 35% slope increment	X	32.5% median slope value	=	_____ +	
+	_____	sq. ft	35 - 40% slope increment	X	37.5% median slope value	=	_____ +	
30,000	Total square feet in net buildable area					=	3,250	Total square feet adjusted for slope

3,250 total square feet adjusted for slope divided by 30,000 total square feet in net buildable area
 = .108333 weighted average slope of net buildable area
 = 11 % (Note: multiply by 100 to convert to percent - round up to nearest whole percent)

Using the table above, an 11% weighted average slope of net buildable area falls within the 5% - less than 15% range which has a minimum density factor of 83%, less 1.5% for each 1% of average slope in excess of 5%. Since 11% is 6% above 5%, multiply 6 times 1.5 which would equal 9%. Subtract 9% from 83% for an adjusted minimum density factor of 74%. This replaces the minimum density factor in KCC 21A.12.030 table.

VIII. Maximum Dwelling Units Allowed (KCC 21A.12.030 - .040):

This section should be completed only if the proposal seeks to exceed the base density utilizing either residential density incentives (RDI) (KCC 21A.34), transfer of development rights (TDR) (KCC 21A.37), or a combination thereof. The maximum density allowed through use of RDI and/or TDR is 150 percent of the base density (from Section II) of the underlying zoning or 200 percent of the base density for proposals with 100 percent affordable units. Maximum density is calculated by adding the calculated RDI units and/or TDR units to the base units calculated in Section III of this worksheet.

_____ base density in dwelling units per acre (from Section II) X 150% = _____ maximum density
 _____ maximum density in dwelling units per acre X _____ site area in acres = _____

maximum dwelling units allowed utilizing RDI (KCC 21A.34) and/or TDR (KCC 21A.37), when less than 100% of proposed units are reserved as affordable units

_____ base density in dwelling units per acre (from Section II) X 200% = _____ maximum density
 _____ maximum density in dwelling units per acre X _____ site area in acres = _____

maximum dwelling units allowed utilizing density incentives with 100 percent affordable units(KCC 21A.34)

Calculation:

- _____ base allowable dwelling units calculated in Section III
- + _____ bonus units authorized by KCC 21A.34
- + _____ transfer units authorized by KCC 21A.37
- _____ total dwelling units (cannot exceed maximums calculated above)

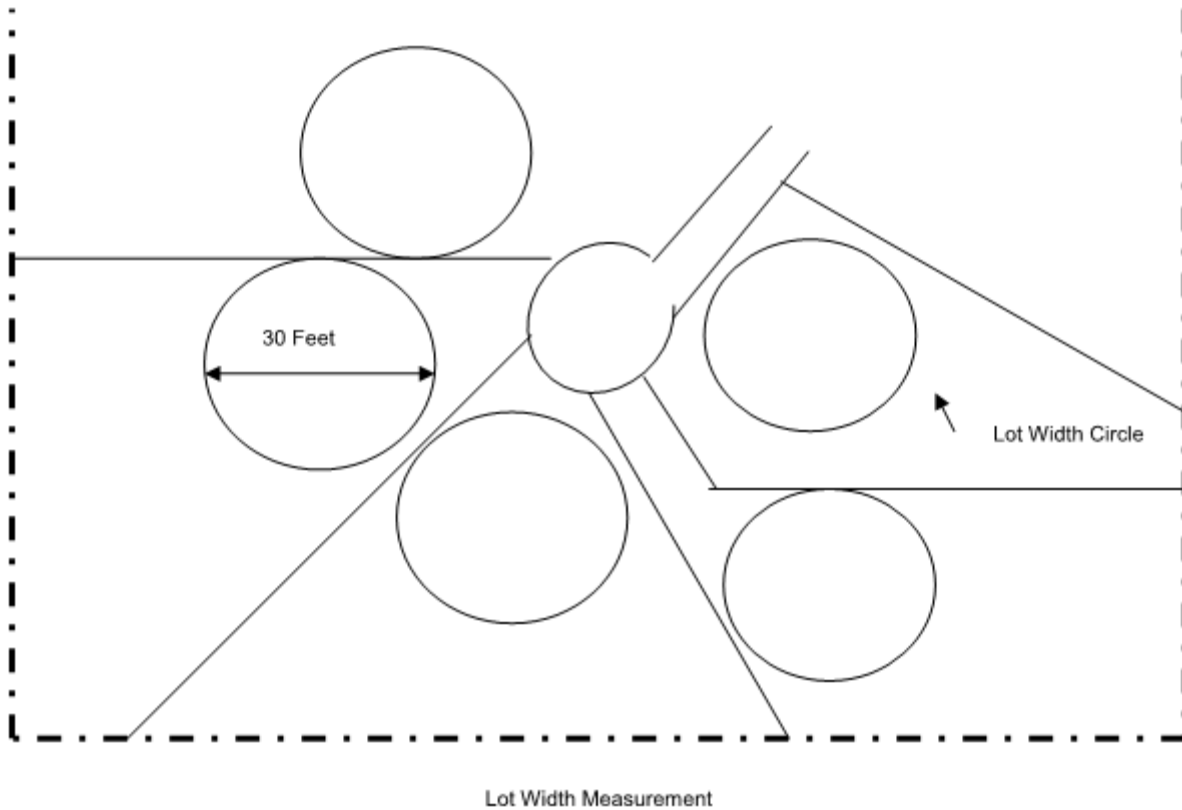
IX. Minimum Lot Area for Construction (KCC 21A.12.100):

Except as provided for non-conformances in KCC 21A.32:

- A. In the UR and R zones, no construction shall be permitted on a lot that contains an area of less than 2,500 square feet or that does not comply with the applicable minimum lot width, except for townhouse developments, zero-lot-line subdivisions, or lots created prior to February 2, 1995, in a recorded subdivision or short subdivision which complied with applicable laws, and;
- B. In the A, F, or RA Zones:
 - 1. Construction shall not be permitted on a lot containing less than 5,000 square feet; and
 - 2. Construction shall be limited to one dwelling unit and residential accessory uses for lots containing greater than 5,000 square feet, but less than 12,500 square feet. (KCC 21A.12.100)

X. Lot Width (KCC 21A.12.050):

Lot widths shall be measured by scaling a circle of the applicable diameter within the boundaries of the lot as shown below, provided that an access easement shall not be included within the circle. (See KCC 21A.12.050).



Check out the Permitting Web site at www.kingcounty.gov/permits