

CALCULATING FLOOR AREA RATIO

WHAT IS FAR?

Floor area ratio (FAR) is the measurement of a building's floor area in relation to the size of the lot/parcel that the building is located on. FAR is expressed as a decimal number, and is derived by dividing the total area of the building by the total area of the parcel (building area ÷ lot area). FAR is an effective way to calculate the bulk or mass of building volume on a development site, and is often used in conjunction with other development standards such as building heights, lot coverage and lot area to encourage a community's desired arrangement and form of development. In this context, higher FARs indicate greater building volume.

PURPOSE AND ROLE IN PLANNING

FAR is most often used to express development intensity of non-residential land uses, and integrated into a community's zoning and other land development controls. FAR can be used to either limit the intensity of land use to lessen the environmental impacts of development or to control the mass and scale of development. In addition, by referencing characteristics for a given land use such as number of employees and number of vehicle or transit trips per square foot of building space, FARs can estimate the potential impact of a proposed development scenario. FAR is sometimes used as an analytical tool for projecting the impact of different land use and development intensity scenarios.

HOW TO CALCULATE FAR

Typically, FAR is calculated by dividing the gross floor area of a building(s) by the total buildable area of the piece of land upon which it is built. Your community may choose to measure floor area and land area differently based upon local standards, policies, and other conditions. However, to calculate FAR using gross floor area and buildable land area, take the following steps:

- STEP 1.** Determine the total BUILDABLE LAND AREA, in terms of square feet, for the site. Buildable land area is that portion of a development site where construction can legally and reasonably occur – so public streets and rights-of way, wetlands and watercourses, and other constraints would not be included.
$$\text{Buildable Land Area (B)} = (\text{Parcel Width} \times \text{Parcel Depth}) - \text{Square feet of undevelopable land (if applicable)}$$
- STEP 2.** Determine the FLOOR AREA of each story of the building. Calculate the area of each story (floor) of the building, typically measured between the exterior walls. Those portions of each story above the ground surface prior to any manipulation or grading are usually included in the calculation.
- STEP 3.** Determine the GROSS FLOOR AREA of the Building. Gross floor area is the sum of the floor area of each story.
$$\text{Gross Floor Area (G)} = \text{Floor Area of 1st Story} + \text{Floor Area of 2nd Story} \dots \text{ for all floors above the ground}$$
- STEP 4.** Calculate the FLOOR AREA RATIO. Divide the GROSS FLOOR AREA by the BUILDABLE LAND AREA. The result is the Floor Area Ratio (FAR).
$$\text{Floor Area Ratio (FAR)} = (G)/(B)$$

FAR ILLUSTRATED

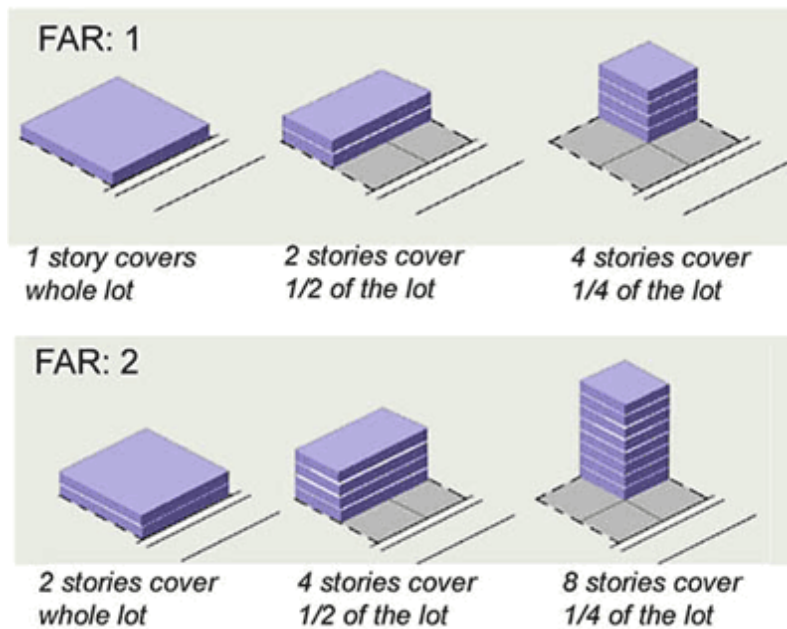


Figure 1. FAR Illustration (Image Credit: Julie Campoli, Visualizing Density)

EXAMPLE: Calculating FAR

A development company is planning to build a two-story building on a rectangular parcel that has 100 feet of street frontage and 200 feet of depth. The first story measures 50 feet by 200 feet, and the second story measures 50 feet by 200 feet. There are no public rights-of-way, or other exceptional development limitations on the parcel.

Step 1. Determine the total BUILDABLE LAND AREA for the site.

$$(B) = (\text{Parcel Width} \times \text{Parcel Depth})$$

$$(B) = 100 \text{ ft.} \times 200 \text{ ft.}$$

$$(B) = 20,000 \text{ ft}^2$$

Step 2. Determine the FLOOR AREA of each story of the building.

$$\text{Story 1 Floor Area} = 50 \text{ ft.} \times 200 \text{ ft.} = 10,000 \text{ ft}^2$$

$$\text{Story 2 Floor Area} = 50 \text{ ft.} \times 200 \text{ ft.} = 10,000 \text{ ft}^2$$

Step 3. Determine the GROSS FLOOR AREA of the Building.

$$(G) = 10,000 \text{ ft}^2 + 10,000 \text{ ft}^2 = 20,000 \text{ ft}^2$$

Step 4. Calculate the FLOOR AREA RATIO.

$$\text{FAR} = G/B$$

$$\text{FAR} = 20,000 \text{ ft}^2 / 20,000 \text{ ft}^2 = 1.0$$