To calculate the building area that can be built on a lot, we need to account for several key factors such as the lot area, building setbacks, Floor Area Ratio (FAR), and local zoning regulations. Here's a step-by-step process to calculate the buildable area using a real-world example in Inglewood, California.

Steps for Calculation:

1. **Obtain Lot Area**:
    - The lot area is the total land area available for construction. In Inglewood, California, the lot size is typically expressed in square feet or square meters. This is typically found in the property deed or public records.
    - For example, let's assume the lot area is **10,000 square feet**.
2. **Determine Setbacks**:
    - Setbacks are the minimum distances that a building must be from the property lines. Setbacks are determined by the zoning code and can vary by the type of building (residential, commercial, etc.).
    - In Inglewood, residential zoning may have setbacks like:
        - Front setback: 20 feet
        - Side setback: 5 feet on each side
        - Rear setback: 10 feet

    These setbacks reduce the total buildable area on the lot, so you must subtract these areas from the overall lot area.

    For example:

    - The lot is 10,000 square feet.
    - The setbacks are as mentioned:
        - Front: 20 feet
        - Side: 5 feet (each side)
        - Rear: 10 feet

    To find the buildable area, subtract the setbacks from the total lot size:

    - Front setback reduces the depth: 20 feet.
    - Side setbacks reduce the width: 5 feet on each side = 10 feet.
    - Rear setback reduces the depth: 10 feet.

    If the lot is rectangular and the dimensions are 100 feet (length) by 100 feet (width), after setbacks:

    - Remaining length = 100 feet - 20 feet (front setback) - 10 feet (rear setback) = 70 feet.
    - Remaining width = 100 feet - 10 feet (side setbacks) = 90 feet.

Buildable area = **70 feet x 90 feet = 6,300 square feet**.

3. **Apply Floor Area Ratio (FAR)**:
    - The FAR is a measure that defines the maximum allowable floor area of a building in relation to the size of the lot. It is expressed as a ratio.
    - For example, if the FAR is 1.0, the total floor area of the building can equal the lot area.
    - In Inglewood, zoning regulations for residential zones may allow an FAR of 0.5 to 1.0, but this can vary depending on the specific district.

    Let's assume the FAR is 0.75 for this example. The maximum total floor area that can be built is:

    FAR x Lot Area = 0.75 x 10,000 square feet = 7,500 square feet.

4. **Determine the Number of Floors**:
    - Depending on zoning regulations, the number of floors that can be built will be determined by the FAR. The FAR of 0.75 means that the total floor area across all floors cannot exceed 7,500 square feet.
    - If the developer chooses to build 2 floors, the maximum floor area on each floor would be:

    7,500 square feet ÷ 2 = 3,750 square feet per floor.

    The buildable area per floor is also constrained by the setbacks, so the building's total footprint per floor must not exceed the reduced area from the setbacks (6,300 square feet).

Example Calculation:

- **Lot Area**: 10,000 square feet.
- **Setbacks**:
    - Front: 20 feet
    - Side: 5 feet each side
    - Rear: 10 feet
- **Remaining Buildable Area after Setbacks**: 6,300 square feet.
- **FAR**: 0.75.
- **Maximum Total Floor Area**: 7,500 square feet.
- **Maximum Floor Area per Floor**: 3,750 square feet (if 2 floors are chosen).

Therefore, in this example, the developer can build up to 2 floors, with each floor having a maximum area of 3,750 square feet, and the total building area can be up to 7,500 square feet.

Final Notes:

- Always confirm specific zoning regulations with the local jurisdiction, as FAR and setback requirements can vary depending on the zoning code and property type (residential, commercial, etc.).
- The calculation may also be impacted by other factors like parking requirements, easements, and other restrictions (such as height limits).

Example 2: Calculating the Building Area in Inglewood, California

Assumptions:

- **Lot Area**: 12,000 square feet (a larger lot).
- **Setbacks**:
  - Front setback: 25 feet
  - Side setbacks: 8 feet on each side
  - Rear setback: 12 feet
- **FAR (Floor Area Ratio)**: 0.6 (a smaller FAR for residential zoning).
- **Zoning Type**: Residential.
- **Number of Floors**: 1 floor (for simplicity, but we can adjust if necessary).

Step 1: Calculate the Total Lot Area

- **Lot Area** = 12,000 square feet.

Step 2: Apply Setbacks to Calculate Buildable Area

Setbacks reduce the usable land where you can place the building. Let's account for these:

- **Front setback**: 25 feet
- **Side setbacks**: 8 feet on each side (so 8 + 8 = 16 feet total)
- **Rear setback**: 12 feet

To simplify, assume that the lot is rectangular, and let's say the dimensions of the lot are 120 feet by 100 feet.

Adjusting the Lot Dimensions:

- **Remaining Length (after front and rear setbacks)**:
  - Original lot length: 120 feet

    - Subtract front and rear setbacks: 120 feet - 25 feet (front) - 12 feet (rear) = 83 feet.
- **Remaining Width (after side setbacks)**:
    - Original lot width: 100 feet
    - Subtract side setbacks: 100 feet - 16 feet (8 feet on each side) = 84 feet.

Buildable Area:

- **Buildable Area = Remaining Length x Remaining Width**
- **Buildable Area = 83 feet x 84 feet = 6,972 square feet**.

Step 3: Apply the Floor Area Ratio (FAR)

The FAR (Floor Area Ratio) indicates the total allowable floor area that can be constructed on the lot.

- **FAR = 0.6**
- **Maximum Total Floor Area** = FAR × Lot Area
- **Maximum Total Floor Area** = 0.6 × 12,000 square feet = 7,200 square feet.

This means the total building area across all floors cannot exceed 7,200 square feet.

Step 4: Determine the Number of Floors

In this example, we are assuming only **1 floor** will be built, so the total floor area will be limited to 7,200 square feet.

- **Maximum Floor Area per Floor = 7,200 square feet**.

Since only 1 floor is being constructed, the maximum footprint of the building can be **7,200 square feet**, but the buildable area after considering setbacks is only **6,972 square feet**.

Thus, **6,972 square feet** is the usable floor area that can be built on the first floor. The building cannot exceed this area because of the setbacks.

Final Results:

- **Lot Area**: 12,000 square feet.
- **Setbacks**:
    - Front setback: 25 feet
    - Side setbacks: 8 feet each side

    - Rear setback: 12 feet
- **Buildable Area** (after setbacks): 6,972 square feet.
- **FAR**: 0.6.
- **Maximum Total Floor Area** (based on FAR): 7,200 square feet.
- **Number of Floors**: 1 floor (for simplicity).
- **Maximum Buildable Area per Floor**: 6,972 square feet (after setbacks).

Key Takeaway:

In this case, the developer can build a single-story building with a footprint of **6,972 square feet** on the lot, as the setbacks reduce the total usable area. The FAR allows up to 7,200 square feet of floor area, but the setbacks limit the actual buildable area to 6,972 square feet.