## Measuring Cell Capacity

## 310:670-5-11(a)(2) and (b)(6) require each cell and detention room to have at least forty (40) square feet of floor space for the initial prisoner, and at least twenty (20) square feet of floor space for each additional prisoner occupying the same cell. Double-celling is permitted if there is at least sixty (60) square feet of floor space for two (2) persons.

Floor space is different form square feet by itself. Floor space is that space on the floor in which a person move. As such, that space occupied by the bed or bunk and the toilet and desk, must be subtracted from the square footage to get the square footage of the floor space. The way to calculate a cell's square footage is by measuring the length and width of the cell and then multiplying those two numbers together. This gives you the square feet. When a cell has an odd shape such as an Lshape, split the cell into squares or rectangular sections and treat them as two separate areas. Calculate the area of each section then add them together. Here is the cell:

5 '7" ( 5 Feet 7 Inches) $\quad 7$ "s as fraction of 12 inches is 0.58 feet. ( 7 " $/ 12^{\prime \prime}=0.58$ ).
$10^{\prime}$ feet
The square footage for a bed or bunk, desk or sink/toilet combo are calculated similarly. Measure their length and width and multiply them. There is a calculator on the web (linked below) designed for calculations in feet and inches. The square footage is the length times the width or $10^{\prime} \times 5.58^{\prime}=$ 55.8 square ft . Most beds/bunks have a standard measurement of $80^{\prime \prime} \times 27^{\prime \prime}$, which is $15 \mathrm{sq} . \mathrm{ft}$. Most toilet/sink combos have a standard measurement of $18^{\prime \prime} \times 30^{\prime \prime}$, which is 3.75 sq . ft . The available square feet of floor space is 55.8 sq . $\mathrm{ft} .-15 \mathrm{sq}$. ft . -3.75 sq . ft . or 37.05 sq . ft . This cell's capacity is one inmate because there is less than 60 sq . ft .

For an odd shape, measure two boxes and add them together.


The large box calculation would be $9^{\prime} \times 5^{\prime} 77^{\prime \prime}(9 \times 5.58)=50.22 \mathrm{sq} . \mathrm{ft}$.
The small box calculation would be $2^{\prime} \times 2^{\prime} 6^{\prime \prime}(2 \times 2.5)=5 \mathrm{sq} . \mathrm{ft}$.
Add the two together for the total:

$$
\begin{array}{r} 
\\
\\
+\quad \begin{array}{r}
50.22 \mathrm{sq} . \mathrm{ft} \\
\hline
\end{array} \frac{5 \mathrm{sq} . \mathrm{ft}}{2}
\end{array}
$$

You would subtract the square footage of the bunk and toilet/sink to get the available floor space.

To calculate a large barrack cell's capacity, measure the square footage for the room. Measure one bunk and multiply that square footage by the number of bunks (not the number of beds). Measure any toilet/sink or shower space. Subtract 40 square feet for the first inmate and divide the remaining square footage by the 20 sq . ft . required for each additional inmate. Here's how:
Dimensions:
Total Square Feet:
Minus 13 Bunks at 15 sq. ft each
Minus 2 toilet/sink combos at 3.75 sq. ft each
Minus 2 showers at 9 sq . ft .
Minus First Inmates 40 square feet:
Remaining Square footage:
$-40 \mathrm{sq} . \mathrm{ft}$.
539.5
Additional Inmate Capacity: $\quad 540$ sq. ft. $/ 20$ sq. ft. $=27$
Total Inmate capacity:

$$
27 \text { plus } 1=28
$$

Here are square footage calculators on the web:
(Note: if you have a fraction on square ft round up. If you have a fraction on inmates, such as 27.5 , round down.) (Note: while the inmate capacity is 28 , they only have bunk capacity for 26 . If they add another bunk they will lose $15 \mathrm{sq} . \mathrm{ft}$. and then only have capacity for 27 .
http://www.calculator.net/square-footage-calculator.html http://www.calculatorsoup.com/calculators/construction/square-footage-calculator.php
See "Cell Capacity Deficiency Example.docx" or the "SOD Template" for writing the deficiency.

