# Arch 1240 Methods of Construction in Architecture

**Professor Jason Montgomery**

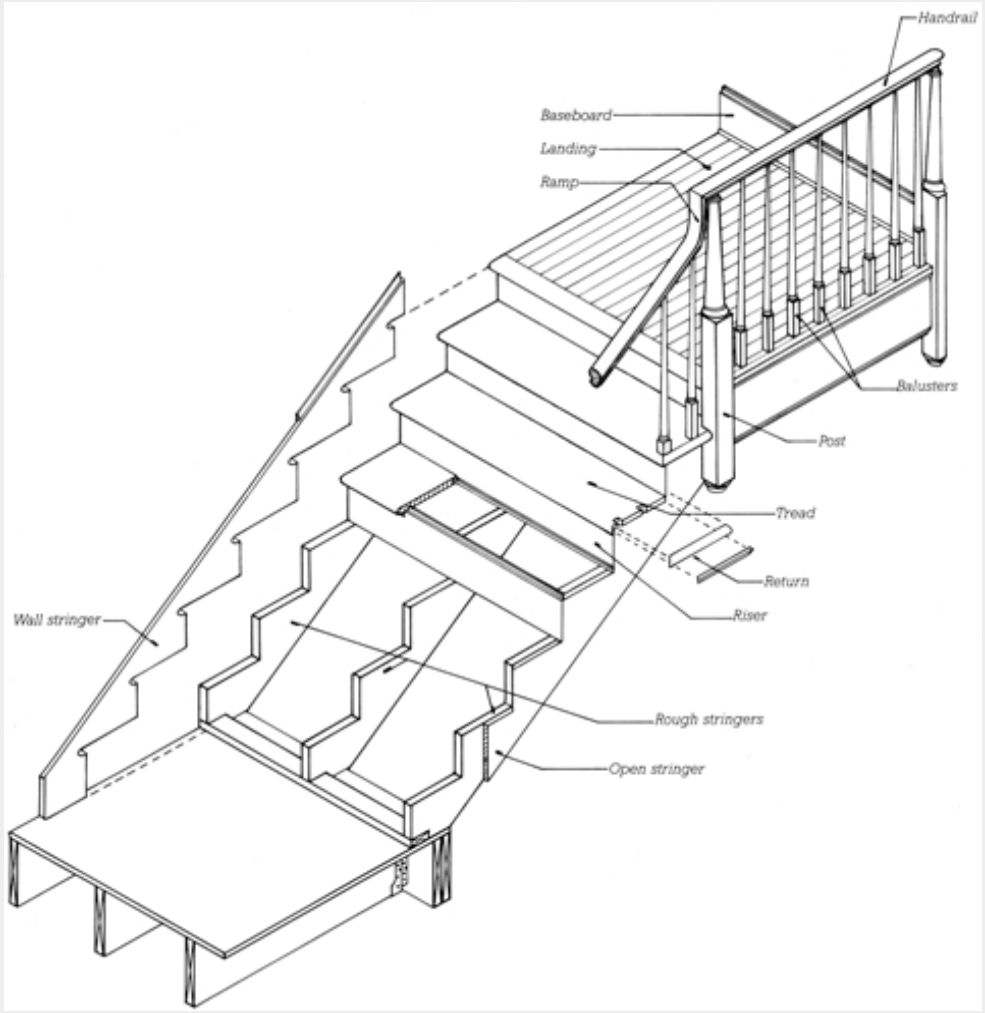

ABSOLUT VODKA
ABSOLUT HARING.

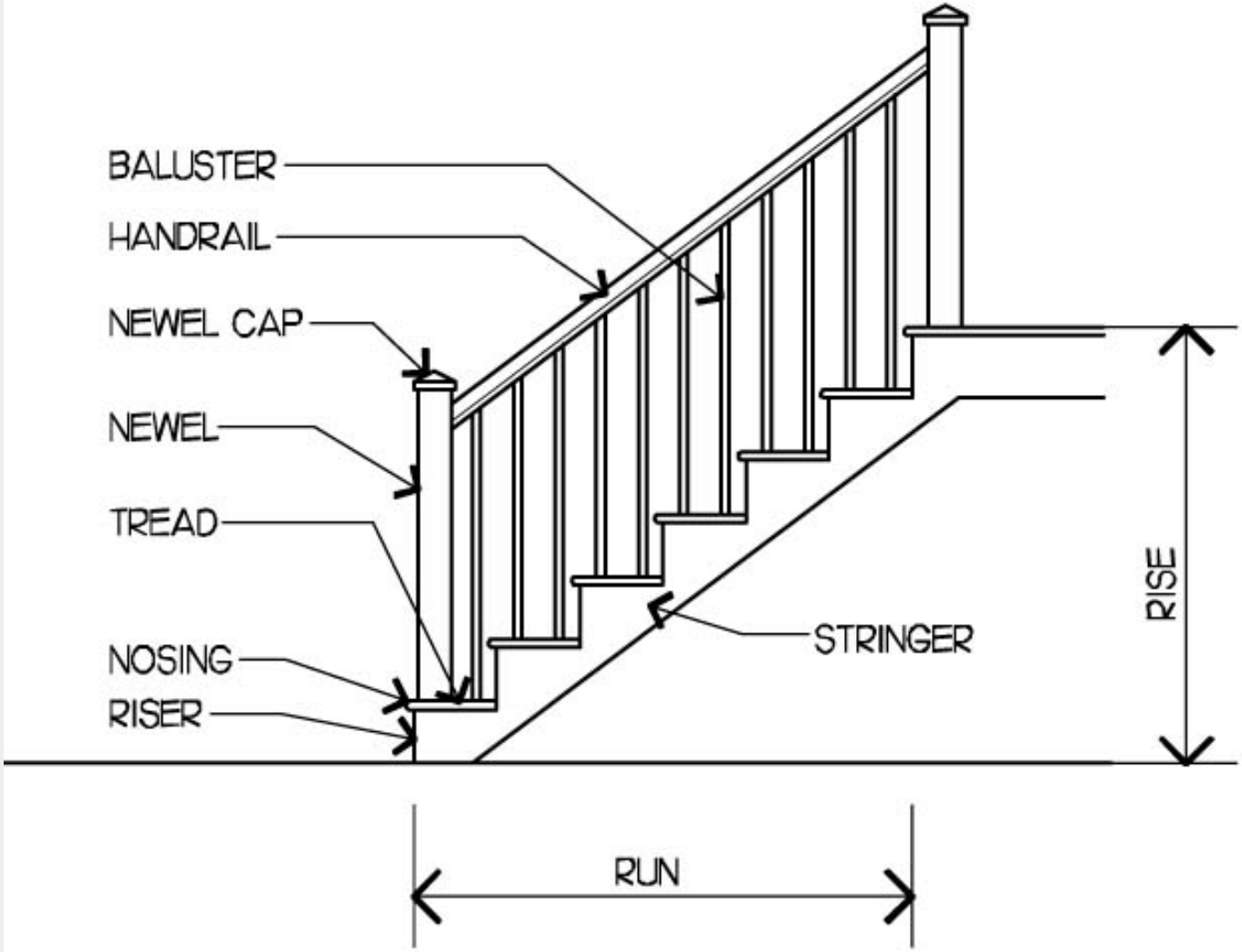
ARCH 1240

ARCH 1240

## MILLWORK AND FINISH CARPENTRY

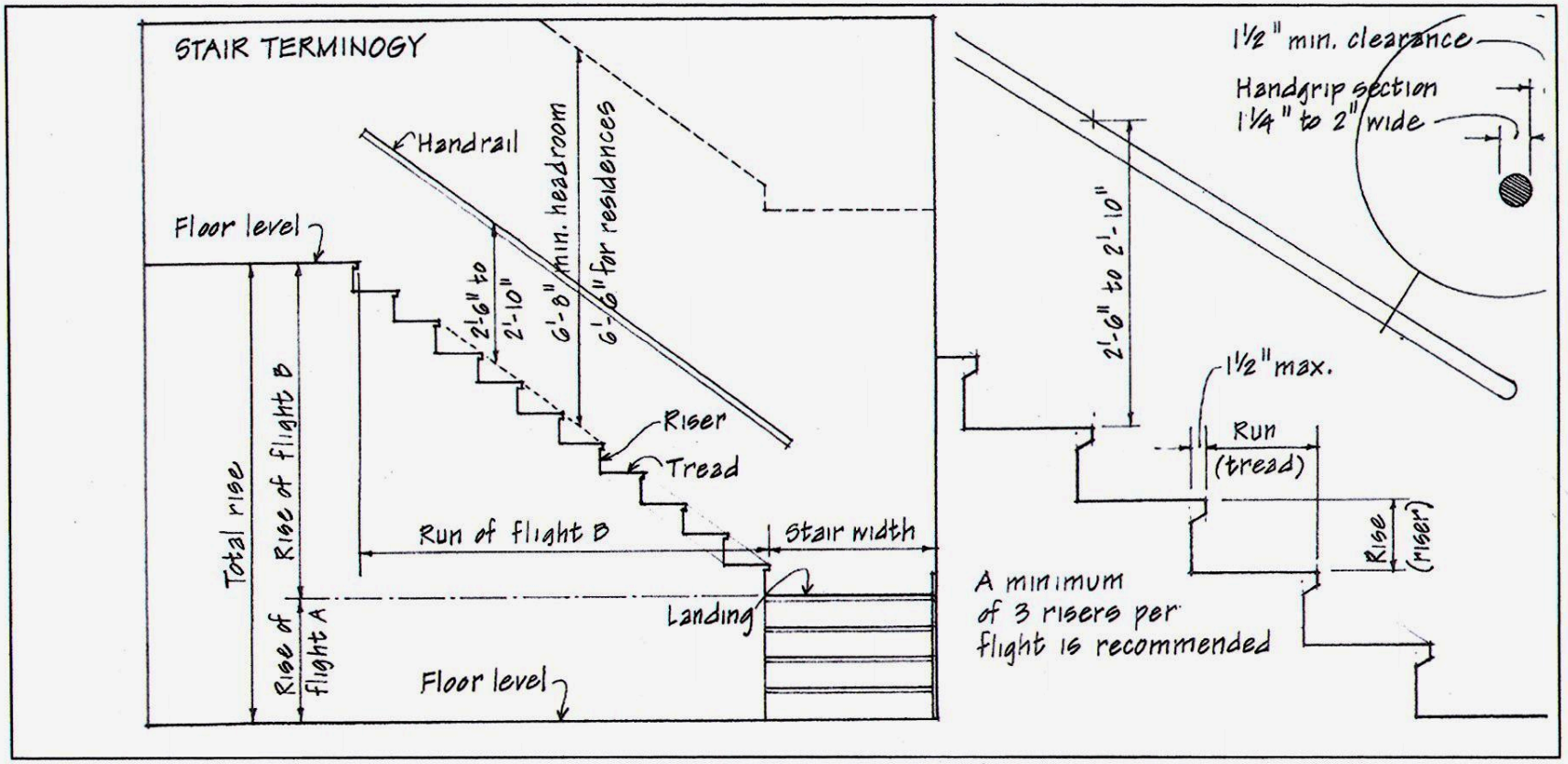
- A site-built custom stair
- Stairs can also be prefabricated in a millworking shop.

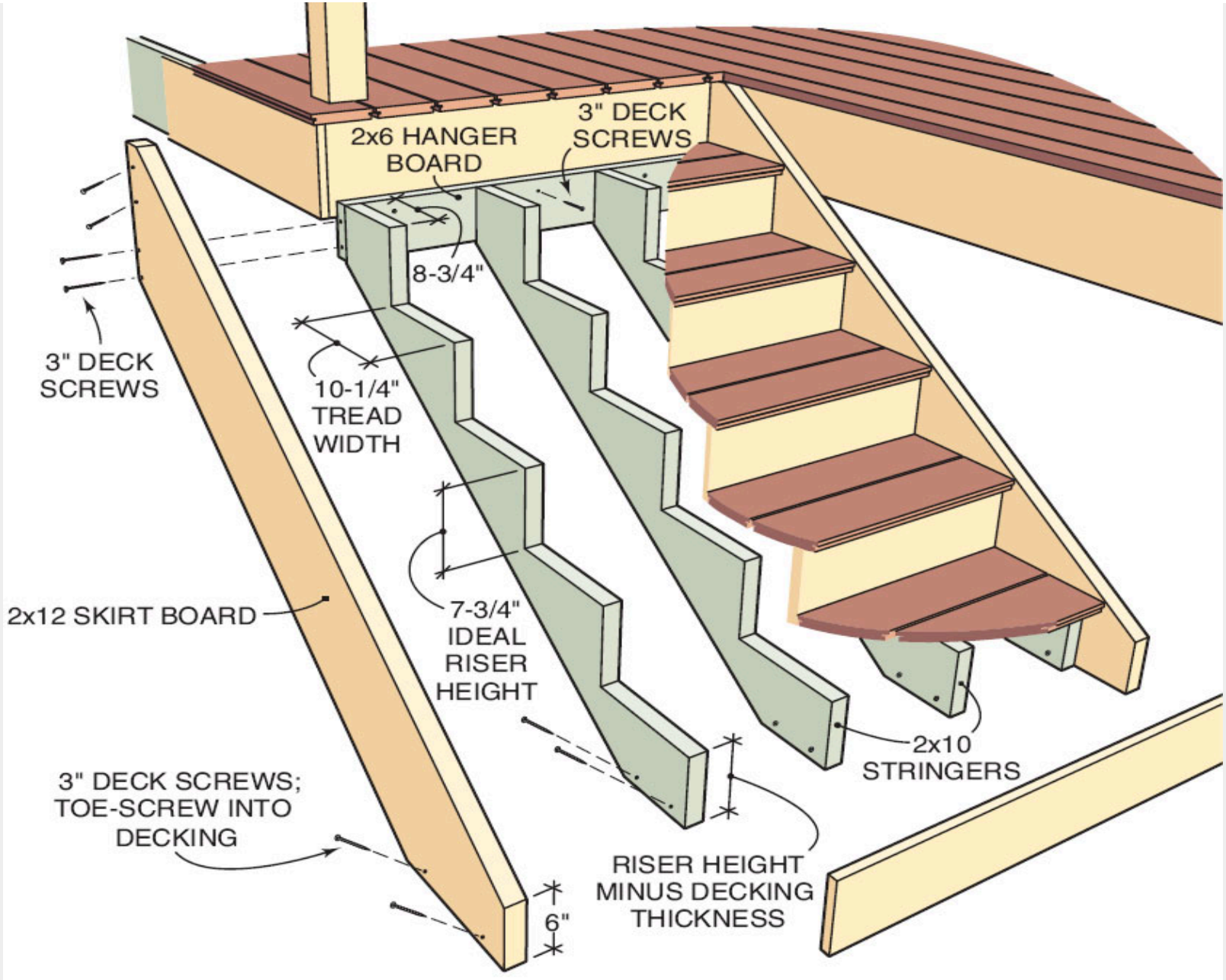



STAIRCASE TERMINOLOGY

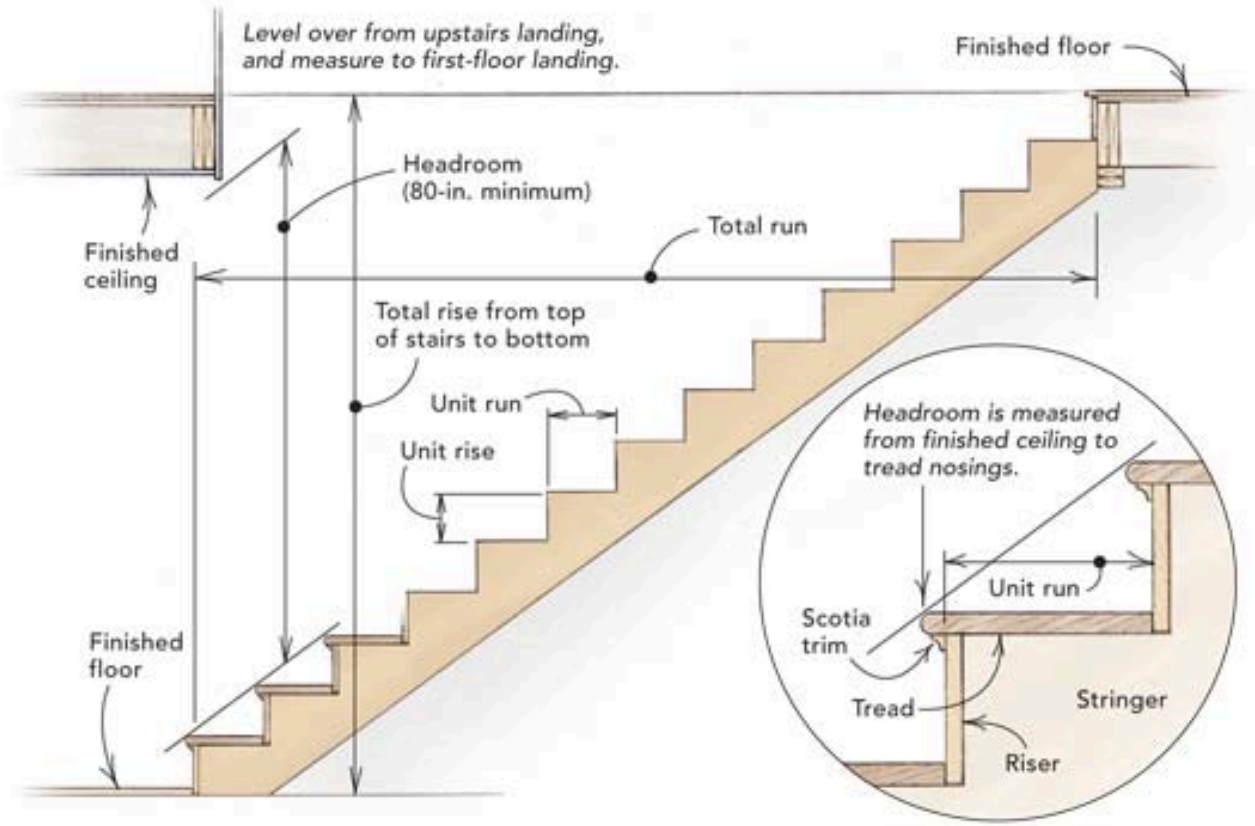
# Stair Terminology




2x6 HANGER BOARD
3" DECK SCREWS
8-3/4"
3" DECK SCREWS
10-1/4" TREAD WIDTH
2x12 SKIRT BOARD
7-3/4" IDEAL RISER HEIGHT
2x10 STRINGERS
3" DECK SCREWS; TOE-SCREW INTO DECKING
RISER HEIGHT MINUS DECKING THICKNESS
6"

## STAIR FORMULAS

Two formulas commonly are used to determine the proportions for interior residential stairs. The first, and most common, is (2 x rise) + (1 x run) = 25 ±1. This formula is incorporated into some building codes. The other formula is (rise) x (run) = 75 ±3. This formula is used for atypical applications like attic or landscape stairs. The example below shows the calculations for this stairway.




**Rise calculations**

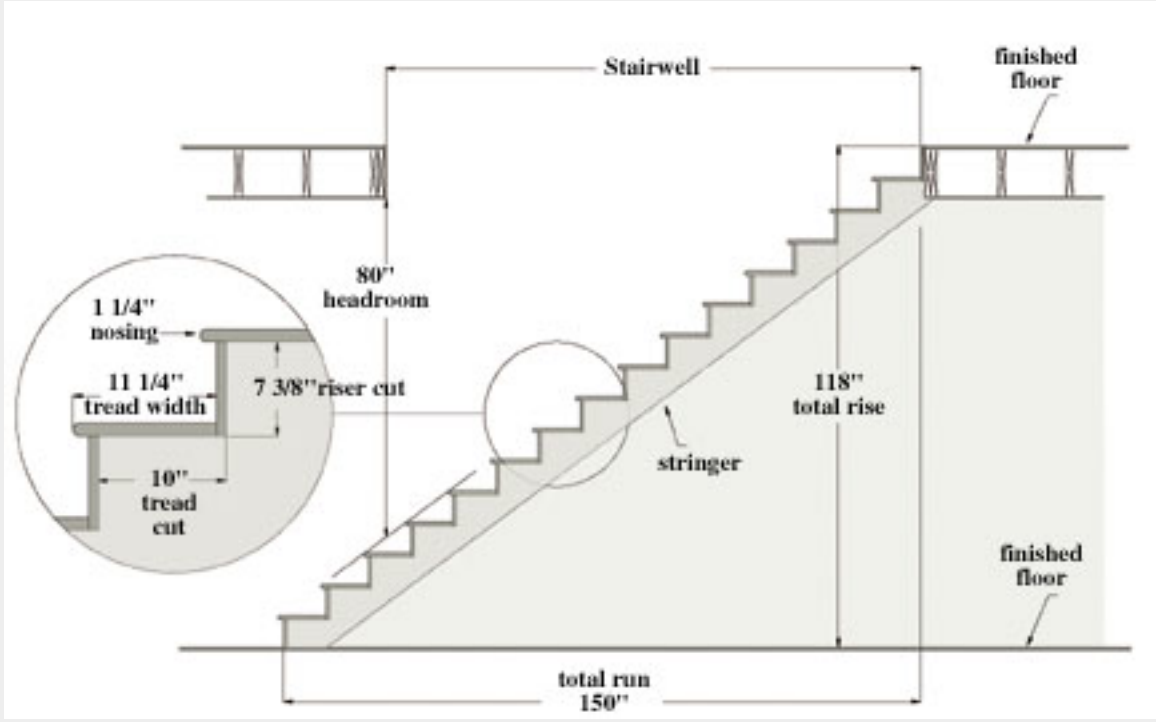
| | |
|---|---|
| 102⅛ | (total rise of stair) |
| ÷ 7 | (approximate riser height) |
| 14+ | (number of risers) |

| | |
|---|---|
| 102⅛ | (total rise of stair) |
| ÷ 14 | (number of risers) |
| 7 5/16 | (exact riser height) |

**Run calculations**

(2 x rise) + (1 x run) = 25 ±1
14⅝ + (1 x run) = 25 ±1
25 – 14⅝ (2 x rise) = 10⅜ ±1
(Run can range from 9⅜ to 11⅜)

13 unit runs @ 10⅛ = 131⅝ total run


Stairwell
finished floor
80" headroom
1 1/4" nosing
11 1/4" tread width
7 3/8" riser cut
10" tread cut
118" total rise
stringer
finished floor
total run 150"