

PLANNING A STAIR

General Rules

- The total of one riser and one tread should not be less than 16" or more than 18".
- Unit rise should be 7" to 8".
- Unit run should be 9" to 11".

Calculating the Number and Height of Risers

- In inches, determine the total rise from the finished floor of the lower level to the top of the finished floor of the upper level.
- Divide the total rise of the stair by 7".
- Round back to the nearest whole number of risers. For example, if you get 13 and 3/4 risers, you would round back to 12 risers.
- Determine the height of the riser by dividing the total rise by the number of risers required.

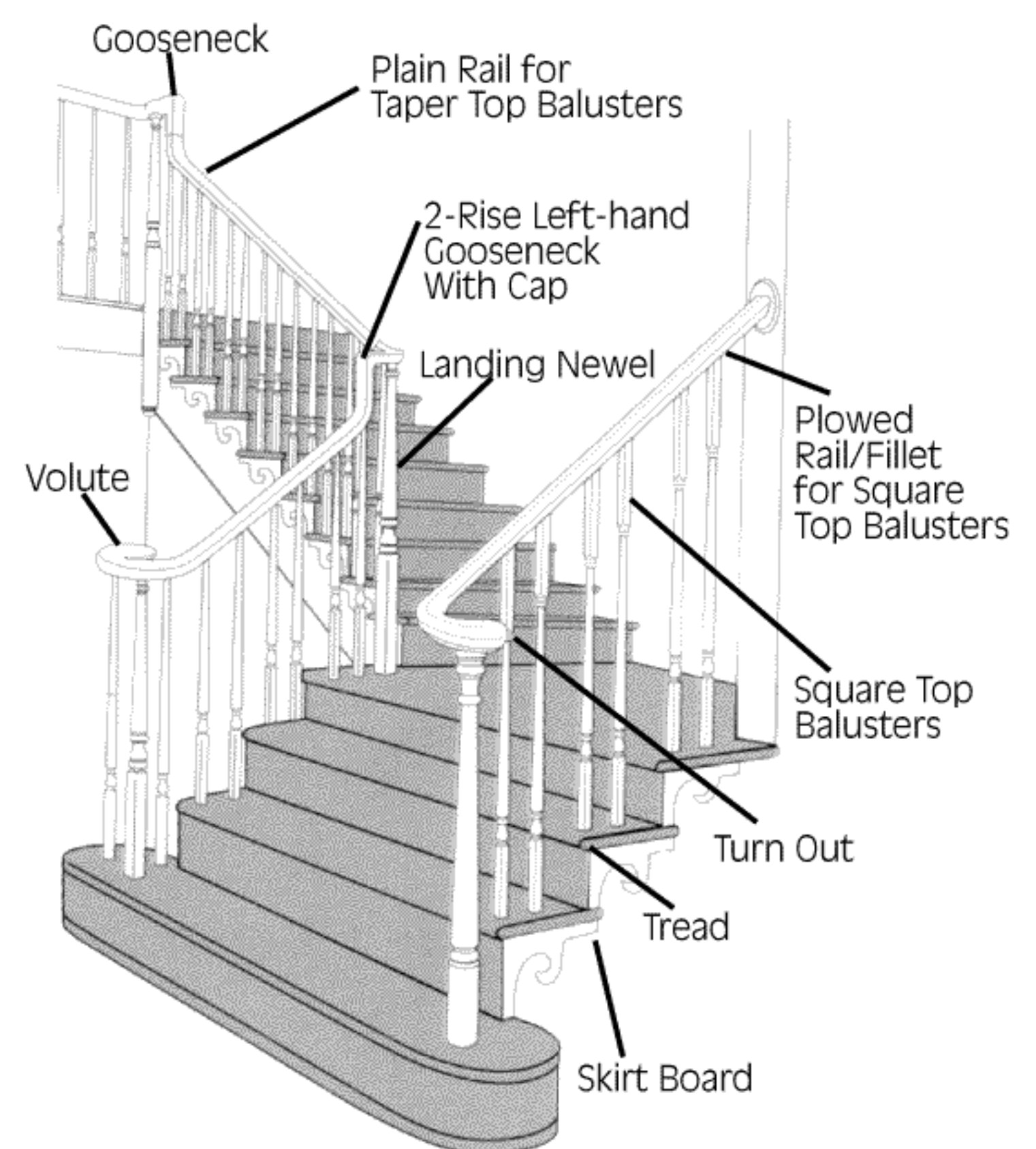
Calculating the Number and Length of Treads

- In inches, determine the total run from a point at the head of the stair to the outside edge of the last riser.
- Divide the total run of the stair by nine to get the number of treads, Round back to the

Baluster Rail Height

- The distance from the top of the baluster rail to the top of a tread, at the middle, should be no less than 32" and no more than 36".

Parts of a Stair



nearest whole number.

- Determine the length of the tread by dividing the total run by the number of treads.

Common Stair Calculations

FLOOR TO FLOOR	RISERS	HEIGHT OF RISER	TREAD WIDTH	TOTAL RUN	HEAD ROOM	WELL OPENING
8'0"	12	8"	9"	8'3"	6'8"	8'1"
	13	7 ³ / ₈ " +	9 ¹ / ₂ "	9'6"	6'8"	9'2 ¹ / ₂ "
	13	7 ³ / ₈ " +	10"	10'0"	6'8"	9'8 ¹ / ₂ "
8'6"	13	7 ¹ / ₈ " -	9"	9'0"	6'8"	8'3"
	14	7 ⁵ / ₁₆ " -	9 ¹ / ₂ "	10'3 ¹ / ₂ "	6'8"	9'4"
	14	7 ⁵ / ₁₆ " -	10"	10'10"	6'8"	9'10"
9'0"	14	7 ¹¹ / ₁₆ " +	9"	9'9"	6'8"	8'5"
	15	7 ⁵ / ₁₆ " +	9 ¹ / ₂ "	11'1"	6'8"	9'6 ¹ / ₂ "
	15	7 ⁵ / ₁₆ " +	10"	10'6"	6'8"	9'11 ¹ / ₂ "