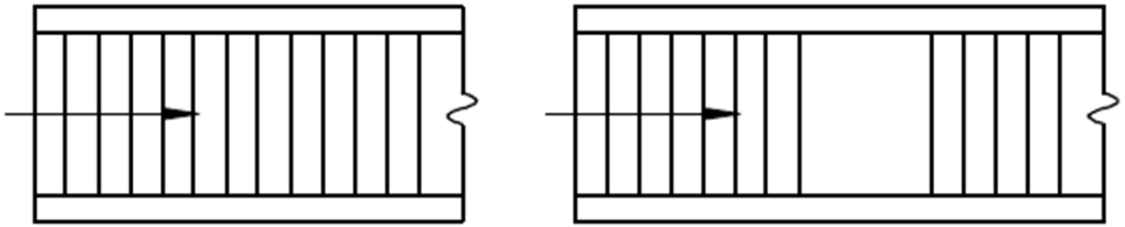
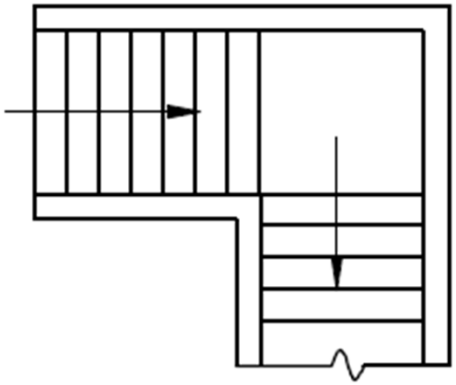
Stair

- Series of steps provided as a means of vertical movement between various floors.
- Stair-case: Enclosure containing the complete stairway.
- Materials used in stairs: timber, stones, bricks, steel, plain concrete or reinforced concrete.

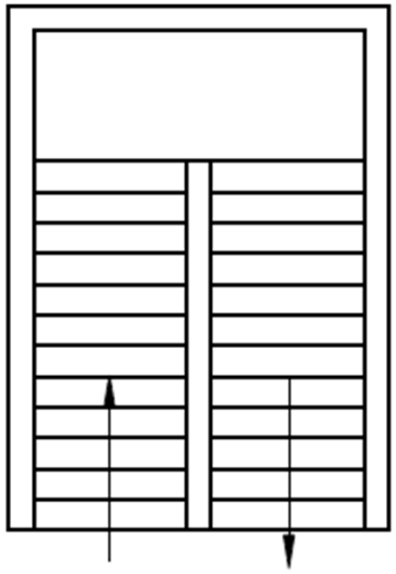
Common Types of Stairs



Straight flight stairs

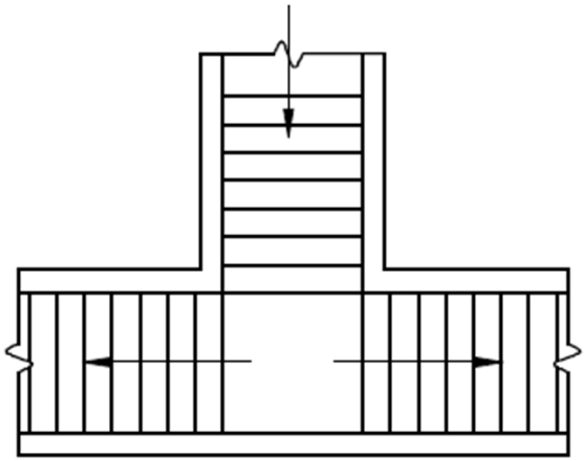


Quarter-turn stair

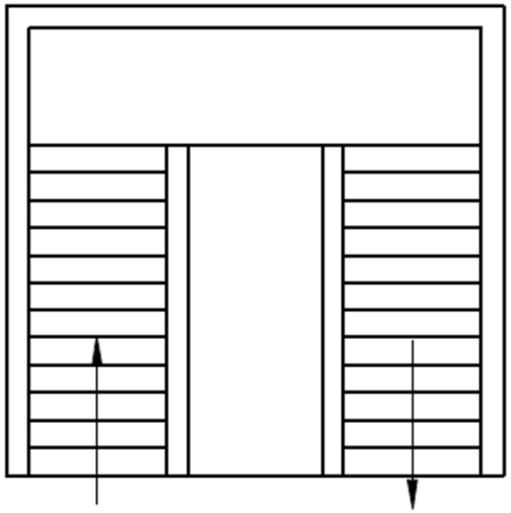


Half-turn stair

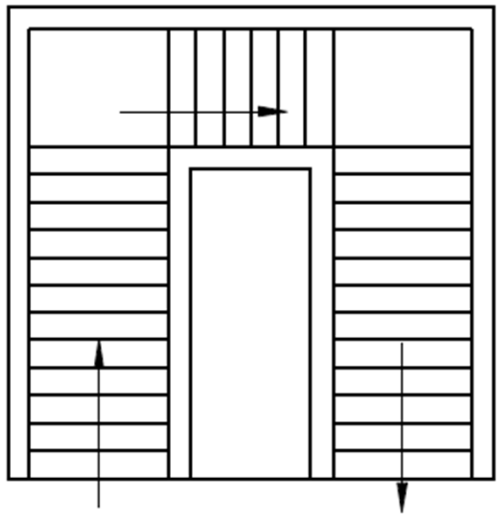
Common Types of Stairs (cont..)



Branching stair

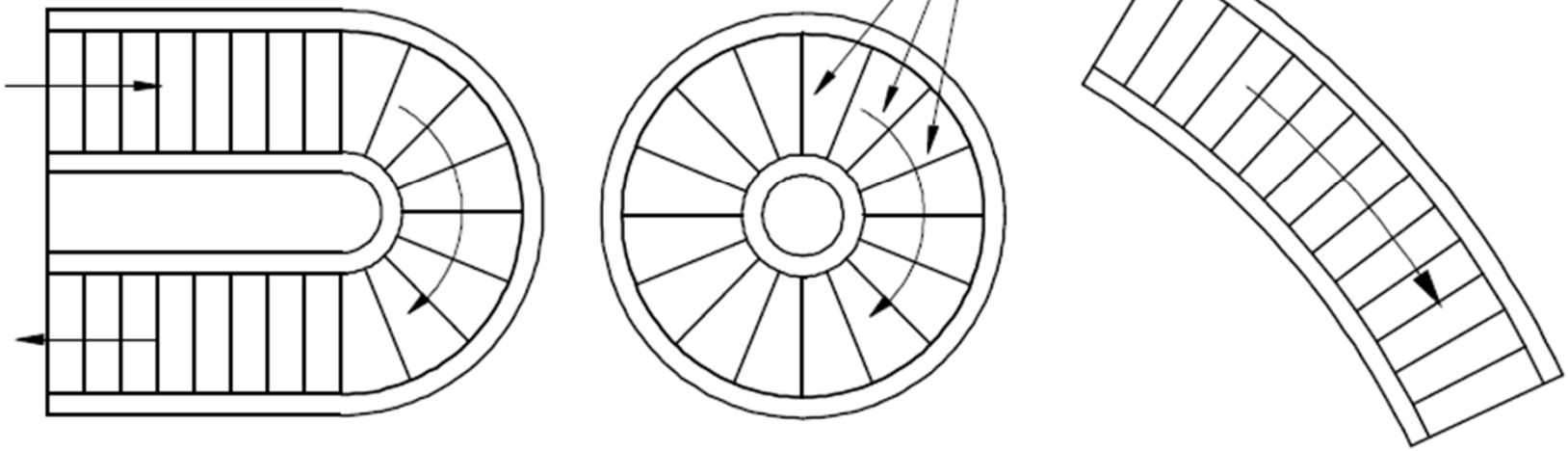


Open-well (half turn)



Open-well with quarter turn landing

Common Types of Stairs (cont..)



Circular

Spiral

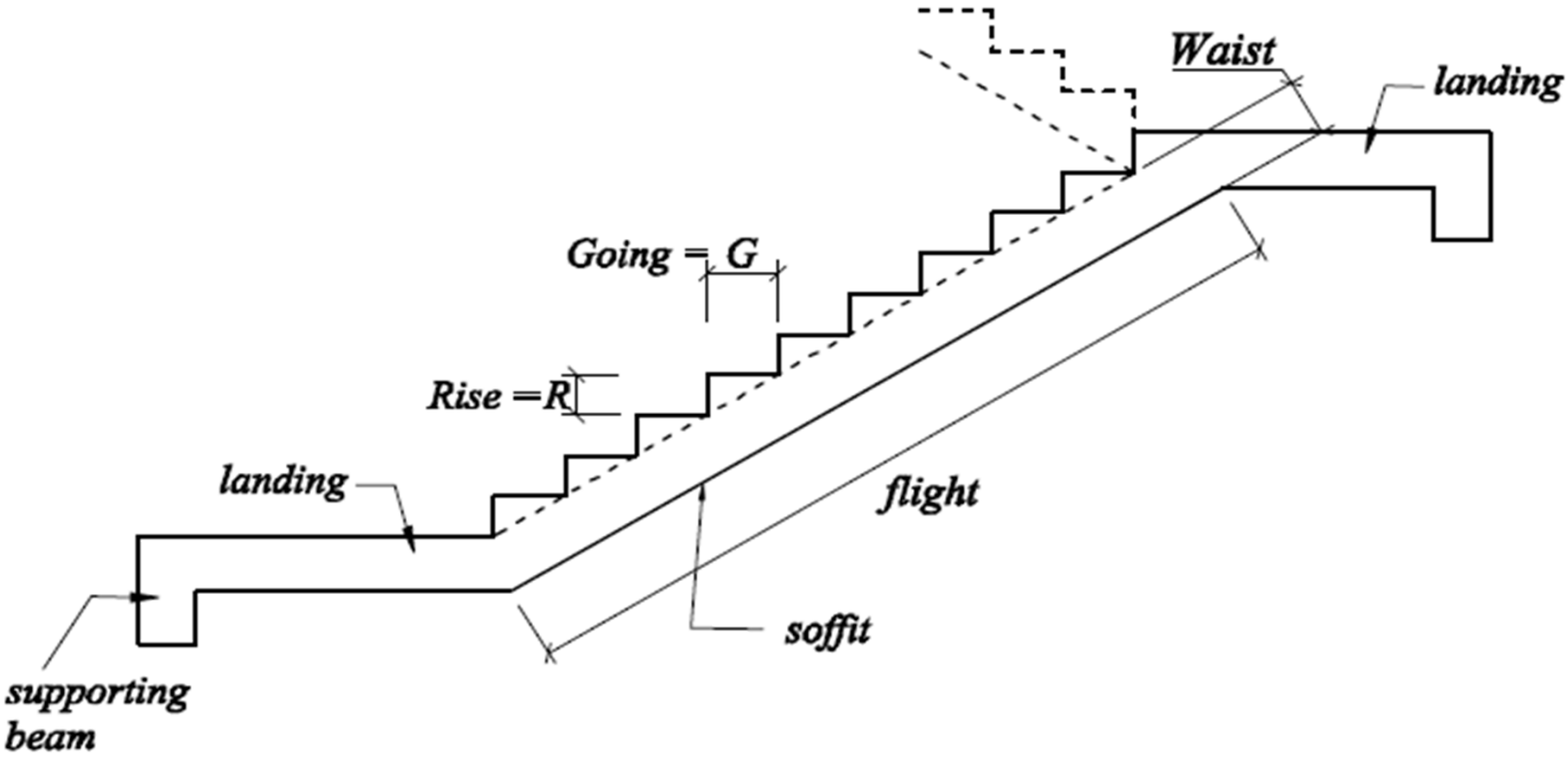
Elliptical

Geometrical stairs

Technical terms related to stairs

- **Flight:** Series of steps without landing
- **Landing:** Platform provided between two flights
- **Steps:** Made from a series of horizontal treads with risers in between
- **Tread:** Horizontal upper portion of a step on which the foot is placed during ascent/descends
- **Riser:** Vertical portion of a step
- **Rise:** Vertical distance between two consecutive treads

Technical terms related to stairs (cont..)



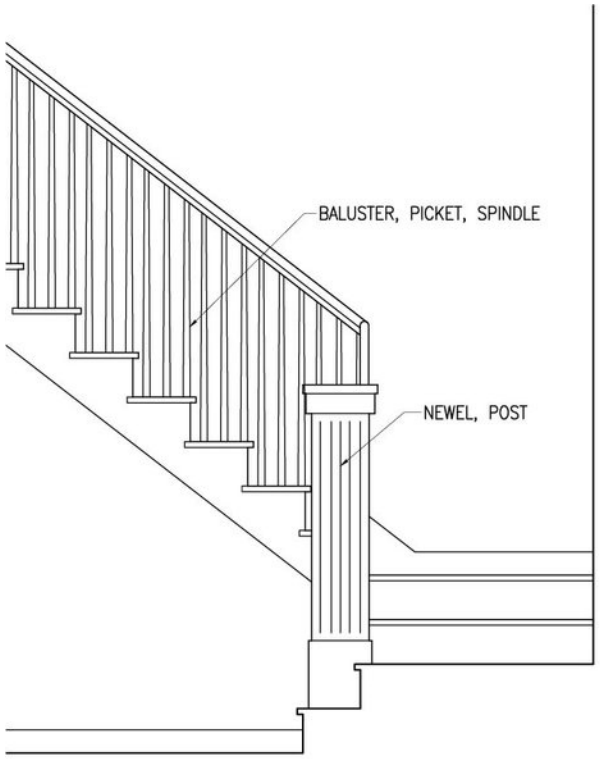
Technical terms related to stairs (cont..)

- **Going:** Distance measured horizontally from the face of one riser to the face of the next riser
- **Nosing:** The exposed edge of a tread, usually projecting with a square, rounded or splayed edge
- **Waist:** The least thickness of a stair slab
- **Soffit:** Bottom surface of a flight
- **Pitch:** Angle with the horizontal

Technical terms related to stairs (cont..)

- **Head-room:** Clear vertical distance between tread of a step and soffit of the flight immediately over it
- **Hand-rail:** Rail of metal/wood on the side of a stair fixed at about waist high parallel to the slope of stair provided to render assistance to the users
- **Baluster:** Vertical member provided for protection and to support the handrail; Placed between steps and handrails
- **Newel:** Post supporting the hand rail where the balustrade changes its direction




BALUSTER, PICKET, SPINDLE
NEWEL, POST

Requirements of a good stair

- **Location:** Sufficient light and ventilation
- **Width:** Varies with situation; however should follow the standard recommended dimensions according to the building types
- **Length of Flight:** For comfort 3≤no. of steps≤12
- **Pitch:** 25°≤pitch≤40°
- **Head room**: Minimum 7’-8’
- **Materials:** Having fire resisting qualities
- **Width of landing:** Not less than width of stair
- **Dimension of a step:** For comfort tread = 10”-12” & riser = 4”-6”