Staircase Policy:

1. This policy shall apply to all common staircases (excluding any ornamental staircase).
2. Design:
    a. The clear width of the staircases shall be determined in multiples of 150 mm eg. 1200 mm, 1500 mm, 1950 mm (in case a different width is needed, it can be rounded down to the nearest multiple of 150 mm eg. If 2000 mm is needed, same can be rounded down to 1950 mm clear)
    b. Following norms shall apply w.r.t Tread and Riser:

Segment	**Breadth of Tread – preferred (range) mm**	**Height of Riser – preferred (range) mm**
Residential & Supremus Office	250	165 (150-175)
Office (excluding Supremus Office)	300	165 (150-175)
Retail	300	165 (150-175)

    c. No void/stairwell between the two flights.
    d. Depth of landing/midlanding should be equal to (max. 200 mm less than) width of the staircases (single tread).
    e. The flight width shall be taken from edge to edge (no adjustment for space taken by handrail etc.)
    f. In case of floors having FTF height <= 2.1 m, the staircase should be designed as follows:
        i. Take height of the said 'less than full height floor' (h1) and add the height of the floor immediately below (h2). Take this height (h = h1+h2) and divide by 2 (h/2).
        ii. There will be 2 full stairwells (2 landings + 2 mid-landings + 4 flights), each climbing a height of h/2, which will enable a person to climb from the floor below 'the less than full height floor' to the floor above 'the less than full height floor'.
        iii. See reference section below as **Annexure B**, which is based on example of a building with typical FTF height of 3.15 m and fire check floor of 2m FTF height. In such case, h is 5.15 m and h/2 is 2.575 m.
    g. In any building with more than one staircase, the purpose of the additional staircase is to provide an alternate means of escape if there is fire in one of the staircases. Hence, the staircases should be located in a manner such that there is maximum distance between the entries to the two staircases and there is minimal chance of fire from one staircase spreading to the other. As far as possible, the two staircases should be located diagonally or atleast, horizontally opposite to each other and should not be located on the same side of the core. If the two staircases are to be located on the same side of the core for any reason, explicit approval of HoD-Design or Director-Design should be taken.
3. Construction:
    a. Factory made pre-cast staircases in all buildings with height > 70 m viz. where crane and man/material hoist is available,
    b. Cast in-situ staircases in all other buildings.
4. Finishes:
    a. If Factory made pre-cast staircases are used: No further finish, just clean raw concrete. It is to be ensured that the specifications of the treads are such that they come with appropriate nosing and grooves. The said staircases shall also have pre-cast joints (or equivalent) for the railing fixitivity.

b. If cast in-situ staircases are used:
   i. For Treads: Use 300 x 300 x 9 mm or 300 x 265 x 9 mm, Vitrified Tiles from Pavit/Zealtop or equivalent with appropriate nosing and treads.
   ii. Raw Risers, kept either raw or finished with grey plaster. No paint to be applied to this surface.
   iii. Landing/mid-landing finished with cement tiles (similar shade to the treads)
   iv. Good quality cement paint (grey)), approx., INR 6 – 7 psf , which is difficult to write on, upto full height on the staircases walls, ceiling & staircase waist slab. Prior to painting, adequate surface preparation to be done by grinding, hole filling etc.

c. If a particular level of the staircase of likely to be used frequently by residents eg. To access the garden on the terrace level, then one of the staircases for such usage is to be identified as a front of house staircase and finishing is to be upgraded as follows:
   i. For Treads: Granite / other stone with appropriate nosing and treads.
   ii. For Risers: Granite / other stone with appropriate nosing and treads.
   iii. Landing/mid-landing finished with granite/other stone.
   iv. Good quality paint on walls and ceiling.

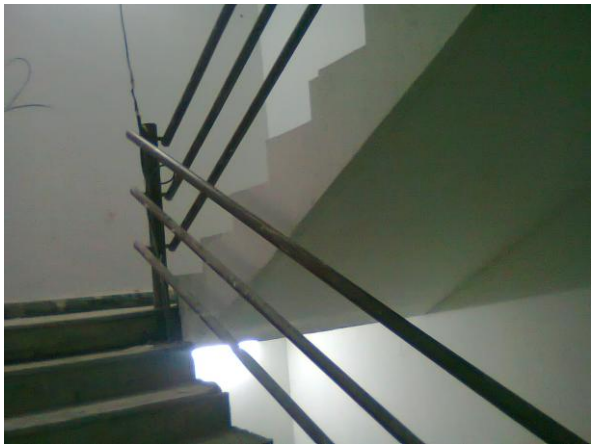
5. Signage:
   a. The floor numbers shall be **painted** on one of the walls (preferably at the landing) at a height which is easily visible (eye-level).
6. Railing:
   a. Height of 1000mm above finished tread.
   b. Should support a continuous load of 50 plf (75 kg-m) or a concentrated load of 200 pounds (90 kg). Max. tolerance for this is -20% viz. continuous load of 60 kg-m or concentrated load of 72 kg.
   c. Located on the side away from the staircases parapet walls.
   d. Material: MS section or equivalent, with paint (red/black/yellow etc.)
   e. Railing shall be fixed with vertical members on mid-landing and landing (not on the side of the stair), without any holes/openings to be made on the finishing material of tread. If the tread is finished with pre-cast cement treads, the screws/bolts should be so designed that they get fixitivity into the base concrete layer.
   f. Please refer to **Annexure A** for reference images/detail.
   g. No handrail shall be provided on the staircase parapet wall side, except in case of buildings having height > 150 m above ground in which case such handrail shall be provided bolted onto the parapet wall.
7. Doors:
   a. All doors to the any staircase which serves as a fire exit should be FRD doors (with 2-hour fire rating), if building height is more than 30 m above ground.
   b. These doors shall have:
      i. paint finish on the staircase side; and
      ii. On passage/lobby side, have finish matching the general finish.
   c. Staircase Windows: Hinges of windows to be selected & adjusted in such a way that the window (regular openable or top/bottom hung, whichever is most cost effective) should not open more than 30 degrees.
8. All attempts should be made to reduce non-public area staircase area and costs, since it is a purely functional part of the development, with limited aesthetic value.

Note: For ornamental staircases which are visible in/from public areas and likely to be frequently used (eg. main staircases in mall, the staircases for L1 to L2 in Lodha Excelus, Mahalaxmi), finishes shall be as per standards prescribed by the Project Architect.

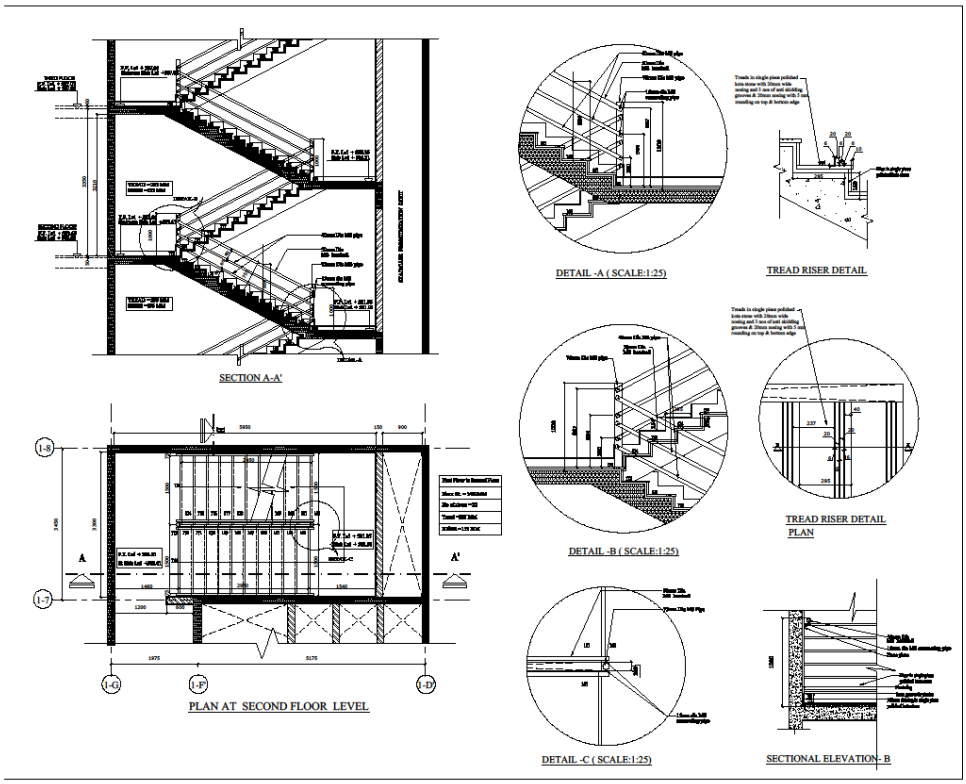
Annexure A



Image is not exact in the fixing details of the railing and the well being present, but is indicative of the nature of the staircase.



Railing as per details below done at Lodha Bellezza, Hyderabad



ANNEXURE B

Sample of design of staircase to serve floors <= 2.1 m FTF height

