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)

Segment	Breadth of Tread – preferred (range) mm	Height of Riser – preferred (range) mm
Residential	250 (250-275)	175 (165-190)
Office	300 (275-300)	150 (150-175)
Retail	300 (275-300)	175 (165-190)

    b. No void/stairwell between the two flights.
    c. Depth of landing/midlanding should be equal to (max. 200 mm less than) width of the staircases (single tread).
    d. The flight width shall be taken from edge to edge (no adjustment for space taken by handrail etc.)
    e. In case of a wing with more than one staircase, only one staircase should go above last habitable level (viz. to terrace level) and all other staircases should terminate at the last habitable level itself. The space above those staircases which terminate at last habitable level can be used for OH tanks etc., reducing the overall building height.
    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.
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. Pre-cast cement treads with appropriate nosing and treads.
ii. Raw Risers.
iii. Landing/mid-landing finished with cement tiles (similar shade to the treads)
iv. Good quality paint (grey / white), which is difficult to write on, upto height of approx. 6 feet on the staircases walls.

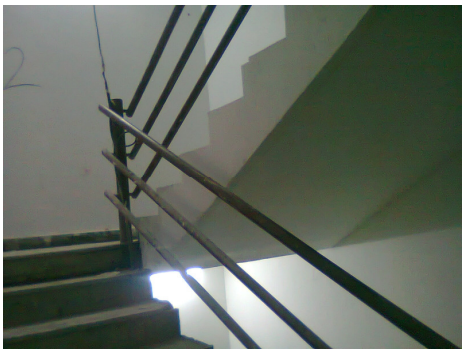
5. Signage:
    a. The floor numbers shall be **painted** on one of the walls (preferably at the landing) at a height which is easily visible (eye-level).
6. Railing:
    a. Height of 34'' (864 mm) above finished tread.
    b. Should support a continuous load of 50 plf (75 kg-m) or a concentrated load 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.
7. Doors:
    a. All doors to the any staircase which serces 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.
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.
9. Any staircase should generally not go above the last habitable floor plus one level (generally terrace level). A steel ladder can be used to access LMR / OH Tank, if required.

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.

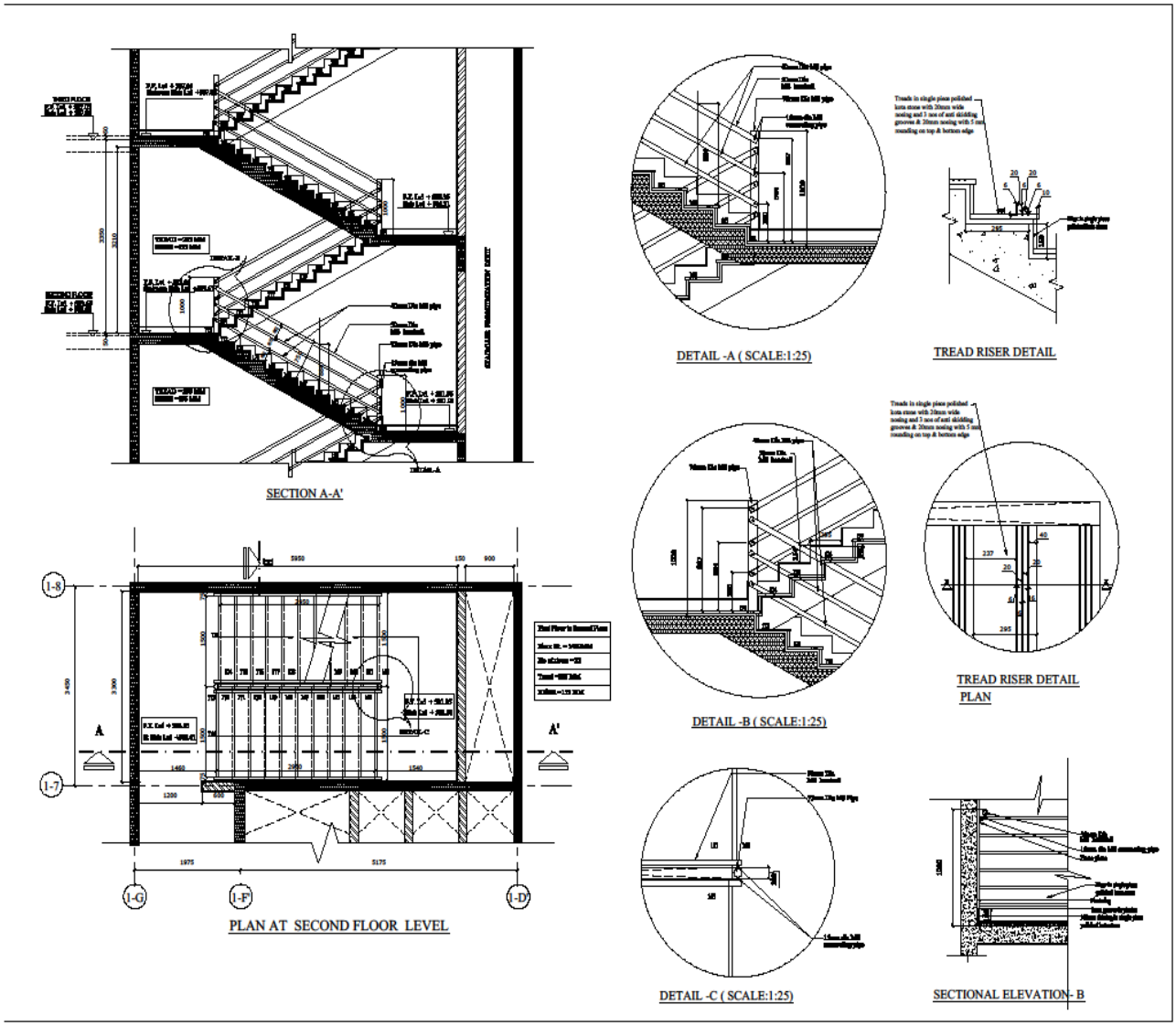
Annexure A



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

