



Tishk International University
Department of Architectural Engineering -3rd Stage-
A322 Execution drawings I

Lec 1 to 6: Introduction to Execution drawings

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General Information about the course

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Research Assistants: Ms.Suzan

Course Title : Execution drawing I

Class No : Studio 2

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Grade : 3rd Year

References :

- **Architectural Detailing-Edward Allen**
- **WORKING DRAWINGS HANDBOOK Fourth Edition Keith Styles and Andrew Bichard**

Basic questions

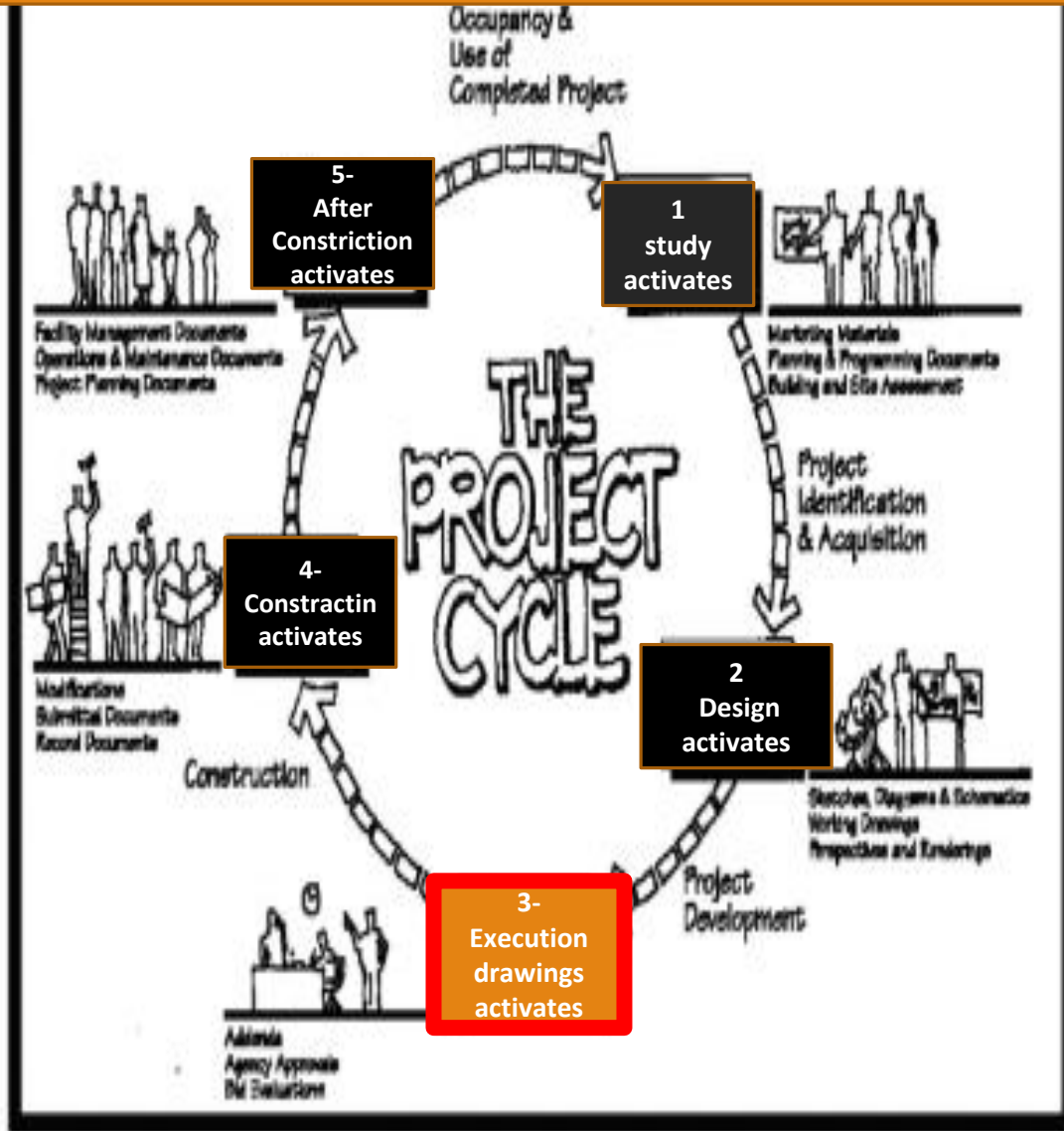
What does mean Execution drawings ?

what is the Execution Drawings Sequence and sheets formats ?

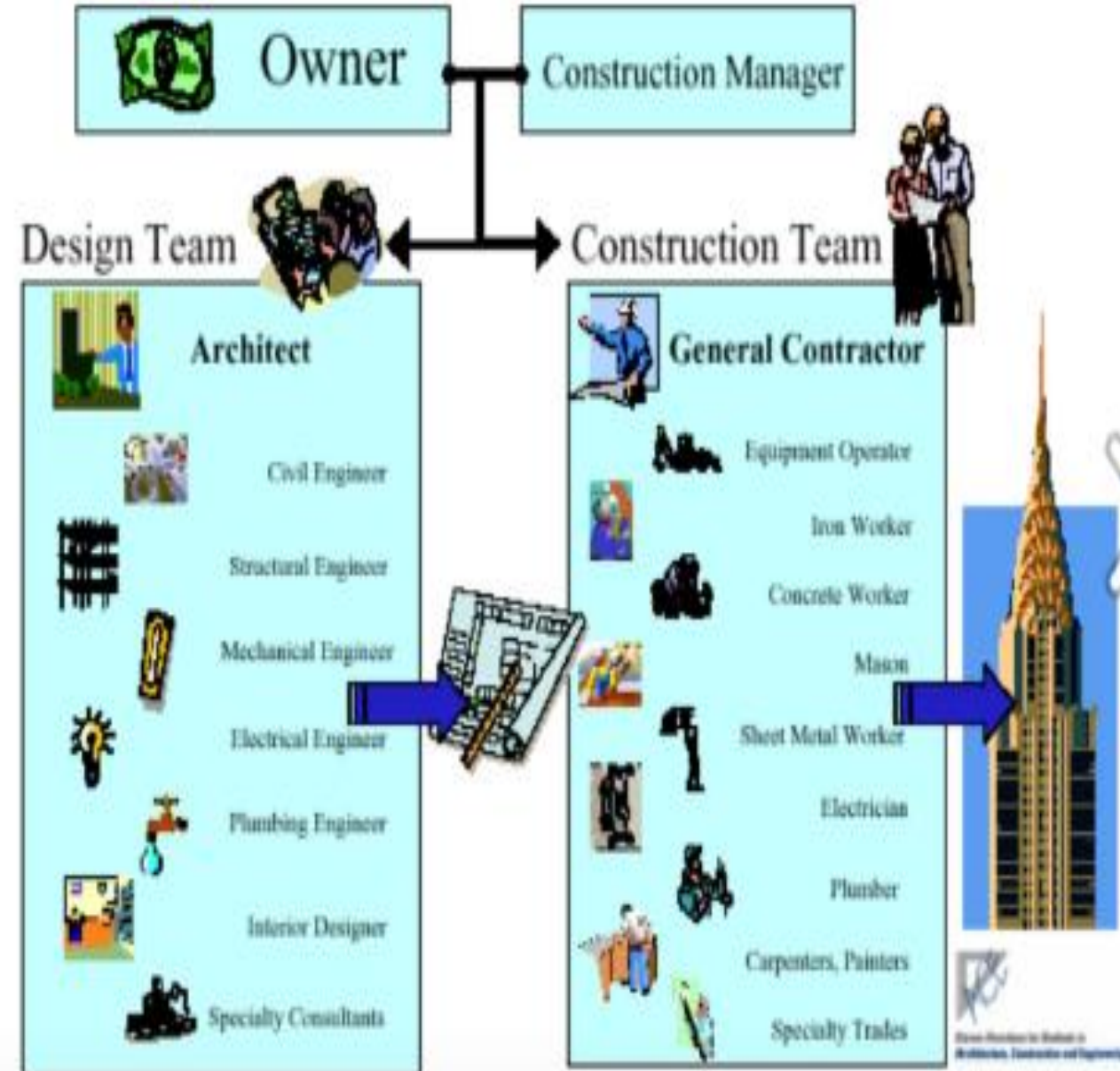
what is the Architectural drawings contents documents system ?

What are the symbols we use in the drawings ?

What does it mean Execution drawings ?



A Building is Born

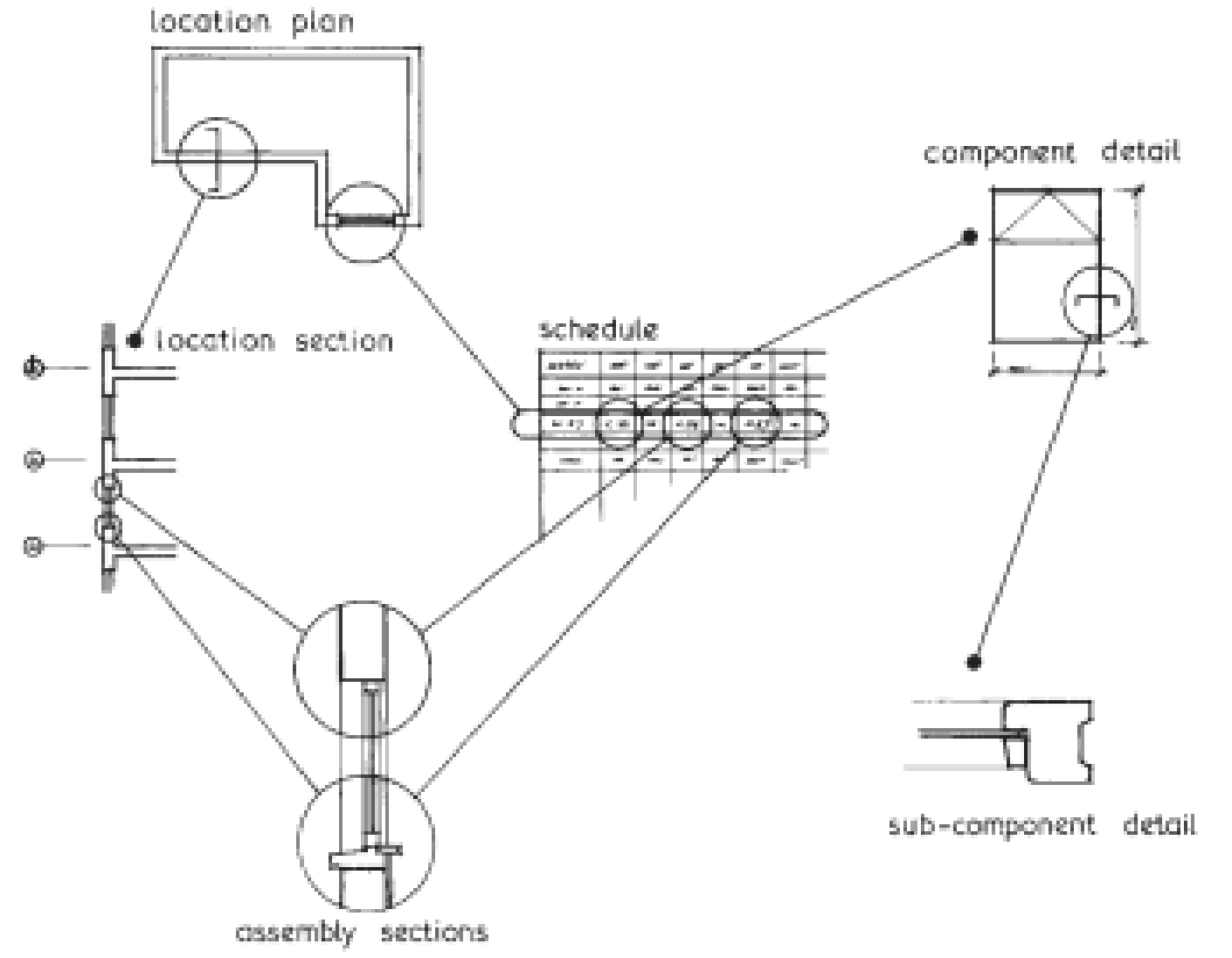


What does it mean Execution drawings ?

A comprehensive set of drawings used in a building construction project: these will include not only architect's drawings, but structural and other engineering drawings as well. Working drawings logically subdivide into location, assembly and component drawings.



← ON - SITE DRAWINGS — X — OFF - SITE DRAWINGS →



Execution Drawings Sequence and sheets formats :

Organization :

- Site work
- **Architectural drawings**
- Structural
- Mechanical
- Plumbing
- Electrical
- Any special disciplines



Generally the Architectural drawings contains :

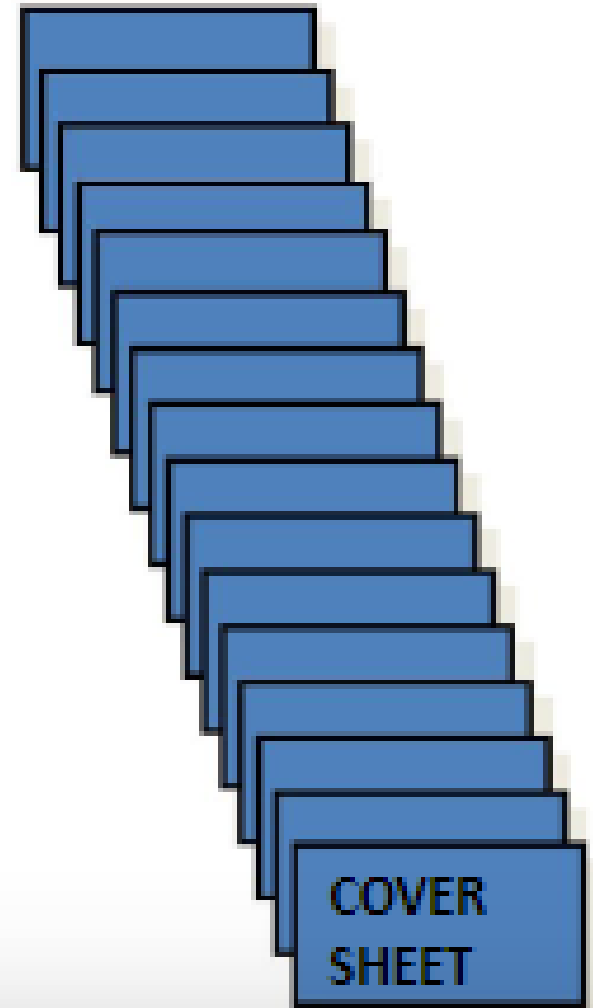
- Site
- Building plans
- Elevations
- Sections
- Details
- Diagrams and schedules

Architectural drawings contents documents system

Major disciplines

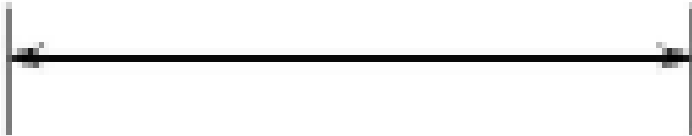
A Architecture

A000, A001, etc. general notes	Schedules, master keynote, legend,
A100, A101, etc.	Plans
A200, A201, etc.	Exterior elevations, Sections
A300, A301, etc.	Vertical circulation, core plan and details
A400, A401, etc.	Reflected ceiling plans, details
A500, A501, etc.	Exterior envelope, details
A600, A601, etc.	Architecture interiors



Drawings symbols :

Lines



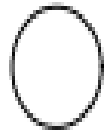
Object Lines

Dimension/Extension Lines

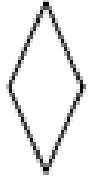
Hidden/Invisible Lines

Center Lines

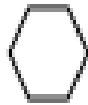
Drawings symbols :



FINISHING NOTATION



DOOR TAG



GLAZING TAG



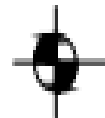
SECTIONS NUMBER

SHEET WHERE SECTIONS APPEARS

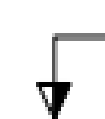


ELEVATION NUMBER

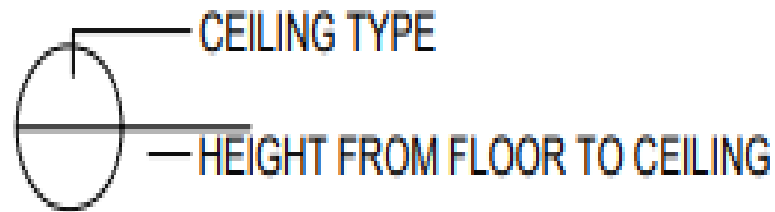
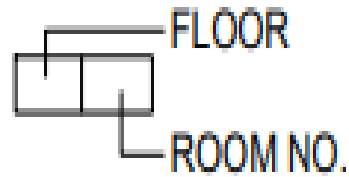
SHEET WHERE ELEVATION APPEARS



LEVEL IN PLAN



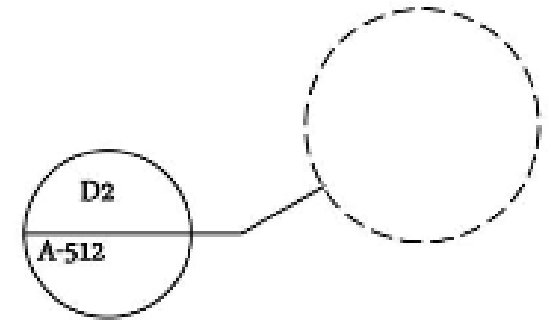
LEVEL IN SECTION AND ELEVATION



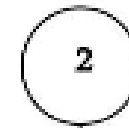
S.C.L. SLAB CONCRETE LEVEL

F.F.L. FINISH FLOOR LEVEL

F.C. FALSE CEILING

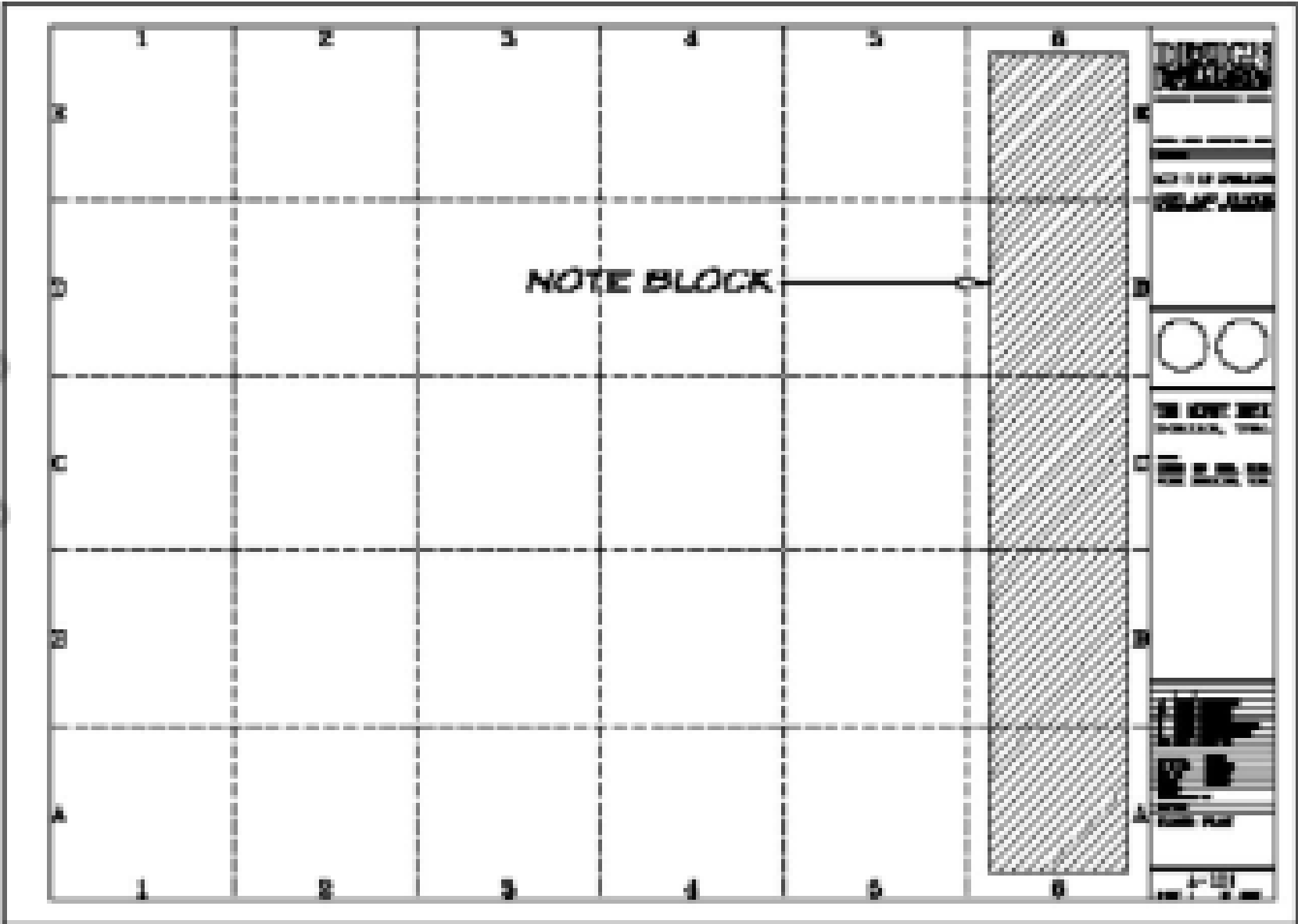


Detail Indicator



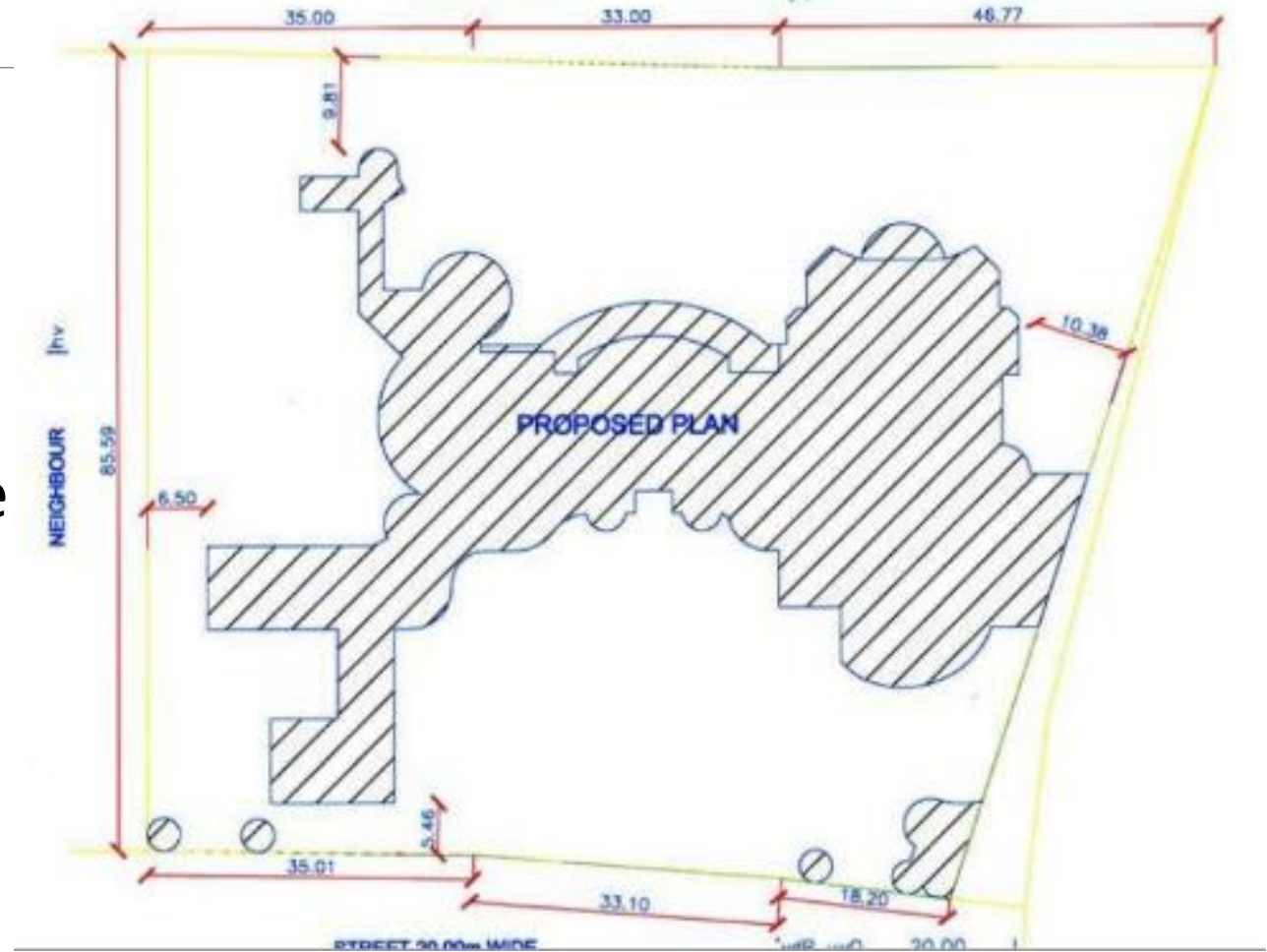
Column Grid Indicator

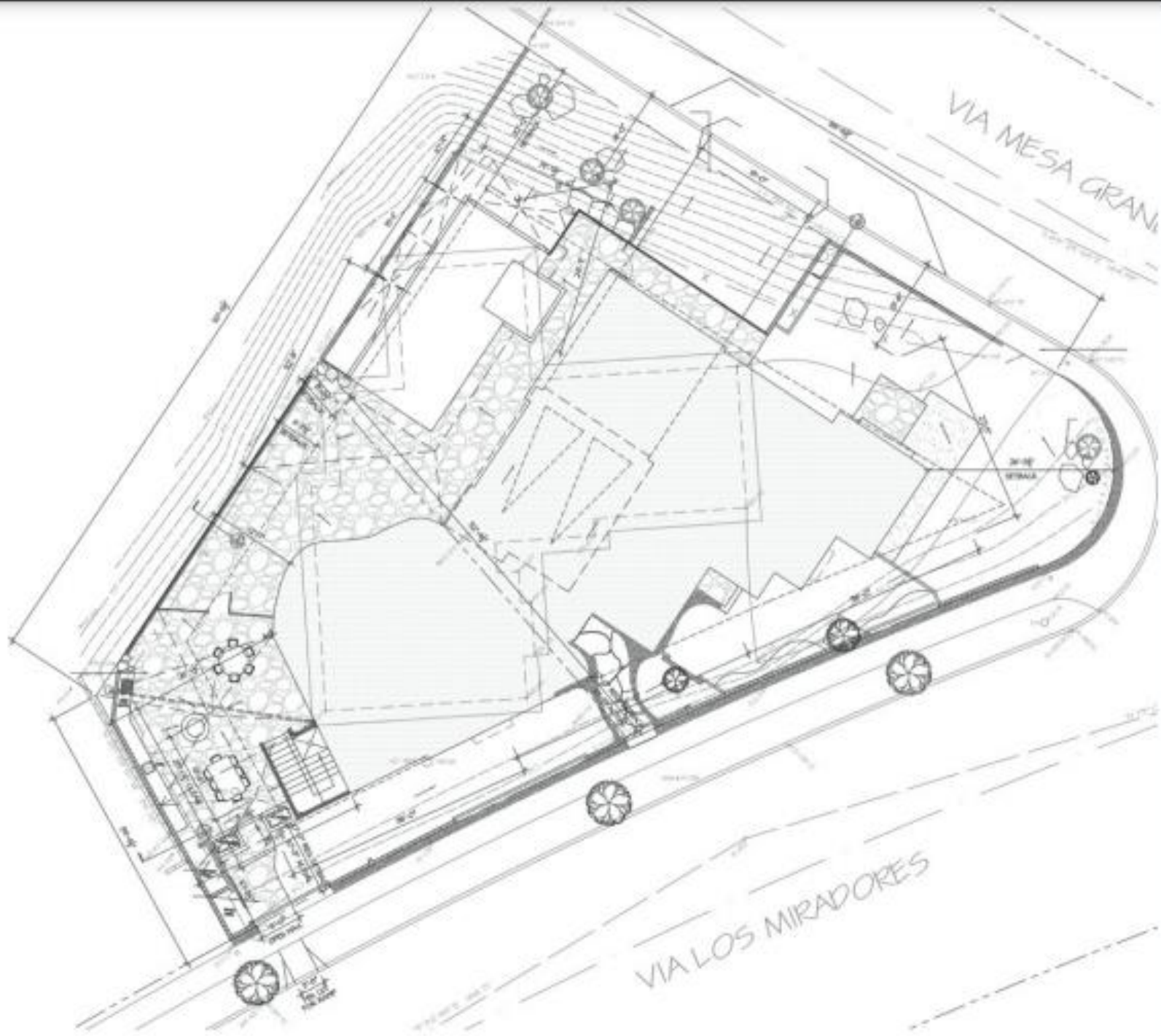
Sheet Drawing layout

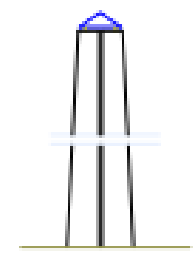
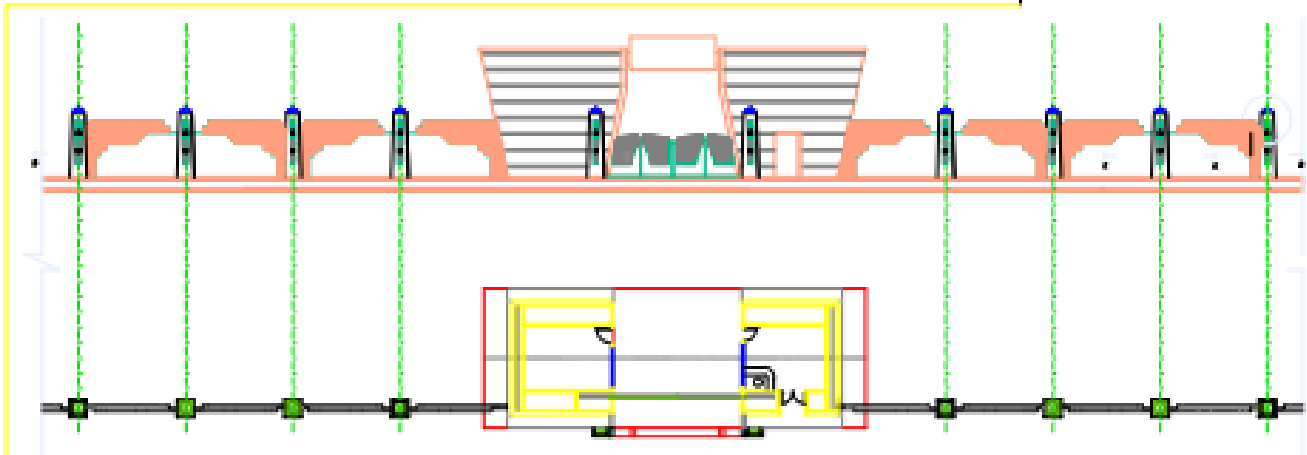
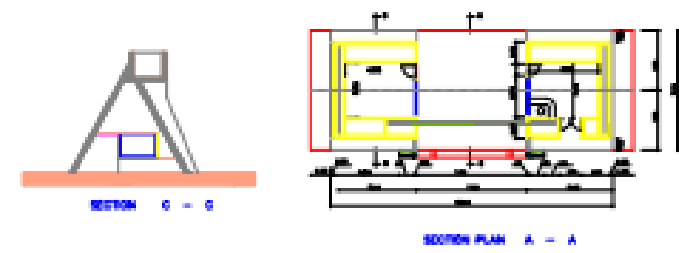
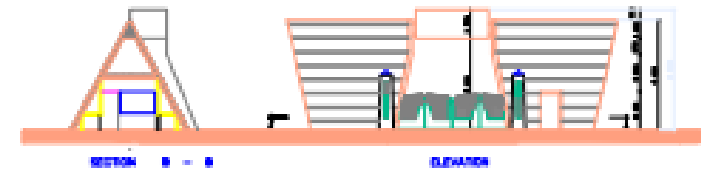
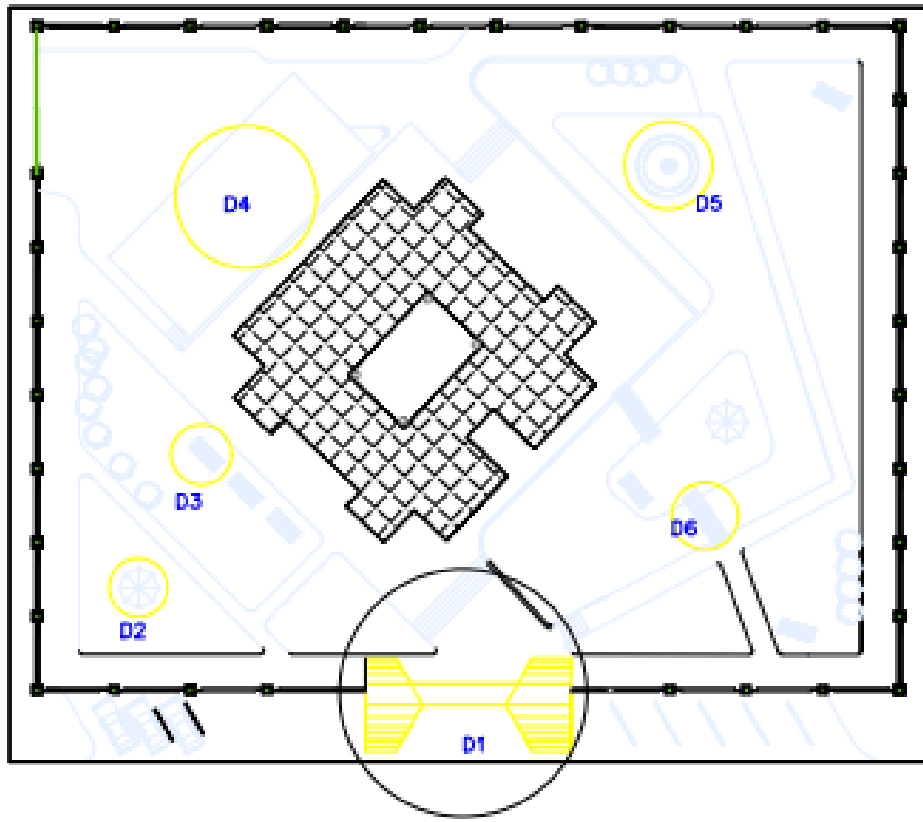


1. A001 Site plan :

- The site plan should show the location of the building in relation to the site boundaries .
- All the landscape elements , street and pedestrian walkways should be indicated, north direction and dimensions .
- A reference point should be identified to related the building to street level .







SECTION E-E

NOTE:

KEY PLAN

COLLEGE OF
ENGINEERING
ARCHITECTURE
DEPARTMENT

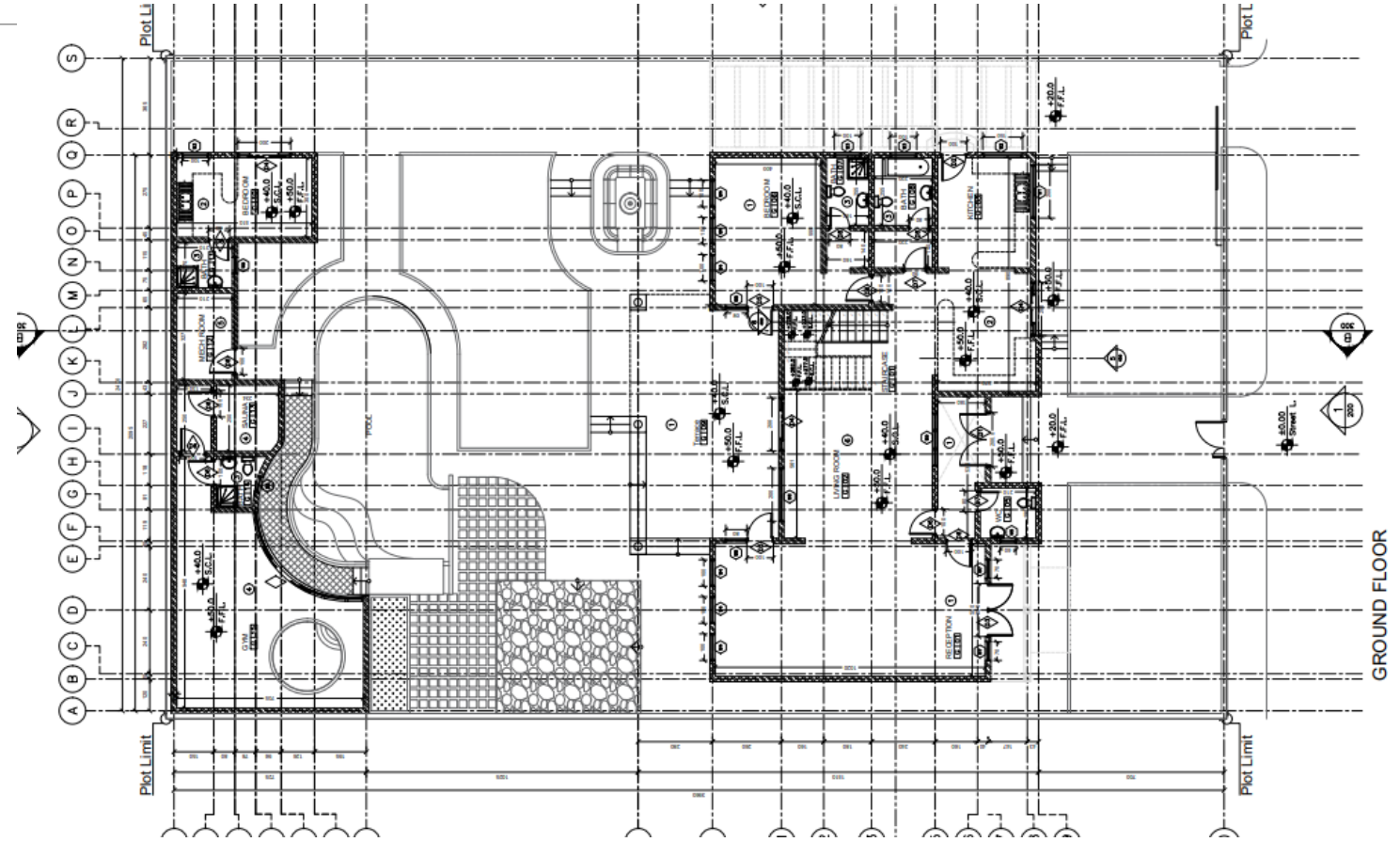
THIRD STAGE
prepared

SUPERVISED
MR.SUHAYB

SHEET TITLE
site detail
NO OF SHEET

2. A101 – etc. plans

All plans should be drawn in scale 1:100 showing : centerlines , walls ,openings , external and internal dimensions , materials and, symbols .

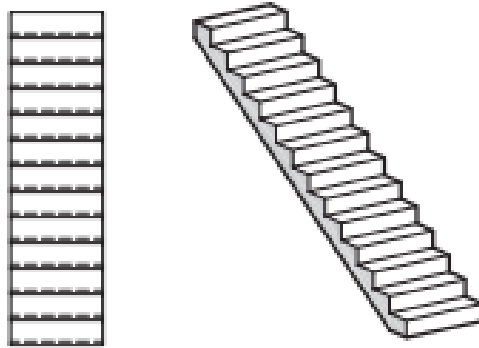


Staircase

STAIR TYPES

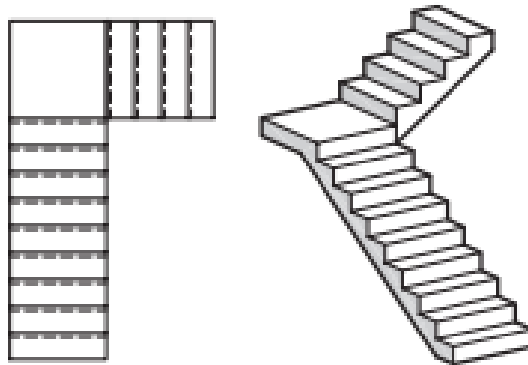
Straight Run Stair

Fire codes generally restrict the total rise of a straight stair to 12'-0" (3.658) before an intermediate landing is required. Landing depth should equal the stair width.



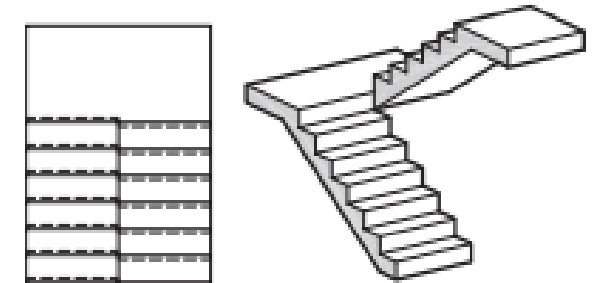
L-shaped Stair with Landing

L-shaped stairs may contain long or short legs, with a landing at any change in direction.



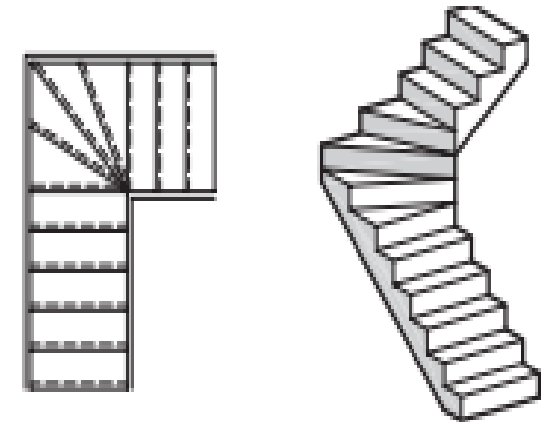
U-shaped Stair with Landing

U-shaped stairs, which switch back as they ascend, are useful in tight floor plans and as one component in a stacking multilevel circulation system (such as an egress stair core).



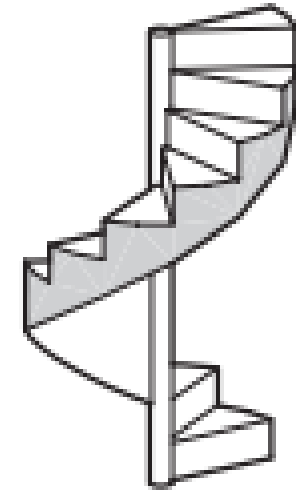
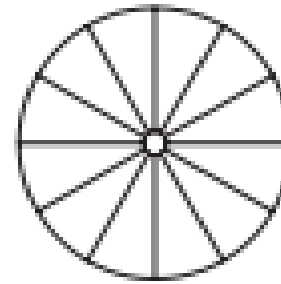
L-shaped Stair with Winders

Winders may help to compress the area needed for a stair by adding angled treads where a landing might go in a typical L-shaped stair. Most winders do not comply with local codes.



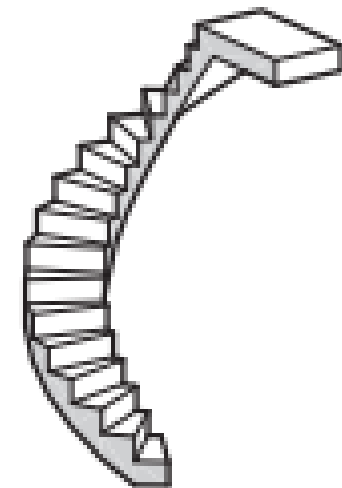
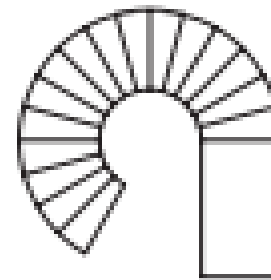
Spiral Stair

Spiral stairs occupy a minimum amount of plan space and are often used in private residences. Most spiral stairs are not acceptable as egress stairs, except in residences and in spaces of five or fewer occupants in 250 sq. ft. (23 m²) or less.

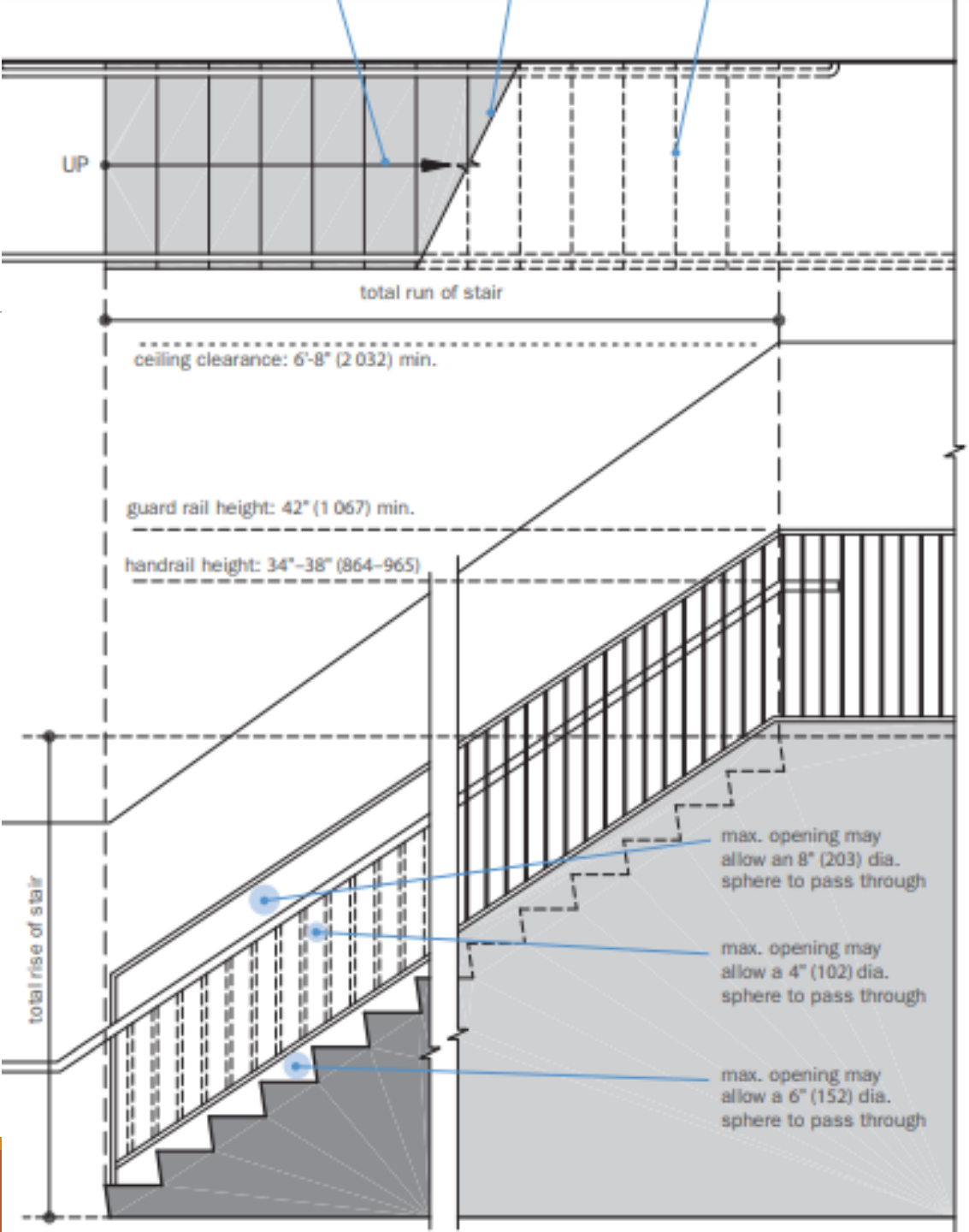
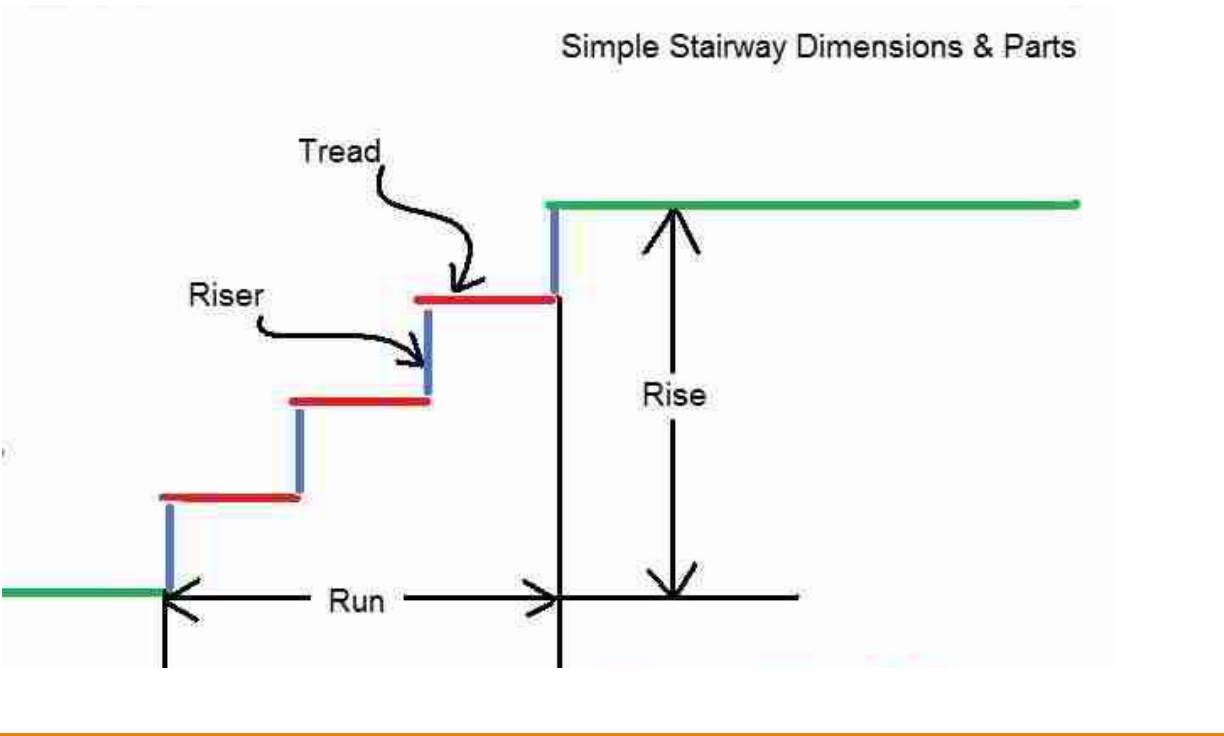


Curved Stair

Curved stairs follow the same layout principles of spiral stairs, though with a sufficient open center diameter, the treads may be dimensioned to legal code standards for egress.



Staircase



How to Calculate Staircase Dimensions and Designs ?

2 Risers + 1 Tread = 63-65 cm

A schematic example of an optimal staircase

(2 x 18) + (1 x 28) = 64 cm

Riser and Tread Dimensions

Angle	Riser inches (mm)	Tread inches (mm)
22.00°	5 (127)	12 1/2 (318)
23.23°	5 1/4 (133)	12 1/4 (311)
24.63°	5 1/2 (140)	12 (305)
26.00°	5 3/4 (146)	11 3/4 (299)
27.55°	6 (152)	11 1/2 (292)
29.05°	6 1/4 (159)	11 1/4 (286)
30.58°	6 1/2 (165)	11 (279)
32.13°	6 3/4 (172)	10 3/4 (273)
33.68°	7 (178)	10 1/2 (267)
35.26°	7 1/4 (184)	10 1/4 (260)

General Guidelines

The following are rules of thumb for calculating limits; always check appropriate local codes:

riser x run = 72"-75" (1 829-905)

riser + run = 17"-17 1/2" (432-445)

2(riser) + run = 24"-25" (610-635)

exterior stairs: 2(riser) + run = 26" (660)

Nonresidential:

minimum width = 44" (1 120)

maximum riser = 7 1/2" (191)

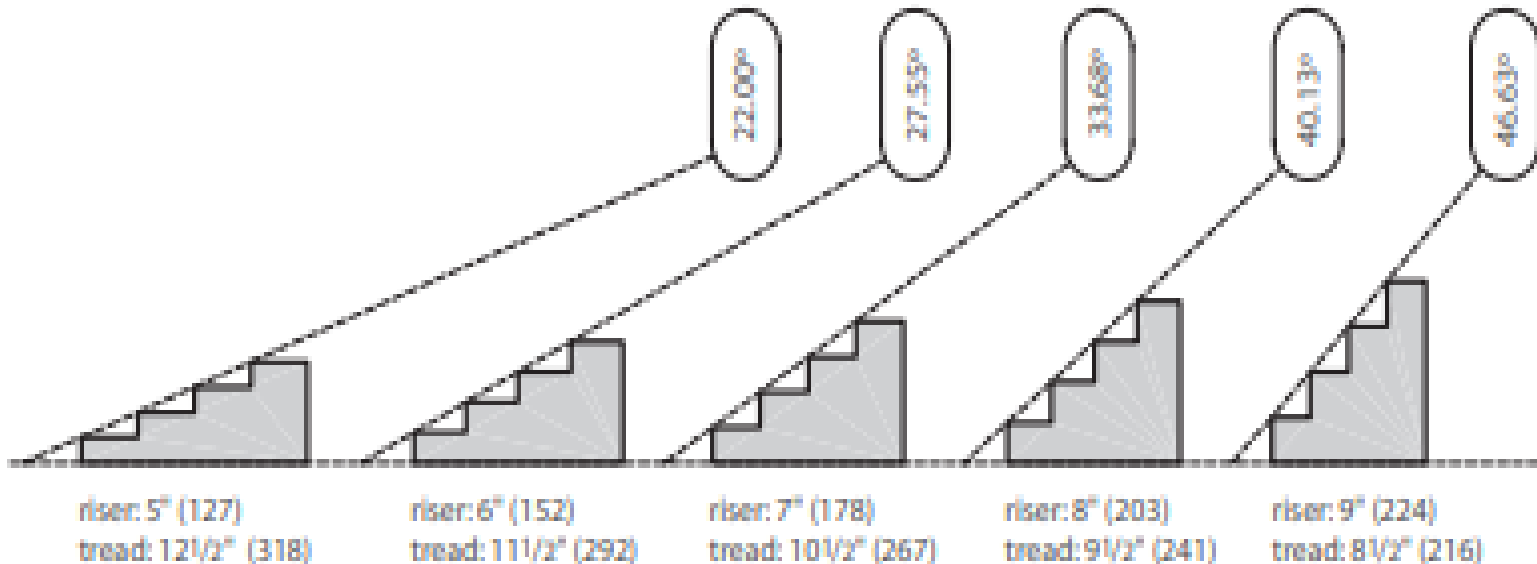
minimum tread = 11" (279)

Residential:

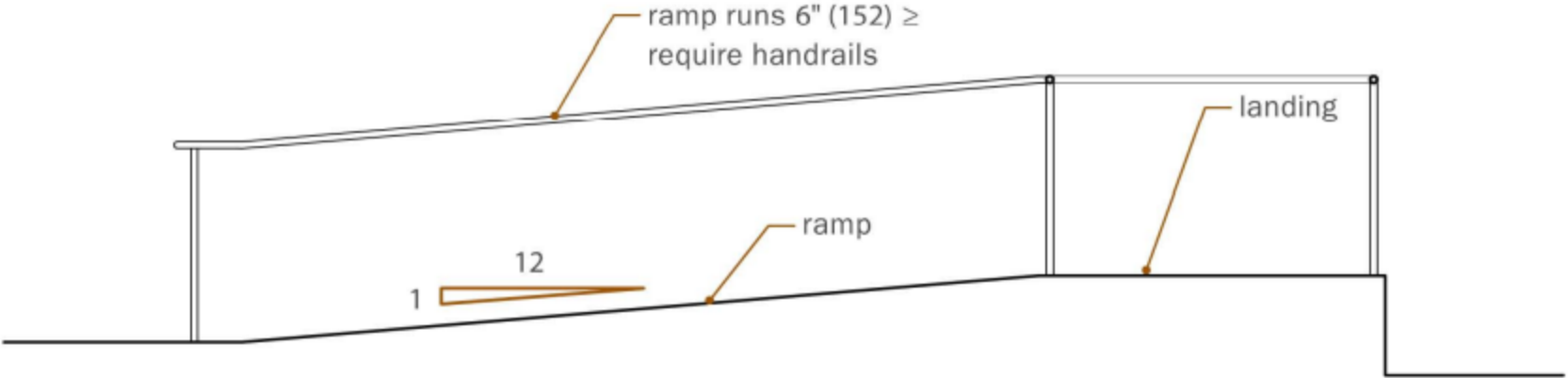
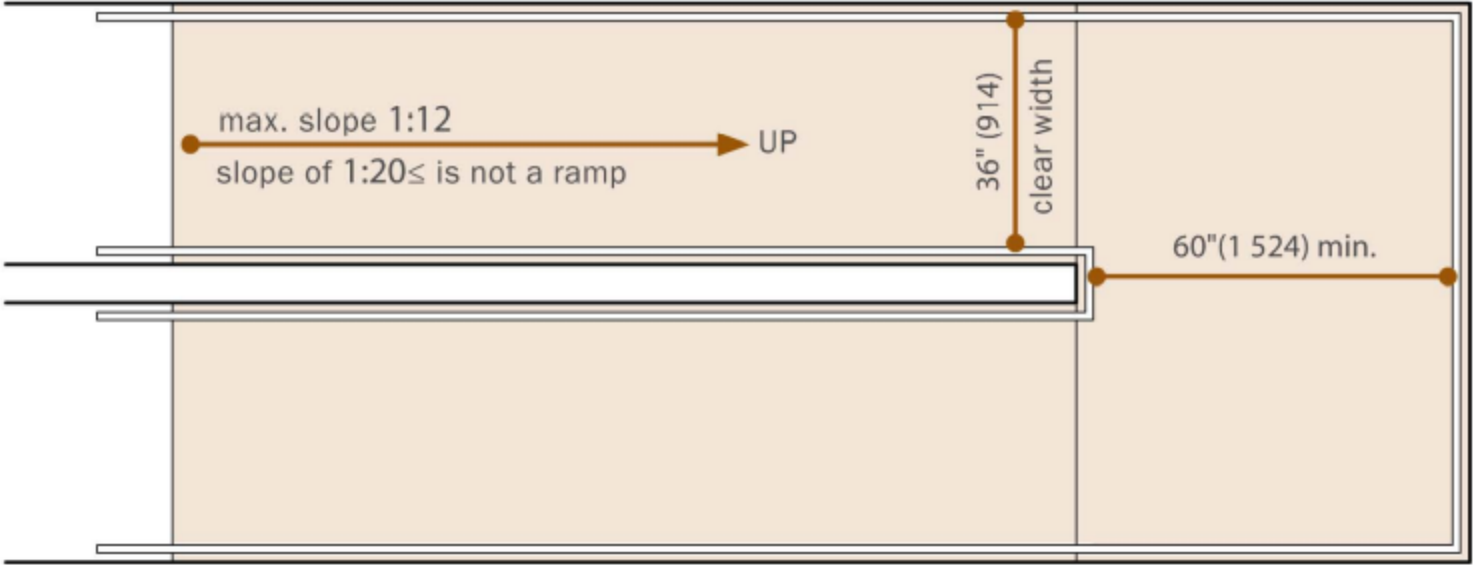
minimum width = 36" (915)

maximum riser = 8 1/4" (210)

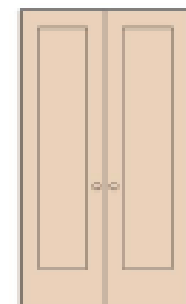
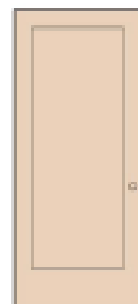
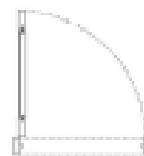
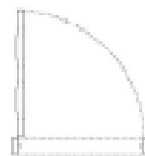
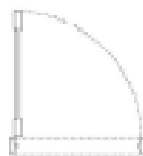
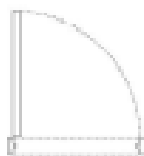
minimum tread = 9" (229)



Staircase



Door Types



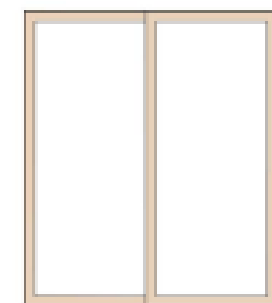
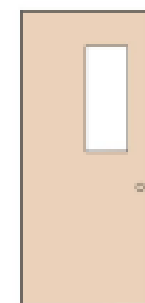
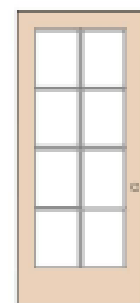
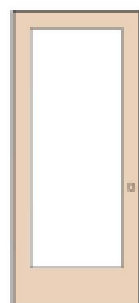
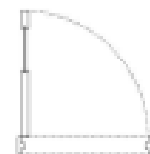
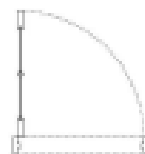
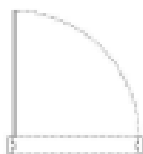
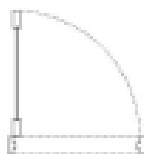
Flush

Panel

5-Panel

Louver

Bi-Fold



Full Glass

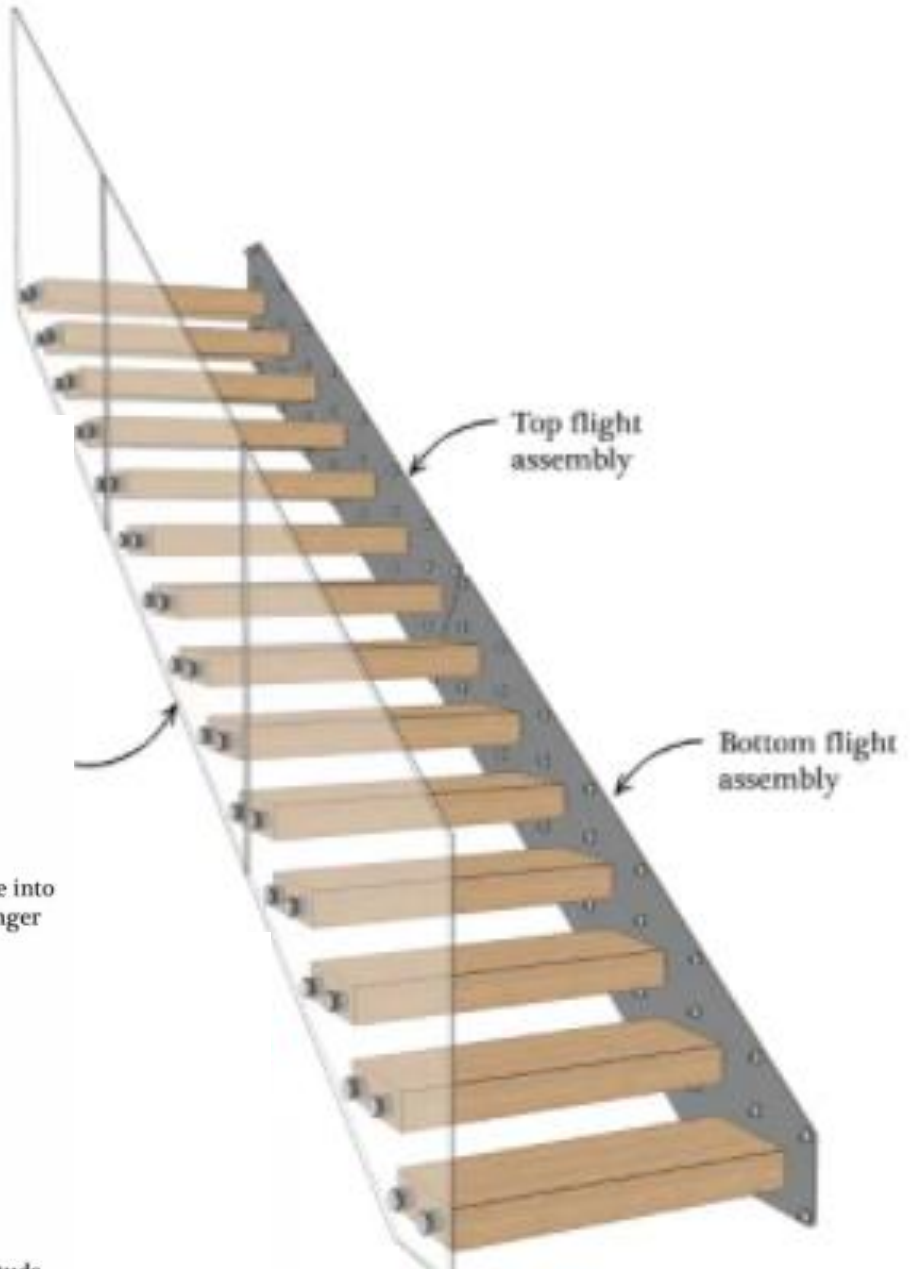
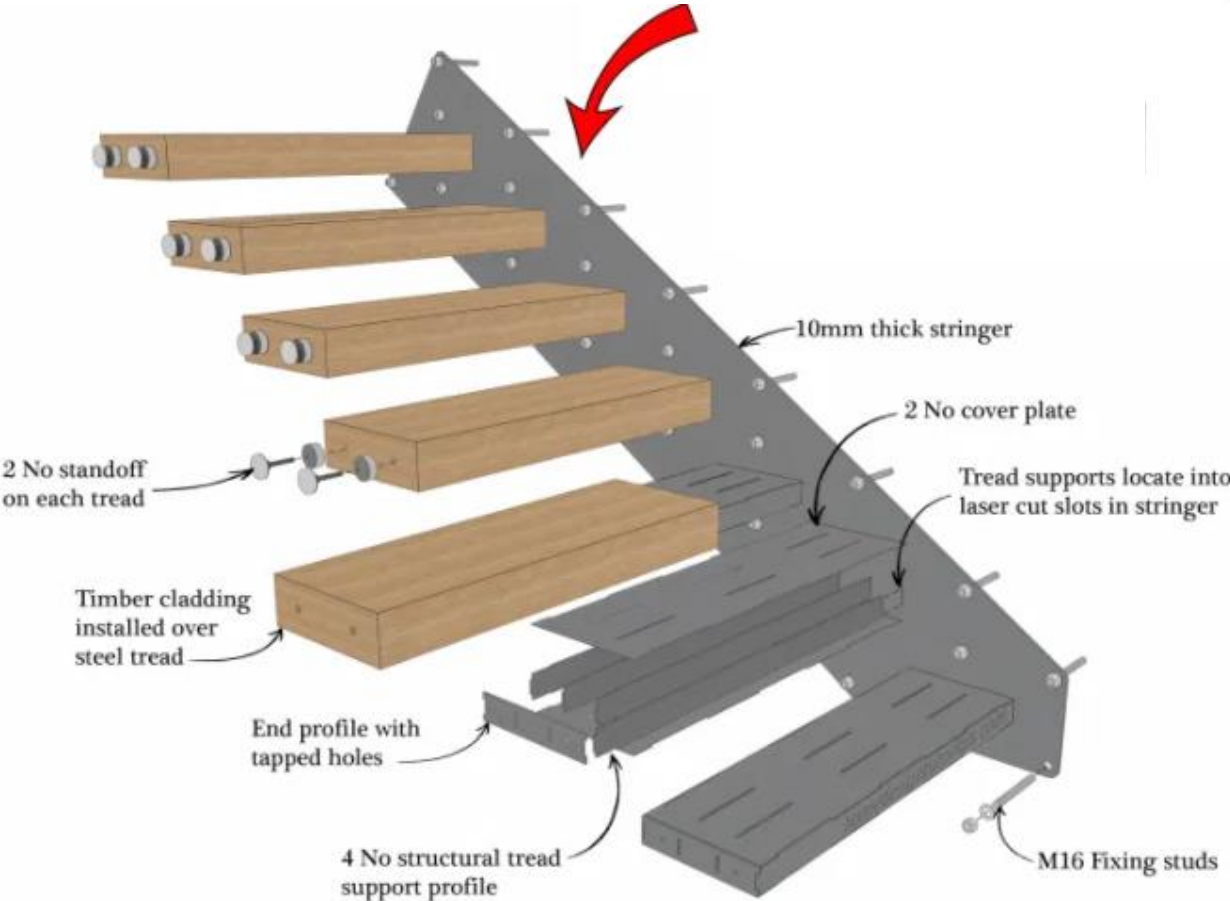
All Glass

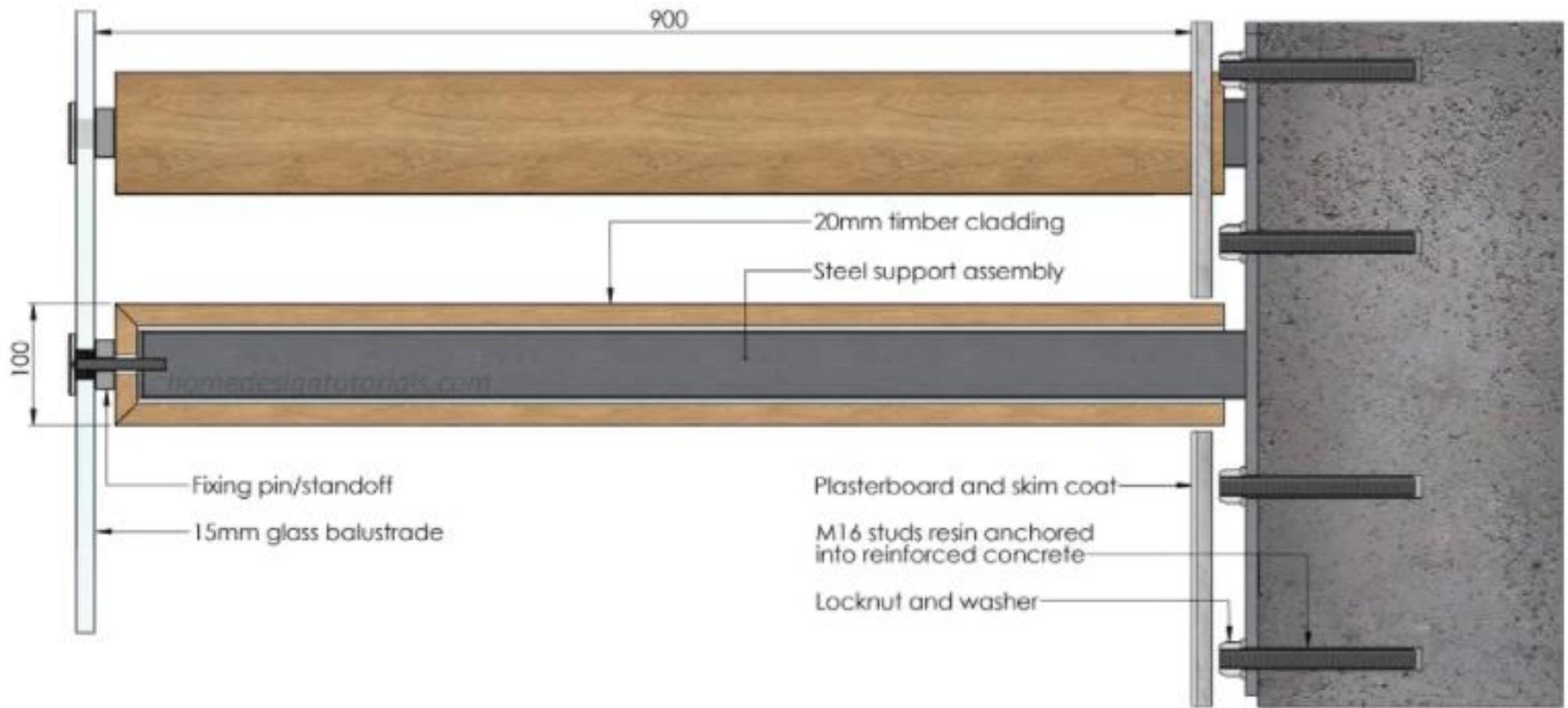
French

Narrow Lite

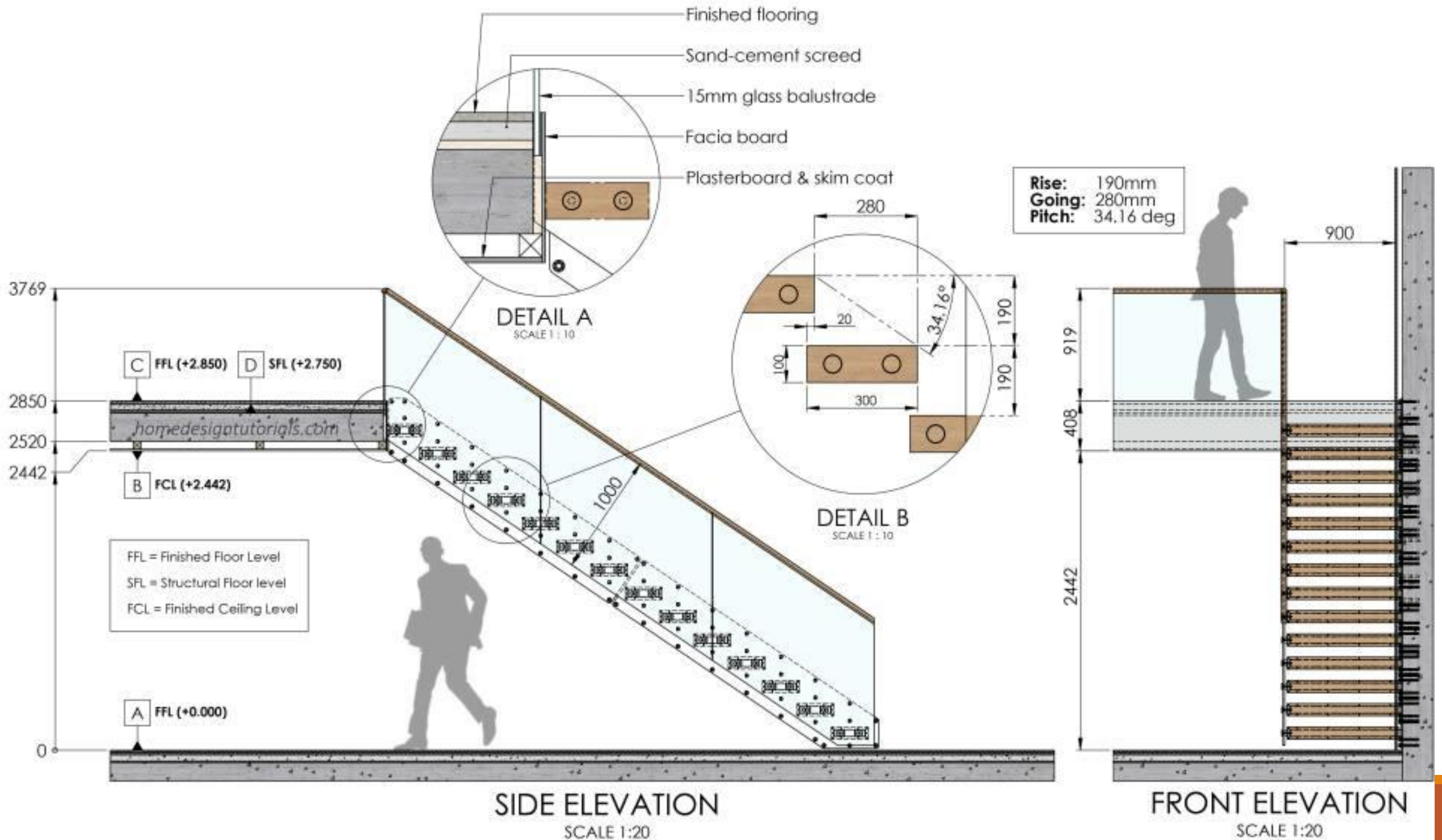
Sliding

Steel Cantilevered Staircase

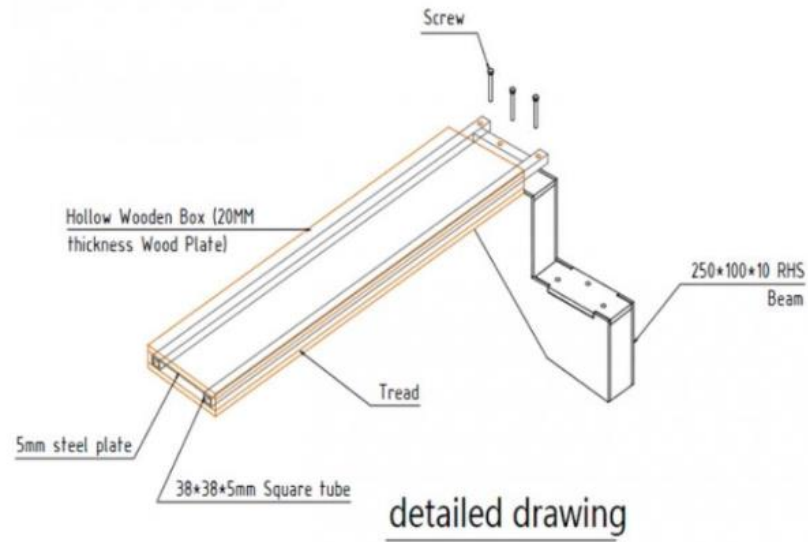




Cantilevered Staircase Fixing Detail



Cantilevered Staircase Details



Steel Floating Staircase

Double stringer



One stringer



