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## 26.1 INTRODUCTION

The journey of any architectural drafting starts with the understanding of drafting techniques. Beginners need to understand the basic skill of drafting techniques to create a detailed drawing. This chapter introduces you to a range of techniques starting from preparation of surface for drafting to selecting the appropriate pen and pencils for the job. Learning these techniques helps in creating drawings that are ideal for execution and conveying the design concept.

The designer and the clients communicate through the drawings. Accurate drawing is facilitated by the understanding of architectural drafting. Before we discuss the techniques, we need to know the essential drafting tools that every beginner should possess.



Fig 26.1: Drafting Board



- i. **Drafting Board:** Drafting boards provide a smooth drawing surface to draft. They provide a parallel straightedge, ensuring precise drafting. It is available in various sizes ranging from A0 to A4.
- ii. **Drafting Tools:** Drafting tools are necessary to help us create precise technical or engineering drawings. Below is a list of a few frequently used tools;
  - T-Square
  - Set Square 30°- 60° and 45° or Adjustable Set Square
  - Scales
  - Compass
  - Drafting Pencils
  - Other tools: masking tape, eraser, etc,
- iii. **T-Square:** Square is a ruler or straight edge with a short crosspiece resembling the letter T. The short crosspiece slides along the drawing board assisting in drawing perfect horizontal lines. It is available in various sizes e.g., 18", 24", 30" 36".
- iv. **Set Square 30°- 60° and 45°:** Set-Square aids in drawing vertical lines and any other specified angles. They are available in sets of two. The right angle with two other sides of 45° and the other with 30°- 60°.
- v. **Scales:** The use of Scale helps in drawing objects/spaces in correlation to the actual size. A selection of ideal scale depends on the size of the object/space to the size of the drawing paper. The level of complexity the drawing needs to convey, also helps in deciding the scale. Typically, floor plans are drawn at 1:50 or 1:100 scale. One can draft plans for individual rooms or furniture detailing at a scale of 1:10 or 1:20.
- vi. **Compass:** A tool mainly used to draw circles and arcs of any required radii.
- vii. **Drawing Pencils:** Pencils are divided into:

**Conventional Pencils:** Conventional pencils or graphite pencils are the most commonly used. These pencils comprise lead made of graphite and kaolin encased in wood. There are letters H, B, HB, and F engraved on pencils. The letters H stands for Hard; B is for Bold and F is for fine. There are numerals behind these alphabets which indicates the intensity of the pencils. More H means more hard and less dark pencil whereas, more B means more Dark and less Hard pencil. It is divided into a category

- Hard Grade - 3H, 4H, 5H
- Medium grade - H, 2H, F
- Soft grade - HB, B, 2B, 4B, 6B

**Mechanical Pencils:** Mechanical pencils are refillable lead pencils that work similarly to spring-operated pens. Commonly known as clutch pencils it is available in various sizes of lead 0.3, 0.5, 0.7, 0.9mm.

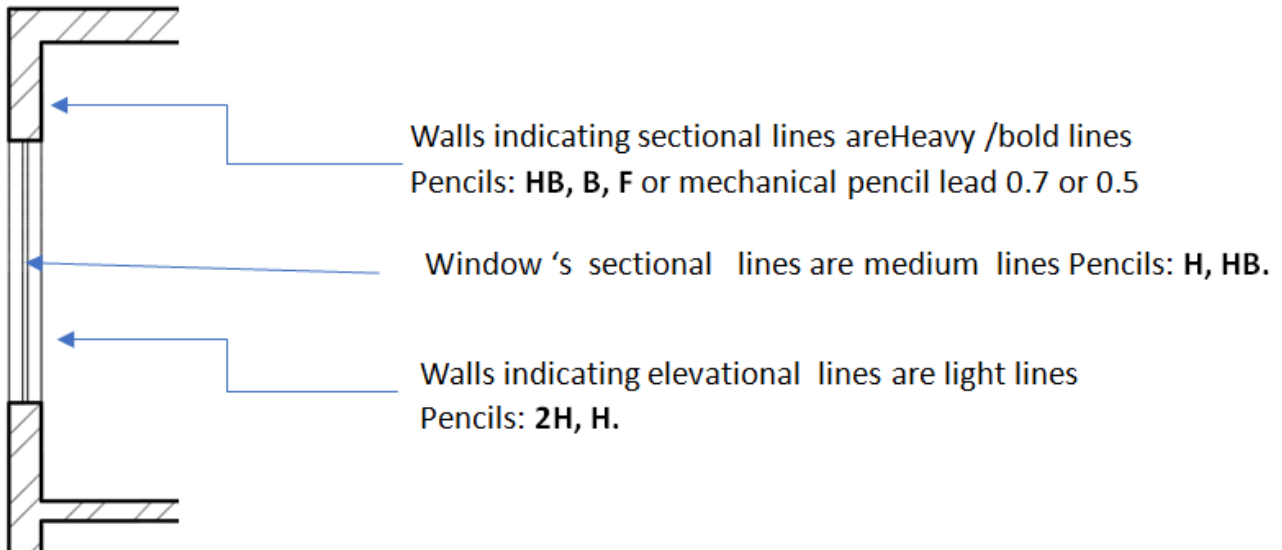
**Fine Lead Mechanical Pencils:** Fine lead mechanical pencils are an indispensable tool for interior design drafting, offering precision and versatility. These pencils, equipped with thin leads typically ranging from 0.3mm to 0.7mm, enable designers to create intricate details and precise lines essential for architectural sketches, floor plans, and intricate interior design layouts. Their consistent and fine lines allow for accurate representations of furniture, textures, and intricate patterns, aiding in conveying ideas with utmost clarity and professionalism. With their erasable and refillable nature, these mechanical pencils provide convenience and efficiency, making them a favored choice among interior designers for their drafting needs.

## 26.2 LINE WEIGHT AND LINE TYPES



Line weight refers to the thickness of lines in a drawing, indicating their importance and visibility. All lines comply with the purpose of architectural drawings. They represent different segments such as the sectional lines, elevational lines, hidden elements, and center lines. The proper understanding of line weight and line types while preparing drawings delivers accurately readable drawings and brings clarity for execution.

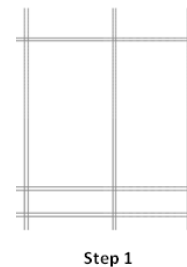
The ability to make floor plans by using the above-mentioned types of lines is key to creating readable and detailed drawings. The plan below demonstrates the usage of different types of lines in the preparation of technical drawings.



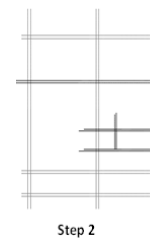
### 26.3 OUTLINE TO DRAW FLOOR PLANS

Having a basic sketch with all the dimensions is helpful before beginning the manual drafting of the floor. Selecting a suitable scale for the drawing is crucial.

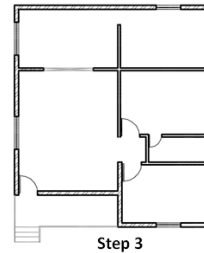
**Step 1:** The external walls are drawn first, and then reference lines are added to help with the addition of the interior wall.



**Step 2:** It's time to add the window and door after the internal wall has been drafted.



**Step 3:** It's time to add the window and door after the internal wall has been drafted.



**Step 4:** After marking the door and window, use the appropriate pencil or pen to highlight the walls and windows. The interior design is ready to go. It's finally time to update the floor plans with dimensions.

## 26.4 PRESENTATION DRAWINGS

The primary purpose of architectural presentation drawings is to facilitate the first exchange of ideas between the architect and the client. The clients need to comprehend the ideas presented by the architects. Drawings should use rendering techniques that provide a realistic visualization of the suggested design with a high level of detail.

All floor plans, the elevation section, and 3D drawings are included in the architectural presentation drawings. Rendering these designs to enable them to accurately reflect the materials, lighting, and textures that will be applied.



## 26.5 WORKING DRAWINGS

Working drawings are drawings provided by architects for the execution of work on-site or by suppliers to fabricate components of the works. Working drawings are drawings with detailed dimensioned and graphical information.

Working drawings are significant for the accurate execution of the project. An important factor involved in the working drawings is dimensioning style, text, and its heights, details, key plans north direction, and key instructions. They are mainly intended for construction workers hence they need to be self-explanatory.

Architectural working drawings include all floor plans, elevation, section to furniture detailing floor, cladding, paneling, railing, staircase detailing, etc. Structural working drawings include foundation, center line drawings, and slab. Working drawings also include some services HVAC, Electrical drawings, and firefighting drawings.

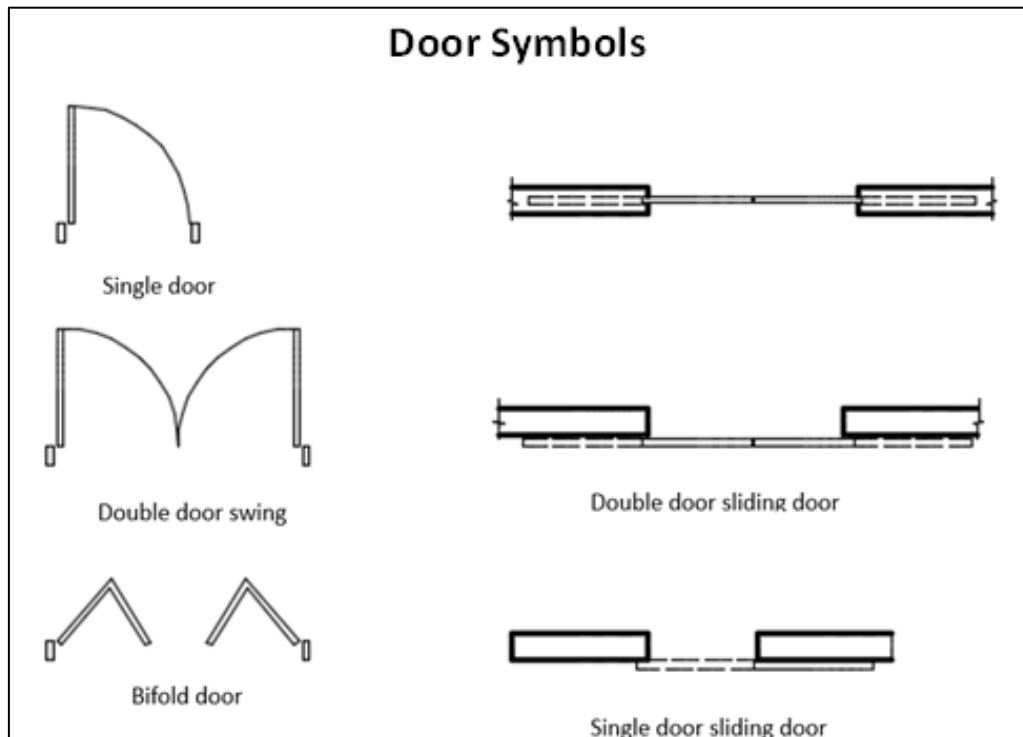
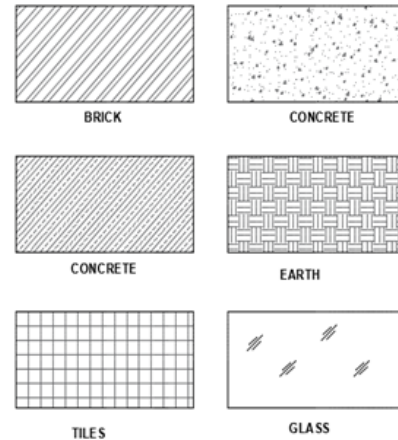
## 26.6 ARCHITECTURAL SYMBOLS

Several people are involved in various stages of the design and implementation process. sothe drawings must not be misread or misinterpreted. It is easier to accomplish effective communication with the standard symbols to indicate different constructional materials and symbolic signsthatdenote different furniture,types of doors, and windows

Most of the symbols and signs are designed in such a way that they reflect the actual appearance of the material and actual work. This assistsin the fast and easy reading of architectural drawings .

Architectural lettering: The style of lettering is mainly used in architectural drawings.It is block lettering that is universally read. Similar to symbols, all textual data on architectural drawings must be accurate and precise readings.

### Rendering Techniaues -



## END OF CHAPTER EXERCISE

1. Conduct a survey to understand the risk factors involved in various household chores.
2. Create an awareness schedule / program for various groups about good posture and application of ergonomic principles in their day to day life. Study the effect and make a report.
3. Scale down and make models of different kitchen layout according to standard dimensions.
4. Prepare a report to understand the latest trend in kitchen ergonomics in India.

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