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**Differences between architectural and civil engineering drawing**

A civil drawing, or site drawing, is a type of technical drawing that shows information about grading, landscaping, or other site details. These drawings are intended to give a clear picture of all things in a construction site to a civil engineer. While

An architectural drawing is a manual for a building. The architectural drawing is an illustration of what the final product will look like plus an instructional tool on how to achieve it. Architectural drawings can be devoted to depicting an overview of the building (i.e. an elevation) or they can focus on a particular element (a detail). All pieces of an architectural drawing give accurate information on how the final product.

## **Types of staircase**

Stairs can be broadly classified into three types:

Straight stairs

Turning stairs

Continuous stairs

### **1. Straight stairs**

Generally for small houses, available width is very retractable. So, this type of straight stairs are used in such conditions which runs straight between two floors. This stair may consists of either one single flight or more than one flight with a landing.

### **2. Turning stairs**

Turning stairs are sub classified as:

Quarter turn stairs

Half turn stairs ( dog legged stairs)

Three – quarter turn stairs

Bifurcated stairs

### **Quarter turn stairs**

A quarter turn stair is the one which changes its direction either to the right or to the left but where the turn being affected either by introducing a quarter space landing or by providing winders. In these type of stairs the flight of stair turns 90 degrees art landing as it rises to

connect two different levels. So it is also called as L-stair. Again these quarter turn stairs are two types.

### **Half turn stairs**

In case of half turn stairs its direction reversed, or changed for 180°. Such stairs are quite common. Again these are three types

### **Three quarter turn stairs**

The direction of stairs changed three times with its upper flight crossing the bottom one in the case of three quarter turn stairs. These stairs are may either be newel or open newel type. This type stairs are generally used when the vertical distance between two floors is more and as well as length of the stair room is limited.

### **Bifurcated stairs**

Bifurcated stairs are commonly used in public building at their entrance hall. This has a wider flight at the bottom, which bifurcates into two narrower flights, one turning to the left and other to the right, at landing. It may be either of newel type with a newel post or of geometrical type with continuous stringer and hand rails.

### 3. Continuous stairs

This type of stairs neither have any landing nor any intermediate newel post. They are geometric in shape. These are may be of following types.

Circular stairs

Spiral stairs

Helical stairs

Circular stairs or spiral stairs are usually made either of R.C.C or metal, and is placed at a location where there are space limitations.

Sometimes these are also used as emergency stairs, and are provided at the back side of a building. These are not comfortable because of all the steps are winders and provides discomfort.

A helical stair looks very fine but its structural design and construction is very complicated. It is made of R.C.C in which a large portion of steel is required to resist bending, shear and torsion.

## **SITE PLANNING**

Site planning in landscape architecture and architecture refers to the organizational stage of the landscape design process. It involves the organization of land use zoning, access, circulation, privacy, security, shelter, land drainage, and other factors. This is done by arranging the compositional elements of landform, planting, water, buildings and paving in site plans. Site planning is the design and process of planning for a new development project. Within Community Development, this stage of site planning is the organizing phase where city planners create a tactical/detailed plan of new developments. These site plans are the exact details city planners need to give their proposal to the community. This is the proposal to the community to get development plans approved of. Through site analysis and precise dimensions taken by development engineers, community members are given an exact image of what developers want to do.

## **AUTOCAD AND ITS COMMAND**

AutoCAD is a computer-aided tool that allows many different types of designers to create diverse kinds of drawings and designs. This program helps designers create their designs much more quickly than by hand and offers many quick, easy, and useful features, such as copy and paste

### **What Does AutoCAD Stand For?**

Those wondering 'what is AutoCAD?' or 'what is AutoCAD drawing?' should know that CAD stands for 'computer-aided design' -- Autodesk created the most popular program. The Autodesk company prides itself on being a 'leader in 3D design, engineering, and entertainment software', per their website. Through their website, AutoCAD and several other software programs are available for free.

### **What is AutoCAD Used For?**

AutoCAD can create any 2D drawing and 3D model or construction that can be drawn by hand. The program also allows the user to group or layer objects, keep objects in a database for future use, and manipulate properties of objects, such as size, shape, and location.

AutoCAD has numerous applications in a wide range of fields. The program can be used for simple projects, such as graphs or presentations, or complex designs, like drawing up the architecture of a building. Some other practical applications may include:

Interior designs

Aeronautical designs  
Logos  
Fine art  
Maps  
Greeting cards  
Engineering designs  
Architectural designs

### **Its commands**

There are numerous command in autocad but the basic one are:

L+enter: for line

C+enter: for circle

Arc+enter: for arc

El+enter: for ellipse

Pol+enter: for polyline

Fill+enter: to blank the filled portion of donut command

Co+enter: to copy the object

Mi+ enter: to make the mirror image

M+enter: to move the selected portion

Array+enter: for multiple copy along a path

Sc+enter: to increase the scale of graph

Dis+enter: to measure the linear distance

## **Paper sizes**

Paper has so many different uses and there's a size for every project

### **A Paper Sizes**

Let's start with the most globally recognised paper size convention, 'A'.

Formally adopted in Europe way back in the 19th century, the 'A' paper size system has since spread across the world. Aside from the USA and Canada, nearly every country uses this system now and it's the most common standard business letter size used in English speaking countries.

You only have to glance at your home or office printer and you'll most likely see A4 paper poking out of it. It's the paper size most commonly known and used for everyday printing.

But there are many more options available for print within the 'A' paper series, which ranges from A0 through to A10.

#### **A0 paper uses**

The largest standardised paper size in the A range, A0 comes in at over 1 metre in height. That's the equivalent of 16 A4 sheets of paper. This size is typically used for large signs or posters.

#### **A1 paper uses**

Like A0, A1 is typically used for signs, posters and window displays.



## A2 paper uses

A2 is used for posters, notices, window displays and art prints.

## A3 paper uses

A3 tends to be used for presentations, charts, posters and plans.

## A4 paper uses

A4 is the most recognised 'A' paper size and is commonly used for everyday printing. A4 tends to be used to print business stationery letterheads.

## A5 paper uses

A5 has many uses. This size is a popular choice for diaries & planners, books, invitations, flyers, booklets and more.

## A6 paper uses

A6 paper is typically used for postcards, flyers, leaflets and save the dates.

## A7 paper uses

A7 tends to be used for large Post-it notes. It can also be practical for tickets, since you can print 8 of them on an A4 sheet.

## A8 paper uses

A8 is the most popular size for business cards.

A9 paper uses

A9 tends to be used for vouchers and tickets.

A10 paper uses

Being the smallest of the standardised A sizes, A10 is only ever really used for stamps or small vouchers.

## **'B' Papers Sizes**

In addition to 'A' sizes, naturally we have, (yes you guessed it) the 'B' series. This paper series was introduced to provide a wider range of options.

B0 paper uses

This size is typically used for posters and enlarged photos.

B1 paper uses

B1 again tends to be used for posters and signs.

B2 paper uses

B2 is perfect for small posters.

B3 paper uses

This size is typically used for smaller posters and paintings.

B4 paper uses

B4 works well for little posters and notes.

B5 paper uses

B5 is a popular choice for menus, magazines and advertising flyers.

B6 paper uses

B6 tends to be used for booklets and flyers.

B7 paper uses

Small notebooks, menus and flyers – B7 is a good choice for these.

B8 paper uses

This size tends to be used for flyers and business cards.

B9 paper uses

One of the smallest B sizes, ideal for labels and small flyers.

B10 paper uses

The smallest B size is mainly used for vouchers and small cards.

## **TEST A**

A) Building and construction steps involving any type of structure is not an easy task, it requires lots of cost and calculations. Although, building construction requires lots of time and is tedious work, yet its result is a permanent asset for us. Therefore, care should be taken in building construction process. Before planning building construction projects important aspects must be considered.

### **PROCEDURE:**

1. First of all, the plot of land is searched for and acquired in a location that is best suited for building construction processes, noting that it has all desirable facilities nearby after some appropriate site planning considering all factors affecting it. It is the most important step in building construction.
2. After selecting proper land for building, personally create building designs or get help and advice from an architect, prepare the floor plans and building requirements, number of flats, rooms, based on the owner's requirements and budget. Then after, determine the structural details of the reinforcements to be used.
3. After, planning and structural detailing completed these details are transferred to the building estimator. The building estimator will estimate the material quantity, quantity of different items of work, and prepare an abstract sheet that shows the cost of building construction.

Of course, after getting appropriate permissions from building and construction authorities.

4. Builders or contractors for construction must be chosen carefully as it is a major factor for securing building construction quality and timely construction of work. In the contract document, all the work-related details must be clearly stated. The contract document should cover layout and work details along with the payment methods, time scales and costs.

5. The construction site must be cleaned before the work is executed. This work involves the removal of roots of trees, debris and leveling ground area. Then the foundation of building ground is excavated with the help of excavating machines as per the building dimension specified in drawings.

6. After the foundation work is done ground beam formwork preparation is started and poured with concrete. Over the plinth beam, masonry work is started and space between foundation and plinth beam filled with soil. The columns are built up to slab level and the frame for further construction is prepared.

7. As column and beam framework is completed, masonry work is started with different materials such as bricks, concrete blocks, fly ash bricks, etc. according to building drawing. The lintel is constructed on the door and window to support the masonry work over it.

8. Then the formwork is started to construct slab resting on the column and beam. Over slab formwork, slab reinforcement is placed as per slab detailed drawing, after that door window frames are fixed at their specified position given in drawing.