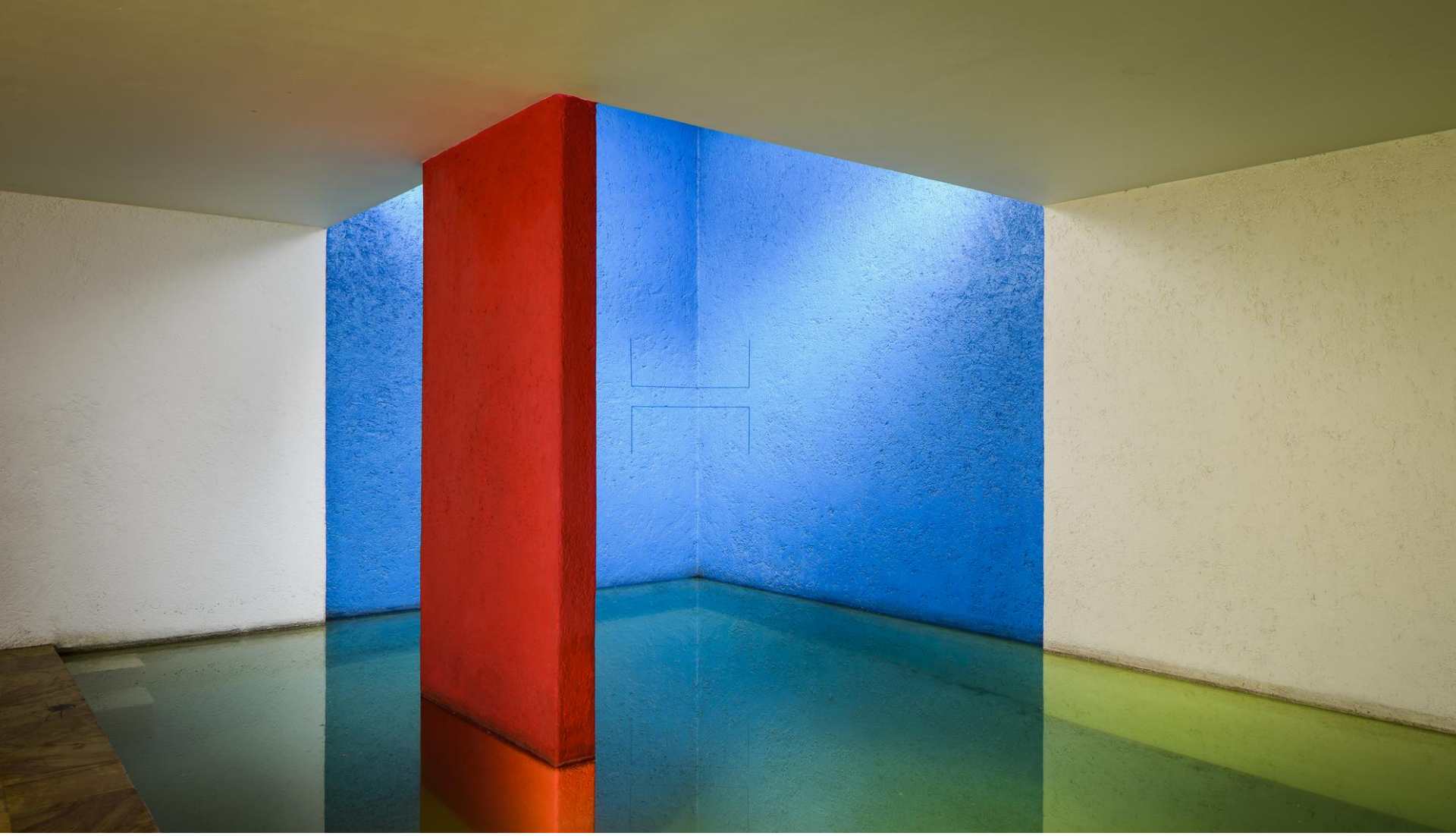


Interior Design

Unit – III Components Of Interior Space: Interior Treatment & Finishes

presented by **Ar. Poornima, M.Arch**

Flooring

Flooring tends to set the **tone of the interior** whether in the home, the office, or the mall. Although aesthetics plays an important role in any design solution, flooring must be practical in today's environment. Today's designer has an enormous range of flooring **types, colours and patterns from which to choose**. **Flooring can pull a design together or visually fragment it**. The use of one continuous material increases the flow and homogeneity and suggests that areas share equal importance and are equally accessible, whereas the introduction of accent flooring suggests that special areas exist.

Flooring is the general term for a **permanent covering of a floor, or for the work of installing such as a flooring covering**. It describes any finish material applied over a floor structure to provide a walking surface.

The purpose of a floor is to provide a level surface and to support live and dead loads.

Types of Flooring

Vinyl Composition Tile (VCT)

Mud Flooring

Tiles

Wooden Flooring

Rubber flooring

Plastic or P.V.C. Flooring

Glass Flooring

Stone

Brick Flooring

Cement Concrete Flooring

Carpet

Vinyl Composition Tile (VCT)

Vinyl comes in an infinite variety of colours and patterns, often with designs that simulate other more expensive types of flooring such as wood, tile, and marble. **It is a wholly synthetic material and contains a varying percentage of PVC, which gives certain flexibility.**

Also, **it is inexpensive**, and comes in **sheet or tile** form. Linoleum is also available in sheet or tile form and comes in a comprehensive range of colours and patterns. Its recent rediscovery is largely due to its improved performance and because it is made up of entirely natural ingredients.

It is a finished flooring material used primarily in **commercial and institutional applications.**

Vinyl tiles are composed of colour vinyl chips formed into solid sheets of varying thickness (1/8" is most common) by heat and pressure and cut into 12" squares.

Tiles are applied to a **smooth, levelled sub-floor** using a specially formulated **vinyl adhesive** that remains tacky but does not completely dry.

Tiles are **typically waxed** and buffed using special materials.

This flooring product is mostly used in interior works and also **photo labourites, airport, drawing room, bedroom, offices, water proof used in bathrooms.**





Advantages:





Easy installation

Cost effective

Low maintenance

Water resistant

Durable

Vinyl floor tiles – one of the most versatile floors available.

It is quite and warm underfoot, easy to clean like other hard surfaces.

It is great around water, easy in installing.

Installation

Measure the floor

Prepare the plan

Centre the tile

Cut the fit

Finish up

Mud Flooring





Materials required for mud flooring –

- sifted sand
- clay
- cow manure
- chopped and sifted straw







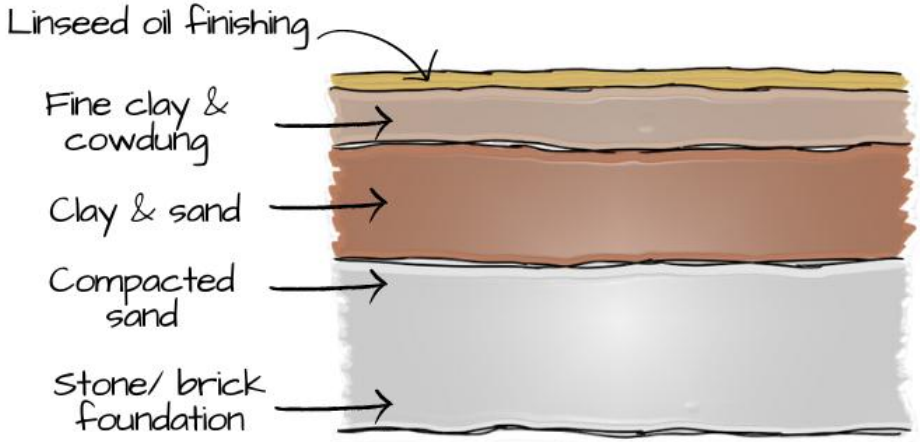






CONSTRUCTION

- Wet the base floor with water
- Spread out the mix
- Ram well so as to get consolidated thickness of 150mm
- Water is not added during the process of ramming
- Flatten the floor surface with trowel
- To maintain the mud floor in good condition, a thin coat of cement-cow dung is added once or twice a week in proportion of 1:2 ratio

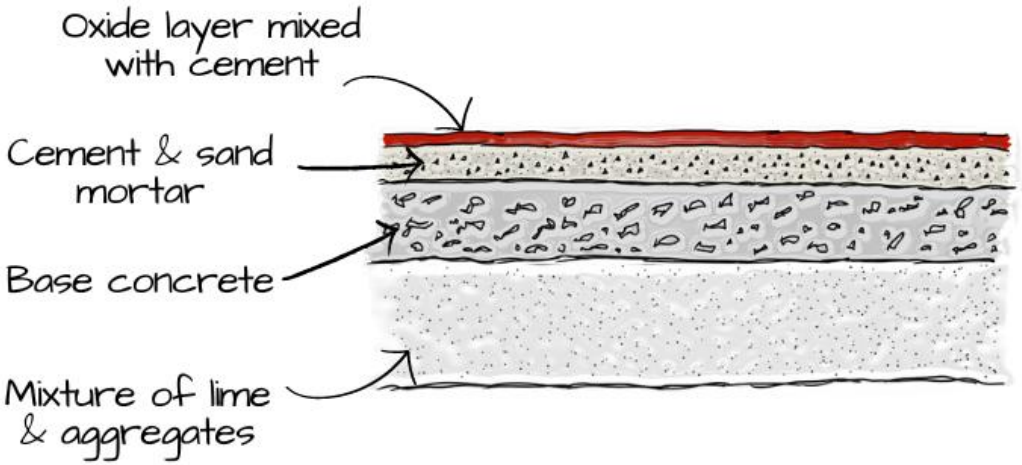




Oxide flooring, also known as 'red oxide flooring,' is a traditional flooring technique that involves mixing iron oxide pigments with cement to create vibrant, colored floors.

Material Composition: Oxide flooring consists of cement, sand, water, and iron oxide pigments. The pigments are available in various colors, including red, yellow, green, and black.

Installation: Oxide flooring is installed by mixing the pigments with wet cement and then applying the mixture to the prepared floor surface. The surface is leveled and smoothed before it dries to create a seamless finish.





These are used for unimportant buildings, particularly in villages.

Merits

Cheap

Hard and fairly impervious

Easy in construction and maintenance

Good thermal insulation

Demerits

For proper maintenance – the floors are required to be given a wash of cement cow dung plaster once or twice a week which is objectionable from sanitary considerations.

Tiles

Hard tiles **including ceramic, terracotta, and quarry tiles** are generally machine-made, which gives them a precise size, and are particularly suited to areas where water is often present, like kitchens and bathrooms.

Tiles of baked clay, such as the **popular quarry tile, are similar to masonry materials and require a sturdy subfloor**. The small scale of **mosaic tiles gives them an almost soft** appearance. They consist of small cubes of **terracotta, marble, ceramic, or stone and are bedded in mortar.** Mosaic is best restricted to small areas like bathrooms.

Tiles are often used to form wall or floor coverings, and can range from simple square tiles to complex mosaics.

Tiles are most often made from **ceramic with a hard glaze finish**, but other materials are also commonly used, such as glass, marble, granite, slate and reformed ceramic slurry.

Types

Ceramic

Vitrified

Porcelain



Advantages

High wear resistance with low density.

Corrosion resistance at high temperature.

Resistance to plastic deformation.

Easy to clean and water-proof.

Harder and stiffer than steel, more heat and corrosion resistant than metals and polymers.

Resistant to stains and spillages.

Their incombustibility prevents spread of fire.

1. Ceramic Tiles: Versatile and Cost-Effective



Ceramic tiles are one of India's most popular types of tiles, known for their versatility and affordability. These tiles are crafted from natural clay and are available in a variety of styles, colors, and finishes, making them suitable for both walls and floors. Whether you're looking for floor tiles for home or a stylish upgrade, ceramic tiles cater to all.

- **Benefits:** Durable, low maintenance, and resistant to water and stains.
- **Disadvantages:** May chip or crack under heavy impact.
- **Suggestions:** Use ceramic tiles in areas like kitchens, bathrooms, and living spaces for a sleek and clean look. Explore floor tiles with marble designs within ceramic options for a unique aesthetic.
- **What to Take Care Of:** Choose glazed options for water-prone areas, and check for anti-skid finishes for bathrooms or outdoor use.

6. Natural Stone Tiles: Rustic Charm



Natural stone tiles, including granite, slate, and limestone, bring earthy textures and rustic appeal to interiors. These floor tiles for the home add character and are perfect for creating a warm and natural ambience.

- **Benefits:** Durable and unique in appearance.
- **Disadvantages:** Expensive and requires regular maintenance.
- **Suggestions:** Ideal for outdoor areas or living rooms where a natural aesthetic is desired. Pair with classy wardrobe laminate color combinations for a harmonious design.
- **What to Take Care Of:** Seal the tiles periodically to prevent moisture absorption and maintain their natural beauty.

Types :

Double charge vitrified tiles
Glazed vitrified tiles
Soluble Salt Vitrified Tiles
Full Body Vitrified Tiles:



4. Vitrified Tiles: A Modern Classic



Vitrified tiles are a popular choice in India due to their durability and resemblance to natural stone. These different types of floor tiles are created through a vitrification process, making them harder and less porous than ceramic tiles.

- **Benefits:** Scratch-resistant, water-resistant, and low maintenance.
- **Disadvantages:** Slightly costlier than ceramic tiles.
- **Suggestions:** Use vitrified tiles for areas with high foot traffic, such as kitchens and hallways. They are ideal for contemporary spaces.
- **What to Take Care Of:** Always opt for anti-skid finishes for safety, especially in wet areas like bathrooms.

3. Marble Tiles: Timeless Elegance

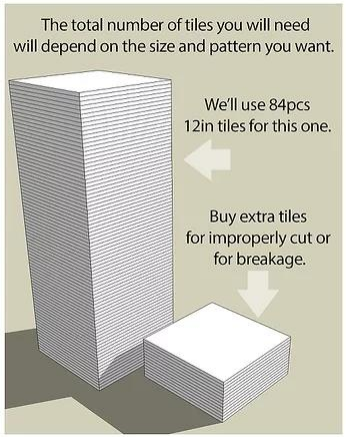


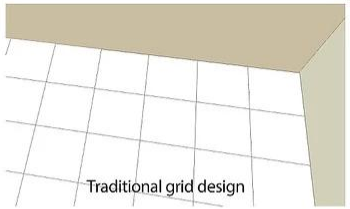
Floor tiles with marble designs are synonymous with luxury and sophistication. Available in a range of patterns and colors, marble flooring add timeless beauty to any space. They are a favourite among homeowners seeking to create a grand and elegant ambience.

- **Benefits:** Stunning aesthetics and excellent durability.
- **Disadvantages:** Expensive and prone to staining if not sealed properly.
- **Suggestions:** Use marble tiles in living rooms or bedrooms to create a luxurious look. Polished marble tiles reflect light, making smaller rooms appear larger.
- **What to Take Care Of:** Regular sealing is crucial to prevent stains and maintain their shine. Avoid abrasive cleaners to preserve their finish.

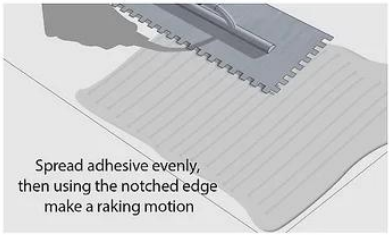
Installation

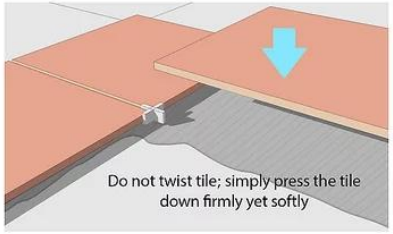
- Remove any baseboard and shoe moulding.
- Level the subfloor.
- Install the underlayment.
- Spread the adhesive with the smooth side of the trowel. Make sure it covers the area evenly and does not cover your reference lines.
- Lightly press and twist the ceramic when setting to make sure the adhesive sticks. Don't push so hard that the adhesive is forced out from under the ceramic.
- Once a row is in place, level the tile with a rubber mallet and level.
- Grouting.
- Finish touches.

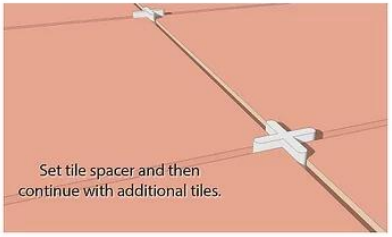




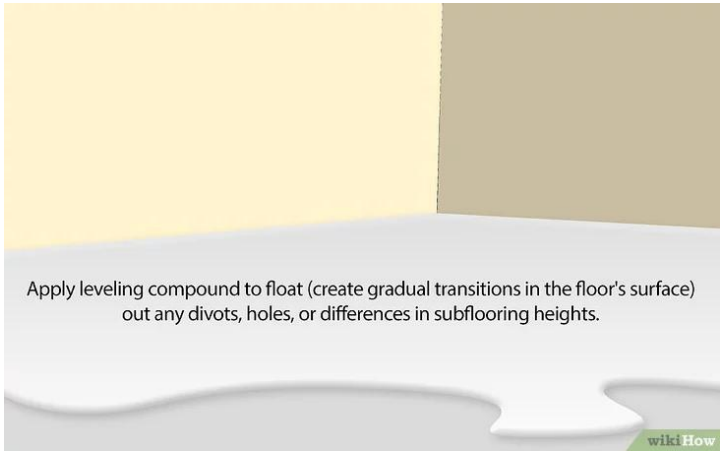


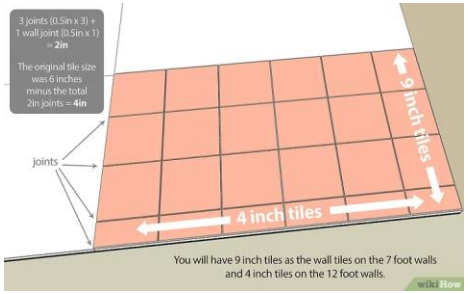


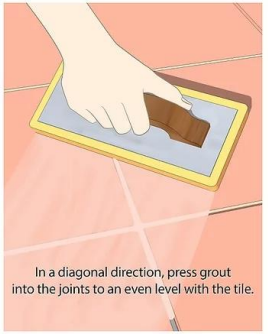














Wooden Flooring

Wood is a widely used floor material that has maintained its popularity over the centuries. It is practical, both **functionally and aesthetically, and works in most environments. Its warm mellow tone, soft touch, and easy maintenance** make it a favourite in residential applications. It lasts well, comes in a variety of **formats, and makes an excellent base for decorative rugs.**

Wood usually comes in **hardwood strip, block, parquet, or board form**. The most common species used are **beech, maple, ash, birch, pine, or oak**. Most types of strip flooring comes tongue-and-groove so that the planks fit together without leaving any gaps.

Wooden flooring is generally used for special purpose floor. **Example – auditorium, hospitals etc.**

Laminated wooden flooring is better suited to moisture prone area.

Wood being a natural material, it expands and contracts **with changes in temperature and humidity.** Therefore proper installation leaves a margin for this movement.

There are many pre-laminated inter locking panel flooring in smooth, matt and rough finishing. It is a high quality interior product, which is most effectively being used in interiors.

Hardness of wooden flooring is comparable to marble and the former is available in up to 45 different colours and shades.

All style are available in solid wood and in laminated wood, which are a thin veneer layer laminated to layer of wood so that it can be sanded and refined several times.





Types of Wooden Flooring

Strip flooring – This type of flooring consists of narrow and thin strip of wood joined to each other by tongue and groove joint.

Planked flooring – In this type of flooring, wider planks are used and these are also tongued and grooved.

Heavy wood block flooring – These are made up of thicker pieces of wood cut in short lengths ranging from 5 to 10 cm. so as form block which are set with the ends of the grains exposed.

Fabricated wood block – These consist of Small Square of rectangular block with tongue and groove joints all side.

Strip flooring



Planked flooring



Heavy wood block flooring



Fabricated wood block



Rubber Flooring

This consists of **sheets or tiles of rubber** in a variety of patterns and colours with **thickness varying from 3 to 10 m**m. Sheet or tiles are manufactured by mixing pure rubber with filters such as **cotton fibre, granulated cork or asbestos fibre**. Sheets or tiles are fixed to concrete base by appropriate adhesives. **Resilient and noise proof**. They are costly. Used in **office or public buildings.**



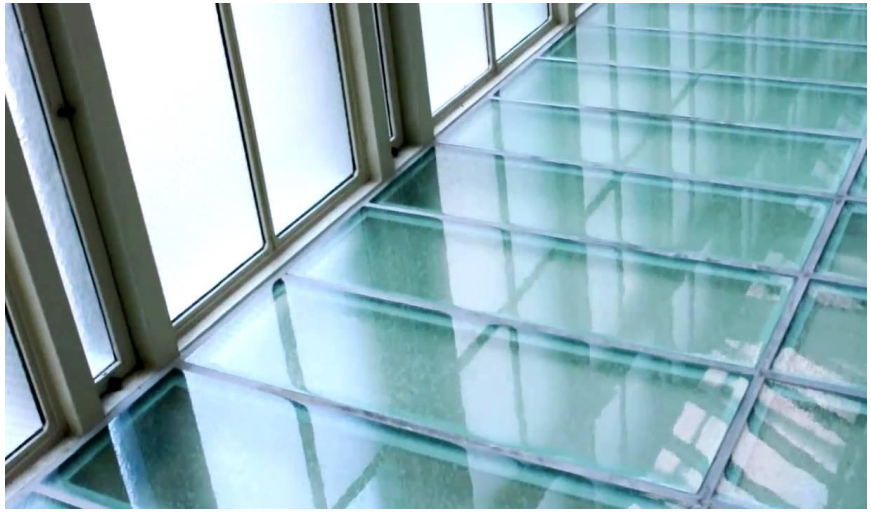
Plastic or P.V.C. Flooring

It is made of plastic materials fabricated in the form **of tiles of different sizes and colour** shades. Widely used **in all types of buildings**. The tiles are laid on **concrete base**. The floor is washed with **warm soap water** before use. It is resilient, smooth, good looking and can be **cleaned eas**ily. It is **costly and slippery** and is damaged when comes in contact with **burning objects.**



Glass Flooring

It is used where **light is to be transmitted from upper floor to lower floor**. Structural glass is available in the form of tiles or slabs. Its thickness varies from **12 to 30 mm**. these slabs or tiles are fixed **in closely spaced frames**. It is very costly and therefore not commonly used.



Installation

Floor panels are constructed of **laminated layers of tempered, annealed, or heat-strengthened glass.**

Laminated glass flooring requires a rigid support with a **deflection of L/500.**

Minimum support depth should be **20 – 30 mm. joints should be more than 40 mm. wide joints used of 6 mm.**

Stone Flooring

Marble and granite are more widely used in countries of **the Middle East, Greece and Italy than in the United States.** Both materials have prestigious connotations and are primarily used in banks and foyers of **commercial buildings and some custom dwellings.**

Terrazzo is a relative newcomer to the domestic scene. It has been popular in Mediterranean countries from early times. **Terrazzo is an aggregate of marble or granite chips mixed into a cement mortar** and either laid in place or as slabs or tiles.

Types

Marble Flooring – Superior type of flooring. Used in **residential buildings, temples, hospitals etc. where cleanliness is required.** Marble slabs may be square or rectangular.
Granites – **Durable and natural** with visible coarse grains. Expensive as compares to marble. Slip resistant. Hardest type of stone. Very difficult to cut and polish. Once polished, gives a mirror finish. Can **resist a lot of wear and tear.** Available in **20 mm thick slabs and 9 mm thick tiles**. Available in India – Rajasthan, Jhansi, Black granite from Bangalore.

Installation

Ensure that the tiles are of regular shape.

Base mortar **1:5 or 1:6 with low water cement ratio.**

Minimum **thickness of base mortar is 25 mm.**

Fix the marble tiles temporarily then press it using wooden handle of the hammer to bring them in a level.

After fixing them in a pattern remove the tiles and spread **white cement slurry (2:1) and refit the tiles.**

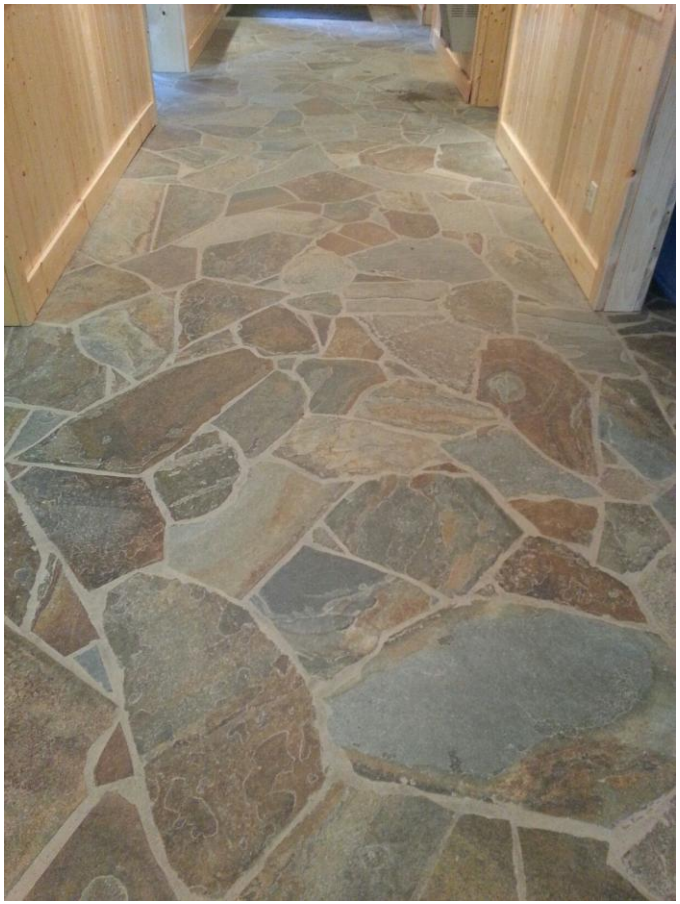
Press with wooden handle.

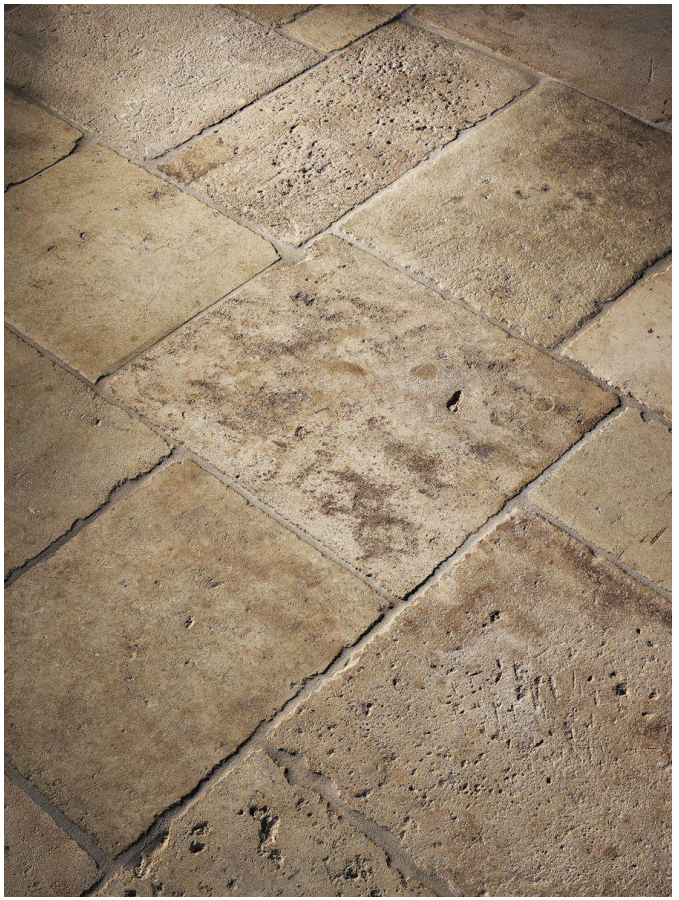
Fill up joints with white cement.

First grinding minimum after 5 days of fixing.

Apply **white cement slurry** over marble floor after first grinding and cure for a day.

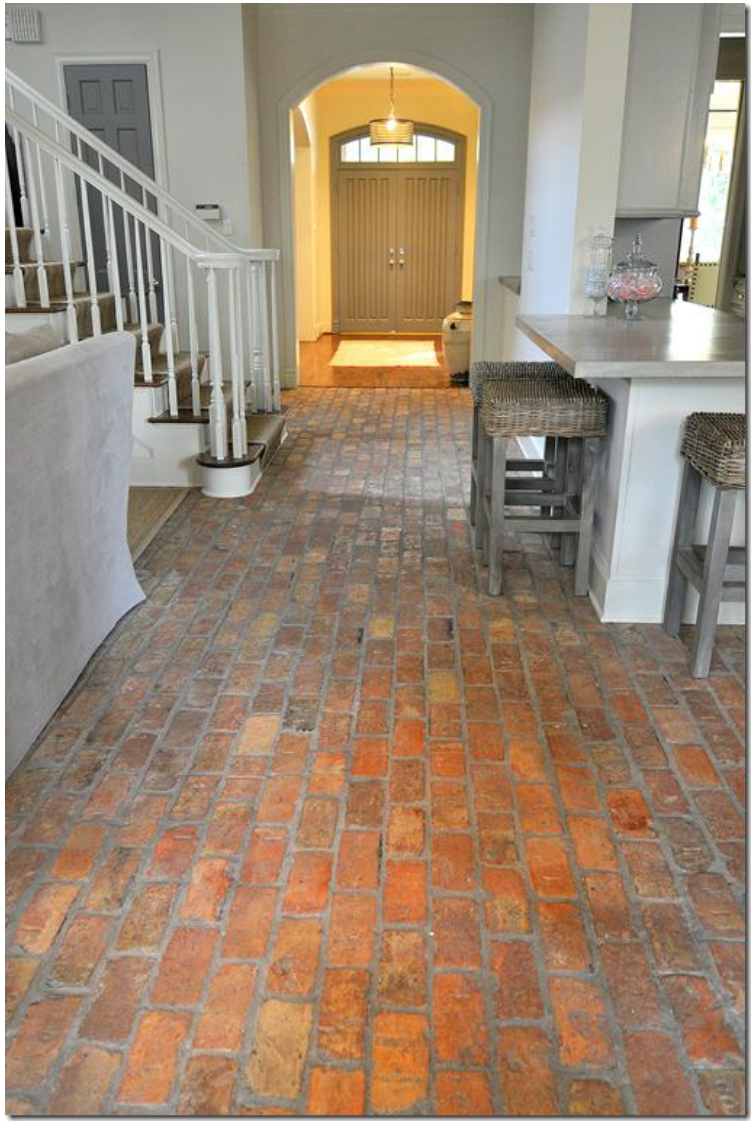
Minimum 3 grindings are required.





Brick Flooring

Suitable for cheap construction used in places where heavy articles are to be stored e.g. Warehouses, stores and go downs. Used in alluvial places like U.P., Punjab where stone is scarce and well burnt bricks are readily available.



Merits

Durable and hard.

Non slippery and fire resistant.

Initial cost is less.

Easy maintenance.

Demerits

It is absorbent.

Cement Concrete Flooring

Used **for residential, commercial and industrial buildings**. The floor consists of two components – the two components of the floor can be constructed either monolithically or non-monolithically. **Base course may be 7.5 to 10 cm thick.**

It may be either in **lean cement concrete (1:3:6 or 1:5:10) or lime concrete containing 40% mortar of 1:2 lime-sand and 60% coarse aggregate. The topping is then laid in square or rectangular panels of size 1X1 or 2X2 or 1X2 m. it consists of 1:2:4 (CSA) cement concrete.**

Merits

Resistant to dampness.

Possesses high durability.

Provides a smooth, hard and even surface.

Can be easily cleaned and is economical.

Fire resistant.



Demerits

Defects, once developed, cannot be easily rectified.

Does not provide sound and heat insulation.

Carpet Flooring

Carpet denotes a more **relaxed, contemplative, and higher status** area because it is softer underfoot and therefore quieter. Moreover, designers can combine various **colours, textures and patterns of carpet** to create visual excitement, define specific work areas or **to direct traffic in corridors and common areas.**

Carpet also has **low maintenance costs compared** with other commercial floor coverings. The inherent cushioning **and non-slip characteristics** of carpet contribute to a comfortable and safe work environment by reducing the likelihood of falls and minimizing potential injuries.

These properties also may help **lower insurance costs** in commercial enterprises. Additionally, the **insulating properties of carpet keep floors warm in winter and cool in summer,** which helps reduce heating and cooling costs.

Likewise, carpet **provides acoustical benefits by absorbing airborne** sound, reducing surface noise generation, and helps block **sound transmission** to floors below. The current trend in carpeting is for increasing specification **of nylon fibre carpets for their superior long-term performance**, including their improved resistance to staining, soiling, matting, crushing, texture loss, and abrasive wear compared to other fibres.





CEILINGS

- Suspended Ceilings
- Wooden Ceilings
- Veneered Ceilings
- Aluminum Ceilings
- Metal Cassette Ceilings
- Acoustic Ceilings
- Ceiling Medallions
- Pop Ceilings
- Coffered Ceiling
- Stretch Ceiling
- Hollow Core Slab Ceiling
- Beam Ceiling

Suspended Ceilings

Suspended ceiling consist of various panels that are placed below the original ceiling, so it is a very good choice as it conceals the surface below.

A very positive side of suspended ceiling is that even after it has been installed, access to the surface below to install wiring or in case you need to do some other repair work, for example to fix pipes.

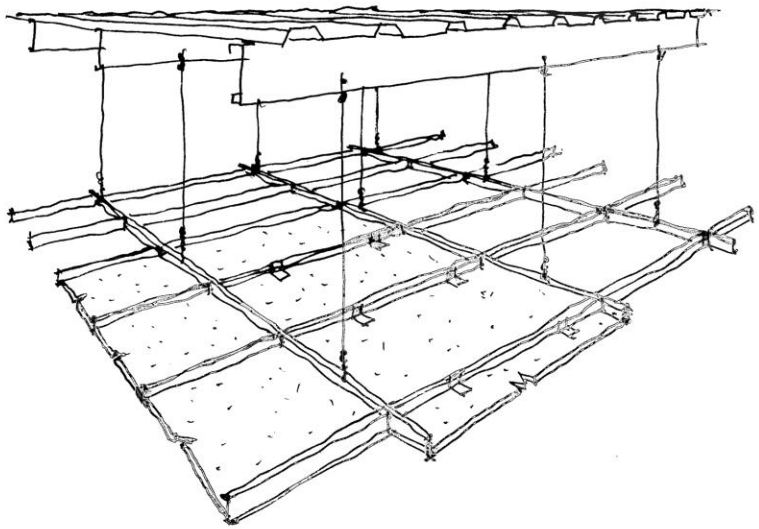
Suspended ceilings are also used in noisy places or offices as they are very good sound barriers and special acoustic panels can be used in suspended ceilings.

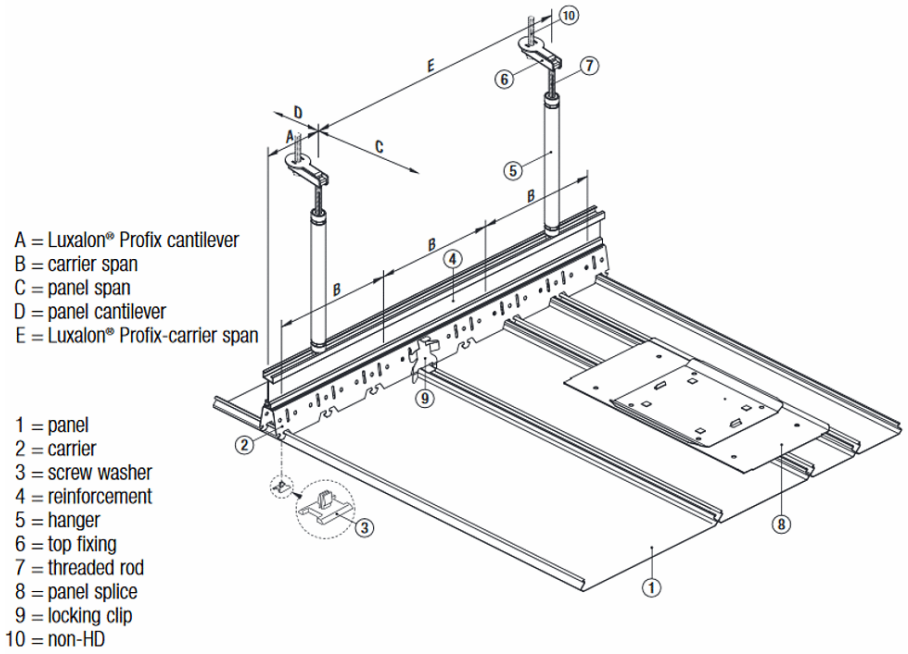
A dropped ceiling is a secondary ceiling which hangs below an existing ceiling, or from the floor above it. **A dropped ceiling can be used to disguise the poor condition of an existing ceiling, or to conceal wires, pipes or ducting.**

The space between the dropped ceiling and the structural ceiling can range from a few centimetres to a metre or more, and is known as **a 'plenum space'.** Dropped ceilings are also known as drop, false or suspended ceilings.

These types of ceilings are most commonly found **in industrial and commercial buildings, consisting of roofing tiles.**

Dropped ceilings can also be used in **residential buildings, provided that the existing ceiling is high enough to allow it.**





Uses

Suspended ceilings are typically associated with industrial or commercial buildings, or large-scale urban dwellings.

There are however, suspended ceiling finishes that are suitable for homes.

Dropped ceilings have the advantage of being easily **maintained and repaired, and allow a great amount of freedom to rearrange ductwork and lighting**.

Installation

The panels and tiles which make up the surface part of a suspended ceiling are made from any number of materials. **Tiles made from spun mineral fibre glass can help in sound proofing and improving a room's acoustics.** Cork, tin and plastic are also commonly used.

The frames and grid arrays for dropped ceilings are generally made of metal.

Dropped ceilings are constructed by suspending panels or tiles on a metal grid.

The grid is partially supported by moulding attached to the walls, but most of the weight of the panels or tiles is taken by metal wires that are strung from the ceiling.

This grid is normally built from the middle of the room out.

Without enough wires to support this metal grid, the dropped ceiling will sag.

Advantages

Reasonably inexpensive.

Can improve acoustics / sound proofing.

Can improve insulations.

Able to hide wires, pipes and ducts.

Can help to disguise uneven or ugly ceilings.

Disadvantages

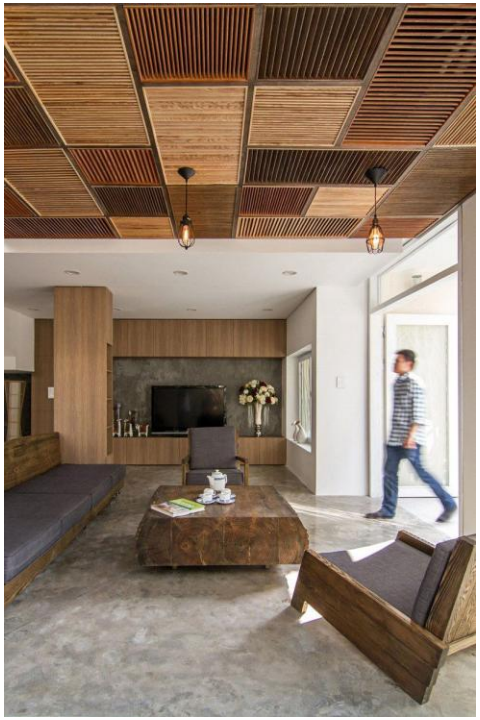
Makes the room smaller.

Ceiling tiles show wear more quickly than other finishes.

Wooden Ceilings

Wooden ceiling were used long before plastic or drywall ceilings. They are very beautiful and make the space look very cosy. The wooden ceilings offer a lot of different appearances as there is a big variety of wood that they are made of.

Choices available from dark or light wood and different patterns on boards and panels are available. This means that with only covering the ceiling with wood you can make it look very old and antique or modern andnew.





Veneered Ceilings

Veneered ceilings are quite often build in a similar way as veneered floors and walls as veneer is placed under some kind of a coverage. Thus it is possible to colour the ceiling in the most appropriate colour for your space.

Also you can use mirrors or other kinds of tiles that you like the best to cover the veneered ceilings. There are some circumstances where veneer just does not suit as it is not humid resistant and can change its form when it gets wet, therefore if your space has a lot of humidity.





Aluminum Ceilings

Aluminum ceilings are installed like all other drop ceilings as the panels are fitted to the previously built framework. Those ceilings are very endurable and look attractive even after long time.

As aluminum ceilings consist also from different panels it is not hard to install further lights or ventilation to the ceiling. Aluminum is a corrosion resistant, very durable product that does not rust. When special aluminum alloy is pressed into different ceiling panels it holds it shape permanently and hardens substantially.

Aluminum ceiling is longer- lasting than a plaster ceiling. These ceilings will not rust or crack and the material that they are made from are non- porous, therefore it resists moisture and odor very well.

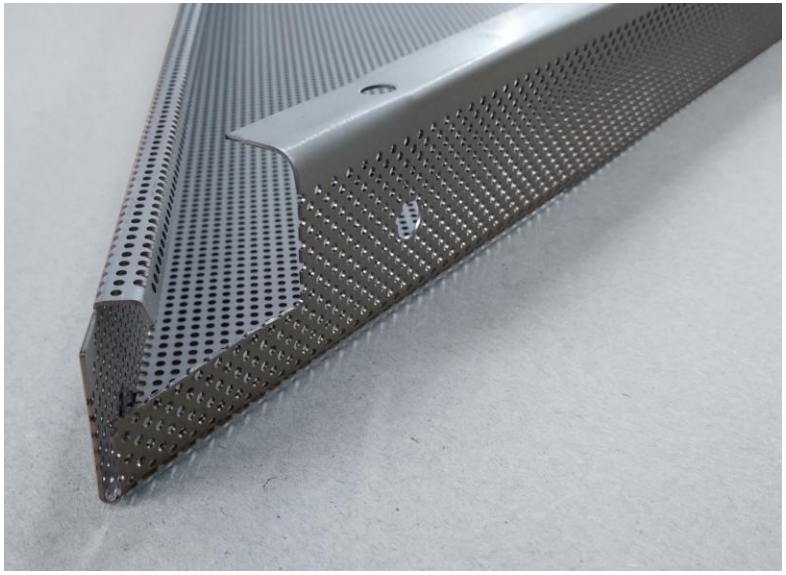


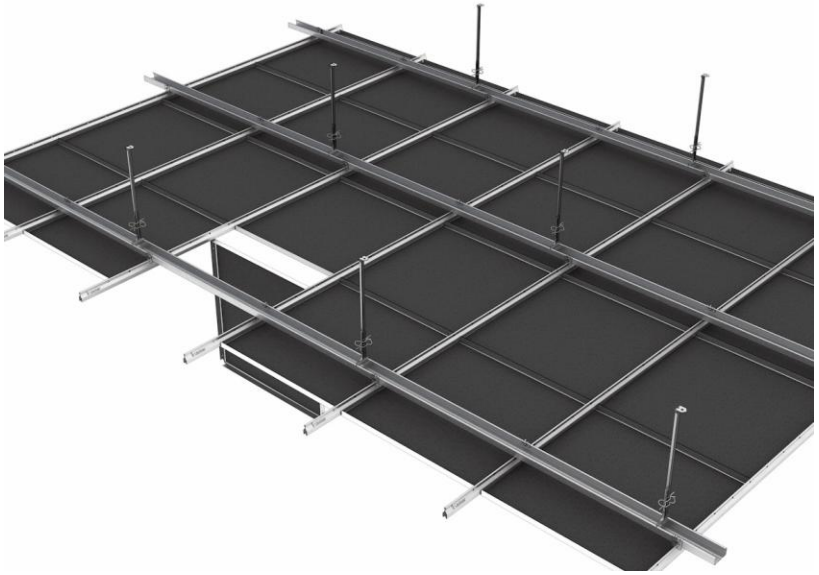


Metal Cassette Ceilings

Metal cassette ceilings can be installed on top of the old ceiling or if a new room is being built. The metal cassette ceiling is made out of interlocking thin metal sheets that have been bolted together from the angles. This acquires only a little levelling work and the installation is rather quick and uncomplicated after fast assembly.

In the metal cassette ceiling there are no gaps between the surfaces, thus there is no possibility that germs or bacteria can get into the cracks. The advantage of metal cassette ceiling is that it has a really smooth surface that is extremely easy to clean. Thus, they are quite widely used in hospitals and other institutions that need very clean environment.



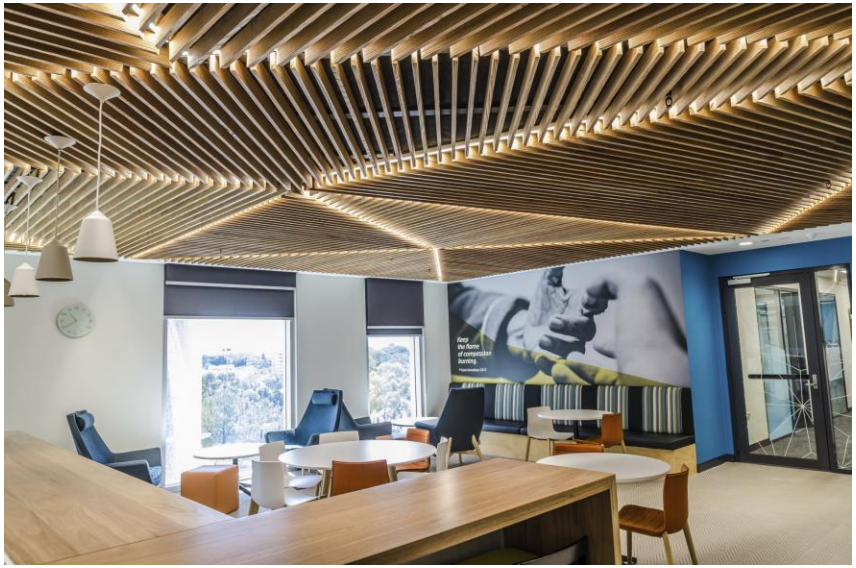


Acoustic Ceilings

Acoustic ceiling panels are designed to improve the sound quality and block noise transmission through the ceiling. Acoustic ceiling panels can be easily installed to existing suspended ceiling grids.

As they are easy to install and do not demand a lot of money, these ceilings are used quite commonly. Typical places where acoustic ceilings are being used are commercial establishments like theatres, studios, offices, training rooms etc., but also in educational institutes, for classrooms, lecture halls and gymnasiums.

Lately they have expanded to residential homes, home theatres, offices and gyms.

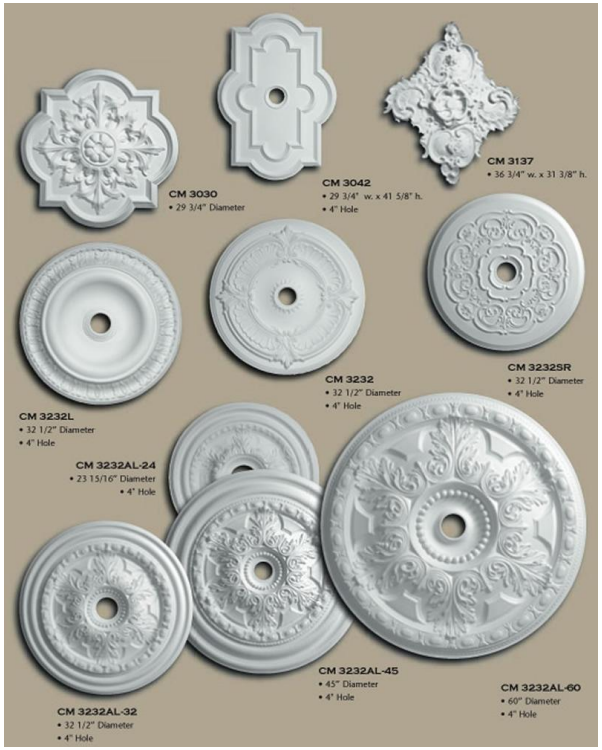




Ceiling Medallions

Ceiling medallions are used to draw attention to chandelier and lighting fixtures. Ceiling medallion with glass chandelier adds warmth to a space.

Ceiling medallions also enhance the beauty of crown molding. Medallions are in various designs and styles that can be painted in matching color.



Pop Ceilings

Add feature to a space with Pop ceilings, ceiling moldings and medallion. Be creative in P.O.P ceiling designing. Choose a design of straight lines in small rooms and low ceiling. Coffered style ceiling designs in tray ceiling with crown molding in a large room may be our choice.



Coffered Ceiling

A coffered (lacuna) ceiling is a decorative ceiling style, formed out of recessed panels framed by beams. A square shaped pattern is used in most coffered ceilings, however other geometric patterns can be created.



Uses

Coffered ceilings were originally designed to help make stone ceilings lighter. Today, they are mostly used to add interest and a personal touch to ceiling design – an often neglected aspect of home décor.

They help to complete interior design themes and use period details and molding to evoke certain eras. Coffered ceilings can also be used to improve a room's acoustics.

Installation

Coffered ceilings are built by adding faux beams onto the existing ceiling beams and then installing plasterboard or tin inlay. They can also be added to existing plasterboard ceilings.

The beams maybe stained, painted or otherwise finished according to your preference. Beams are usually timber but can be made from tin, medium density fiberboard (MDF) or plasterboard.

Advantages

Can improve acoustics.
Can help to add character and visual appeal.
Can improve the value of the home.

Disadvantages

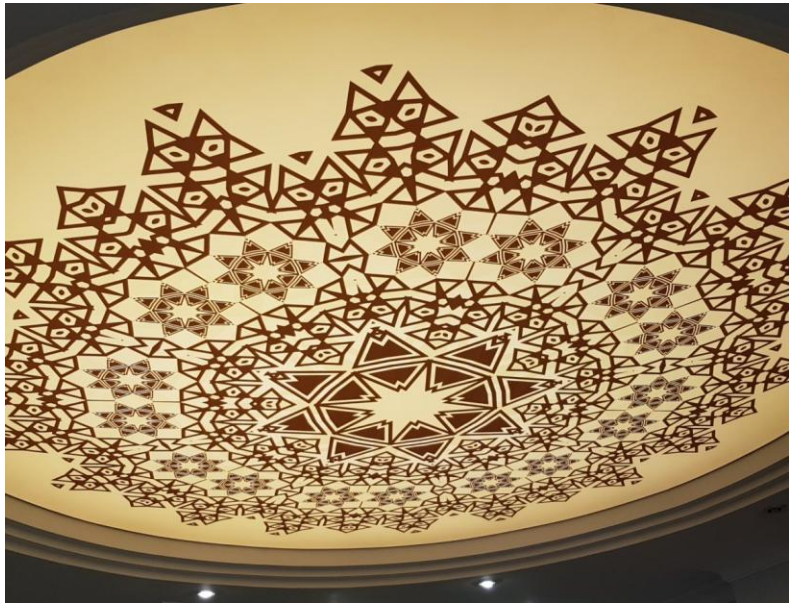
More expensive than some other options.
Not always attractive in smaller rooms.

Stretch Ceiling

A stretch ceiling is similar to a dropped ceiling, in that it sits below the structural ceiling of a room. A stretch ceiling typically consists of a piece of polyvinyl chloride (PVC) material 'stretched" across an area, and held in place by a frame called a 'perimeter profile'.

The perimeter profile can be curved and shaped as required, and the PVC can be colored or painted to suit just about the taste. As a result, stretched ceilings offer a great deal of freedom in terms of shape, color and lighting.





Uses

A stretch ceiling has the same advantages as a dropped ceiling. It can disguise the poor condition of an existing ceiling, conceal wires, pipes or ducting. Stretch ceilings are often installed in home theater or music rooms to soundproof them or improve their acoustics. Stretch ceilings can also be installed more quickly than many other ceiling finishes.

Installation

Most stretch ceilings are made of a non-flammable PVC membrane which is attached to Aluminum railings (also known as 'perimeter profiles'). The PVC can be finished with high or low gloss paint, or painted with images or patterns. For this reason, stretched ceilings are popular in shops and displays. The PVC membrane is composed of numerous sheets joined together – it's a good idea to check the quality of the joints before purchasing a particular product.

To install a stretch ceiling, tracks are fixed to the interior perimeter of the room. The PVC sheets are then attached to the tracks and tightened using heat

Advantages

Can help to disguise uneven or damaged ceilings.
Can hide wires, pipes and ducts.
Able to be used to create unique shapes and designs.
Easy to clean.
Quick to install.
Good for acoustics.

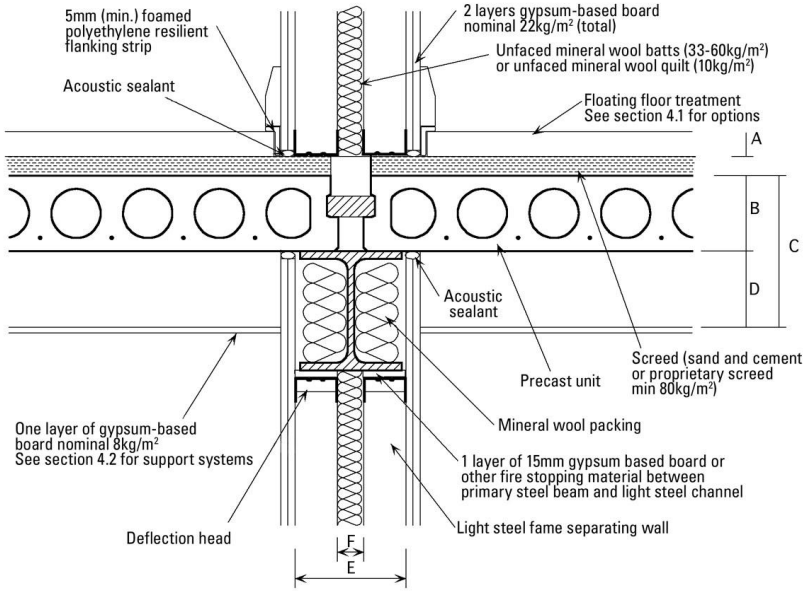
Disadvantages

Sometimes used to conceal serious damage or pest infestations.
Maybe more expensive than some other options.

Hollow Core Slab Ceiling

A hollow-core slab ceiling is made from precast, pre-stressed concrete slabs which have tube_x0002_shaped tunnels running through them. These concrete slabs can also be called voided slabs or hollow core planks. The surface of a hollow-core slab ceiling can be finished by polishing or painting the concrete, or by spraying it with a soundproofing material.





Uses

Hollow-core slab ceilings are often used in multi-storey apartment buildings as a cost_x0002_effective method of creating floors and ceilings over large spaces. As long as the interior voids are correctly aligned, they can be used to carry wires for lighting, heating and communication.

A hollow-core slab ceiling will suit contemporary industrial designed interiors.

Installation

Hollow-core slab ceiling are made from either very low slump or normal slump concrete poured to a thickness ranging from 50mm to 130mm.

The interior tubes are cast by pouring the wet concrete over augers or tubes.

The concrete is cast on beds which can be between 100 and 200 meters long.

It is cut to the required size once it has set.

Advantages

Cheap option for large spaces.

Fast assembly due to prefabrication.

Lighter weight equals lower transportation costs.

Hollow interior can be used for heating, wiring and communication cables.

Disadvantages

Not suitable for buildings in earthquake prone regions.

Potential to amplify and transmit noise.

Does not incorporate well into a timber framed house.

Beam Ceiling

A beam ceiling is one which features exposed joists and beams. Beam ceilings create visualinterest and bring individual flair to your home. They are normally made from timber, but other materials or a combination of materials can also be used. Timber beams might be finished with wood stain or paint, and might have extra mouldings attached, or be decorated in other ways.

Types

Hammer-Beam Ceiling

Hammer-beam allow for a lot of open vertical space inside a building.

The so-called hammer_x0002_beams are short horizontal and vertical beams which are bracketed to the walls in order to support the roof.

Keeping the beams close the walls allows for the highest possible uninterrupted views of a room or building's interior.

Hammer beam roofs are often found in large churches or cathedrals.



Boxed Beam Ceiling

A boxed beam ceiling has beams which are arranged in a waffle-type pattern. This is a finish similar to ceiling coffered in a square or rectangular pattern, and looks great with either painted or stained beams.

Installation

The material used in the exposed beam ceiling and how it is chosen to finish them will make a difference to feel of a room.

The use of metal beams will give the room an industrial finish, whereas as a kitchen with exposed oak beams can create a French provincial feel.

If the focus is stained beams, make sure they are of a good enough quality to work as a visual feature.

Likewise, if beams are used to create geometric patterns on the ceiling, concentration should be on making sure the design is flawlessly planned, and that it is constructed very precisely.



Advantages

Creates dramatic visual impact.

Adds an individual touch to the home.

Can be made to suit a variety of styles.

Adds resale value to the house.

Disadvantages

High ceiling can make a room feel less intimate.

Less insulation means greater heating and cooling costs.

Intricate – looking ceilings can overpower small rooms.

Materials and workmanship must be of a high standards.

Can be expensive.

Walls

Walls are important elements of any design scheme because they define spaces, segregate activities, and mark out personal domains within the home or office.

Their importance is highlighted by the enormous variety of treatments available that draw attention to the walls themselves. In addition to the obvious paint, the market is saturated with all types of wall covering material, including fabrics, leather and carpet, in addition to the paper and vinyl wall coverings of the past.

For high traffic areas, there are ceramic and clay tiles, metal panels, plastic laminate, and rubber, as well as rougher cinderblock, brick, and glass block.

A wall is a structure that defines an area, carries a load, or provides shelter or security. There are many kinds of walls: Defensive walls in fortification.

Walls in buildings that form a fundamental part of the superstructure or separate interior sections, sometimes for fire safety.



Functions of a Wall

To provide protection from weather, animals.

To divide the areas.

Acts as sound barriers.

As fire walls to attenuate the spread of fire from one building unit to another.

Separates the interior spaces.

To improve the building appearance.

Materials used for wall construction

Timber, brick, concrete block, reinforced concrete can be used for wall construction.

Good for wall construction due to its durability, beauty and able to provide comfortable area.

Cengal is suitable to be used at hot and cold climate area.

Meranti can be used for all types of construction in the buildings.

Reinforced concrete used for precast concrete panel.

Types of wall

Load Bearing Walls

Non Load Bearing Walls

Types of Load Bearing Walls

Precast Concrete Wall

Pre Panelised Load Bearing Metal Stud Walls

Retaining Wall

Masonry Wall

Engineering Brick Wall (115mm, 225mm)

Stone Wall

Load Bearing Walls

Able to carry the load from above (own weight & load from roof) and transfer it to the foundation. It can be exterior wall or interior wall. It brace form the roof to the floor.

As the height of the building increases, required thickness of wall and resulting stress on foundation will also increase and cause it to be uneconomical.

Non Load Bearing Walls

Only carry their own weight. Also known as interior wall (doesn't carry other than its own load).

Types of Non-Load Bearing Walls

Hollow Concrete Block

Façade Bricks

Hollow Bricks

Brick Wall (115mm, 225mm)

Wall finishes

The range of wall finishes could be used to achieve desired effects. The aesthetic appearance of the interiors and exteriors could be enhanced by the use of these finishes appropriately.

Partition Wall

A partition wall may be defined as a wall or division made up of bricks, studding, glass or other such material and provided for the purpose of dividing one room or portion of a room from another.

Partition walls are designed as non-load bearing walls. It may be of folding, collapsible or fixed type. If partition walls are load bearing then they are called as 'internal wall'.

	***Stained Glass Finish*** It involves lot of creative work. The glass is decorated with itching, frosting, glass pasting and finally colouring with suitable colours according to the theme. The stained glass panels are used on walls and ceilings.
	***Pebbles Finish*** This a very simple and attractive finish obtained by pasting small pebbles on the walls with cement mortar as an adhesive. Pebbles finish is usually preferred for exterior facade. It is also commonly used to give nice flowing effect to the waterfalls that are created especially designed for Hotel Interiors or as a part of Exterior Landscaping.
	***Flakes Finish*** It is a special material used to enhance the elevation treatment of the building. It is majorly used for the exterior facade. It has also been used for the interiors but to a very small extent. Application of flakes finish is avoided in the interiors because chipping off of flakes is a trouble. The flakes are applied with a trowel on walls over a coat of adhesive.
	***Coral Finish*** Coral finish is similar to Plaster of Paris Finish and Gypsum Plaster Finish. Coral is the name of a type of plastering material. It gives a rough edgy finish.
	***Tile Cladding*** Different tiles, for example, granite, marble, glazed tiles or vitrified tiles are used for tile cladding. Tiles are available in a variety of colours and shapes. The selection of tiles depends on the place where it is to be applied i.e. interior facade or exterior facade.
	***Wood Panelling*** It is a decorative treatment done with wooden panels on the walls in various designs. The material used can be plywood or wood covered with veneer or laminate.
	***Sand Textured Finish*** Sand Textured finish is used to give fine texture to the wall. This wall finish is not very commonly used because of its grains coming out.
	***Canfor Finish*** Canfor finish is also known as Faux finish. This material is used for the interiors of residences. It adds a unique aesthetic appeal to the place. It comes in 6mm thickness and in different designs. This finish is chosen when a false finish is to be given. It gives a stone wall or brick wall effect.

Advantages of Partition Walls

Thin in cross-section so that maximum floor area can be utilized.

Provide adequate privacy in rooms both in respect of sight and sound.

Constructed from light, sound, uniform, homogeneous, durable and sound insulated materials.

Simple in nature, easy and economical in construction having proper coherence with the type of building structure.

Offer sufficient resistance against fire, heat, dampness, white ant or fungus, etc.

Rigid enough to take the vibrations caused due to loads.

Storing enough to support sanitary fittings and heavy fixtures.

Divide the whole area into a number of rooms.

Classification based on operation		
Sliding	**Sliding & Folding**	**Screens**
Sliding partition consist of series of panels that slide in tracks fixed to the floor and ceiling. The machine if the partition is similar to those of sliding doors.	Sliding and folding partitions operate in a similar manner to sliding and folding doors. They are normally used for smaller spans	Screens are usually constructed of metal or timber frame. It is fixed with plywood and chipboard inside. The screen supported with legs for free standing and easy movement.

Types of Partition Walls

Glass Partition Walls

Plaster Slab Partition

Brick Partition Walls

Wood Partition Walls

Asbestos or G.I Sheet

Concrete Partition Walls

Strawboard Partition

Clay or Hollow Brick Partitions

Glass Partition Walls

These may be made from sheet glass or hollow glass bricks.

Sheets of glass are fixed in the framework of wooden members dividing the entire area into a number of panels.

Glass block adds to the architectural beauty and also provide good day light.

They are sound-proof and fire-proof.

Needs care and maintenance.



Plaster Slab Partition Walls

These are made of burnt gypsum or plaster of paris mixed with sawdust.

5cm to 10cm thick slabs are prepared in iron or timber moulds.

To form rigid joints suitable grooves are provided in plaster slabs.

Nails and screws can be easily driven into these slabs.



Brick Partition Walls

Plain Brick Partition

These are cheap, strong and fire resistant.



Brick Noggin Partition

It consists of brick work within the frame work of wooden members called studs (vertical members) and noggin pieces (horizontal members).

Reinforced Brick Partition

Bricks are reinforced with iron strips or steel bars.

Installation

Constructed with plain bricks, reinforced bricks, bricks-nogged or hollow bricks.

Plain brick partition of half brick thickness is not more than 2m in height.

In reinforced brick partition of half brick thickness, reinforcement in the form of wire mesh or hoop iron or steel bars is provided.

Brick noggin partition wall consists of brickwork built up within a framework of wooden members.

Brick partition is fire-resistant and sound-proof.

Wood Partition Walls

These partition walls consists of a wooden framework either supported on the floor below or by side walls.

Advantages

The major advantage of using this partition is light in weight.

Disadvantages

Neither sound-proof nor fire-proof.

Not suitable for damp locations.



Types of Wood Partition Walls

Common Partition: These are composed of vertical members known as studs bridged between upper horizontal (head) and lower horizontal (still) member.

Trussed Partition: These are designed on the principle of trusses. It is applied with possibilities of providing supports only.

Asbestos or G.I Sheet

Wooden frame is used to fix the sheets for the partition.

They are lighter in weight, thin and cheaper.

To make it stronger, specially manufactured asbestos slabs are used.

Fire-resistant and makes it have good heat and sound insulation properties.

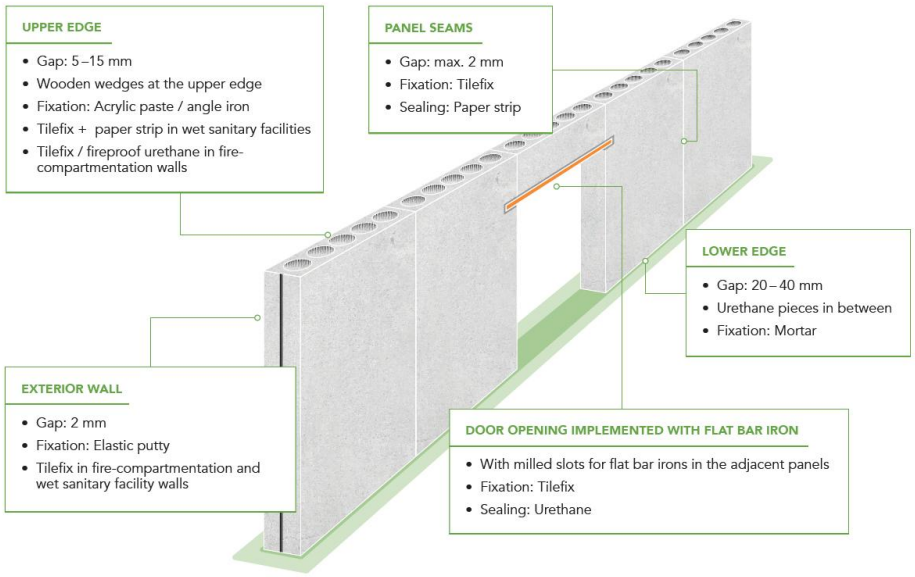


Concrete Partition Walls

It can be plain or reinforced.

It may be cast in site or precast in advance.

This partition is rigid and stable along both vertical and horizontal directions.



Strawboard Partition Walls

Useful where removal of partitions is frequent.

Made of compressed straw covered thick paper or hardboard.

Easy to construct.

Heat and sound proof partitions.



Clay or Hollow Brick Partition Walls

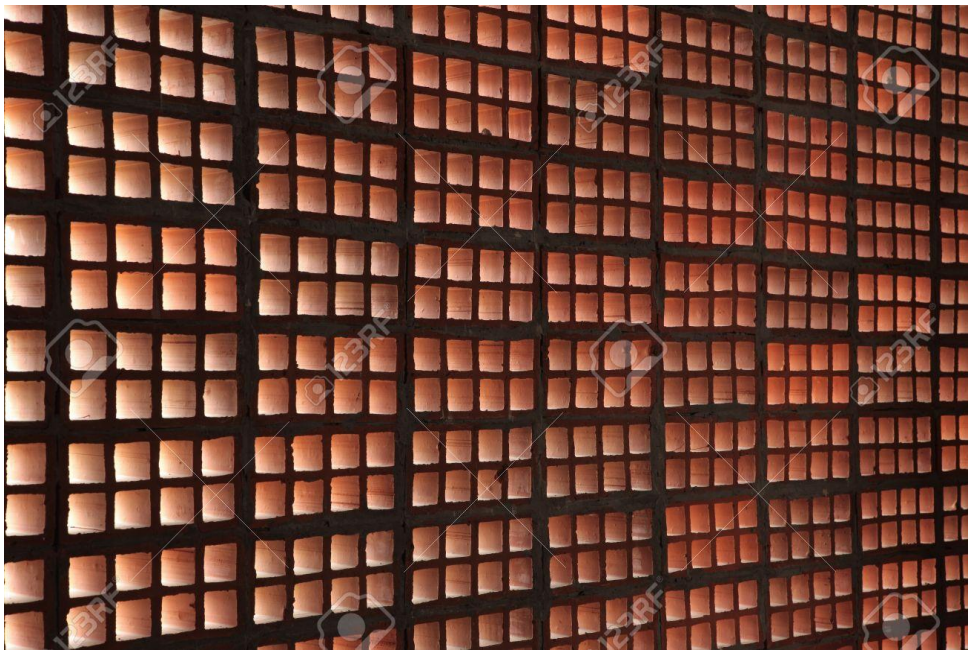
Hollow concrete block partitions are built of individual units of concrete.

Clay blocks used are well prepared from clay or terra-cotta, and they are either solids or hollow.

Hollow clay blocks of section 30X20 cm with thickness from 5 cm to 15 cm can also be used.

The blocks are provided with grooves on top, bottom, and sides, surfaces are kept glazed in different colours.

They are light in weight, rigid, strong, economical and good insulation.





Windows

Purpose of Window Treatment

Window coverings help control the environment in a home. They regulate the amount of light, muffle noise, insulate and provide privacy.

Light Control: Window treatments allows to control the amount of light a room receives. They also allow to brighten the room by removing the covering from the window.

Energy Control: Window treatments can effectively conserve heat in a room, thus making the heating of the room more economical.

Camouflage: If a window is poorly located or sized, a window treatment can camouflage the problem.

Noise Control: Although most people enjoy the light and ventilation a window provides, there may be times of the day, or season, when undesirable noise enters the buildings through a window. In some cases, a window treatment can minimize the noise from the outside world.

Privacy: Bedrooms and bathrooms require window treatments that provide privacy. Privacy can also be provided in other areas of the home with window treatments.
Beauty: Window treatments can add a great deal of beauty to an otherwise dreary room.

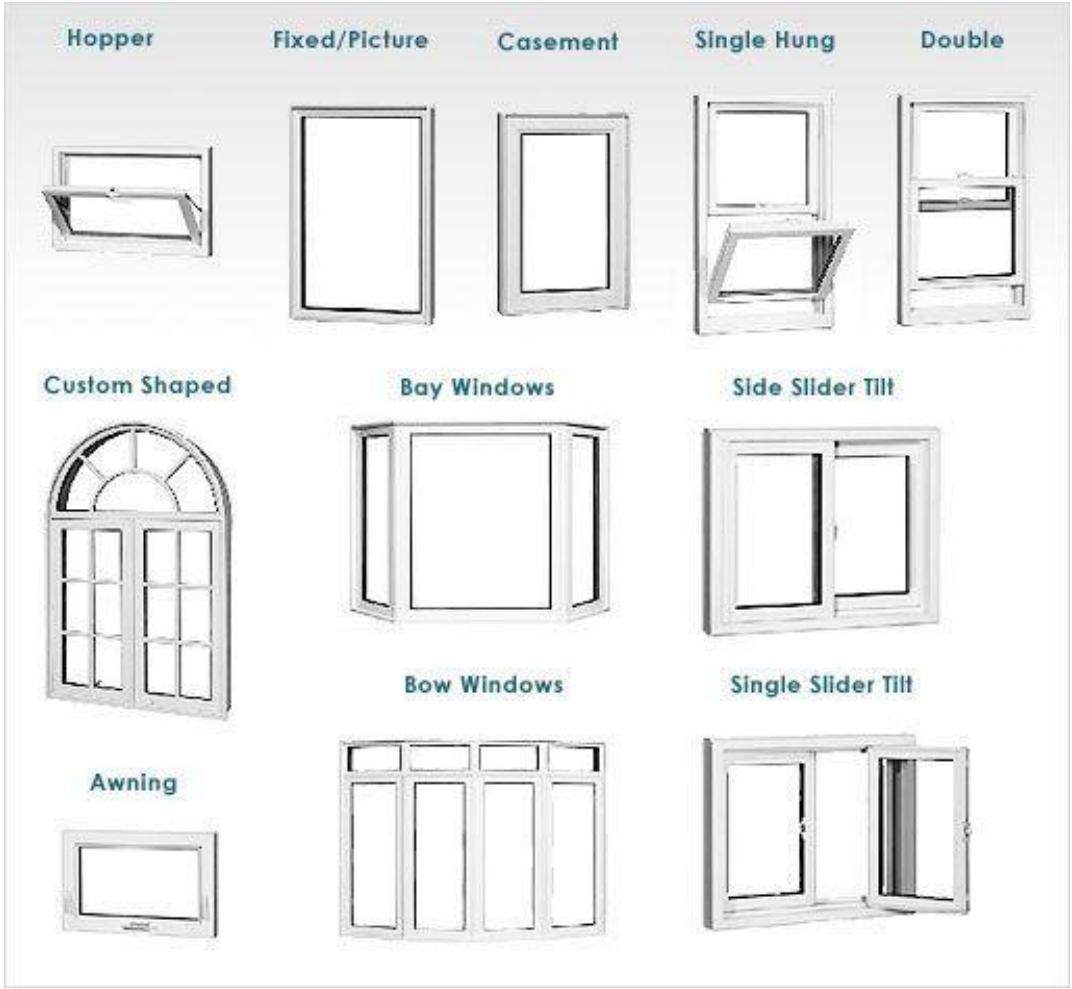
View: Although many window treatment are designed to enhance an outside view, other treatments are designed to obscure a poor view.

When choosing window treatments, consider these points

Direction of window (exposure)
Light control
Shape of window
Purpose of window
Style of room
Cost
Maintenance
Energy efficiency
Privacy

Window treatment should be

Durable
Sun resistant
Moisture resistant
Insect resistant



Types of Window Treatment

		
Curtains Fabric sheared are gathered onto a rod	**Draperies** -More formal -Heavier fabrics which are pleated - Panels hung on a rod.	**Shade s** A single piece of window material
		
Blinds Evenly spaced slats that may be opened or closed by cords.	**Shutters** -Vertical sections of wood hinged together, much like a folding door. -The sections have crosswise slats called louvers, which vary in width.	**Cornice** Straight or shaped wood top treatments that may or may not be upholstered
		
Valance: A short length of fabric placed across the top of a window.	**Swags** Fabric draped gracefully across the top of a window, attached to both sides of window at the top.	**Skylights and Clerestory** **Skylights** are located in ceiling or roof **Clerestory** windows are located high on walls

Paint

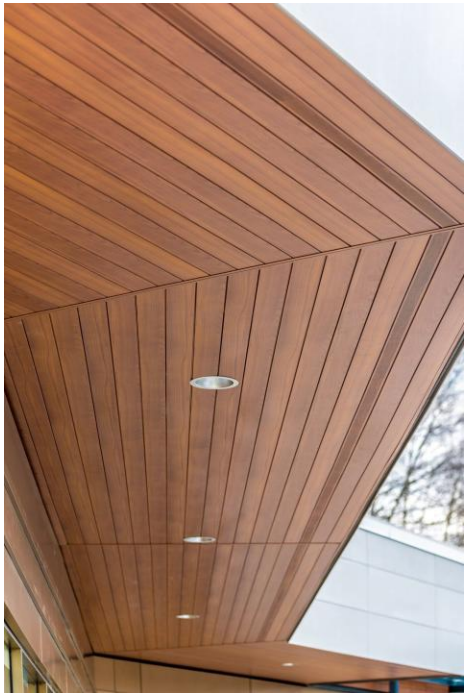
Colour is a key element in most contemporary interiors, and paint is one of the simplest and least expensive ways of providing an acceptable finish to our home, office or store, which is obviously why it is the most widely used.

It wasn't long ago that the walls of corporations were plastered and painted white, because it was a neutral background for everything else. Unfortunately, white is highly reflective and hard on the eyes, which is why softer colours are now preferred in many applications. Special colours can be mixed on the job by skilled painters.

Wall Paper

Wallpaper offers a large variety of textures, patterns, and imagery, often making it a viable alternative to paint. Wallpapers are traditionally made of either paper, cloth, or paper-backed PVC.

Vinyl papers are water and steam-proof, washable and tougher than normal paper, which makes them suitable for use in kitchens, bathrooms and utility areas. Wallpaper also remains popular because it is a practical way of hiding surface imperfections. The vinyl type is frequently used in commercial applications as well as in the home.





Cladding

Wall cladding makes practical sense in many situations, and allows the character of raw materials to be explored in the context of contemporary wall decoration. Wood is the classic cladding material, and often reflects a feeling of luxury. Plain pine cladding, readily available in tongue and groove boards, can be painted or left natural with a coat of matte varnish to seal the wood.

Plywood and veneer panels when intelligently applied, also look impressive on walls. Tiling is a tried and tested formula for areas of heavy wear or maximum exposure to water and heat, typically kitchens, bathrooms and areas around pools. The material comes in a vast variety of colours, shapes, textures, patterns, and sizes, from the tiny mosaic to the large squares and rectangles

Thank You.