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RESEARCH ARTICLE

ANALYSIS OF LOW COST HOUSING WITH ZERO ENERGY

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ABSTRACT

Low cost house is today's are used very high amount. Today's in India large population Poverty is a significant issue in India, despite having one of the fastest growing economies in the world, clocked at a growth rate of 8.0% in 2017. Bank Research estimated that there are nearly 300 million people who are belong to middle class family. India's share of world GDP will significantly increase from 7.3% in 2016 to 8.5% by 2020. More than half of rural households depend on manual labour for livelihood, and 75 percent of the rural population, or 133.5 million families, earn less than Rs.5, 000 per month. According to this revised methodology, the world had 872.3 million people below the new poverty line, of which 179.6 million people lived in India. In other words, India with 17.5% of total world's population had 20.6% share of worlds poorest in 2011.

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INTRODUCTION

In place of bricks, I can make waste of two feet long and two-foot width and six-inch width thick by adding waste bones plaster and pop to it, after which the piece of thick thermocol can stick from both sides. It does not allow the hair of the sun to come in. By applying a sheet of plastic outside, beauty can be protected from strength and water. Today, the time of seized brick is very useful in the low cost house. You know that some time ago the roof of the brick was planted in the village in Sahro, the ceilinged brick roof was planted from the same concept. Our column and beam. The frame will remain the same. The work of further thermocol will work as air condition. Why is that heat resistances occur. The house will be cold. The house CD will be of glass and iron and the railing will use wood instead of iron. The cost of the house will be very low. And it is also appropriate for the middle class family. Low cost housing concept on only poor family. Today's very large amount of population is growth. All human being interested a villa's but have a not sufficient balance. Then this project aims all people spend a villa's from infrastructure. But low coast provide home. This type of home in material is used in low cost like a wood, glass, cemented brick, and pop. These types are objected collected. Hospitals are very large amount

of wastes material are fallen in out of cities. This is creating a major problem for air and water pollution. But waste a bones plaster after uses manufacture large type of brick 2fit by 2 fit. In rectangular shape and size outer both side attach joint a thermocol this object after manufactur a heat resistance. Incident of Sun raise is not directly inner side home. Today's life bricks are large amount. And create a wall of bricks are very costly. A wall are included masonry, brick, pants, distemper, wall putty, white cement, coercion oil etc are used in completed wall. RCC slab with a steel or iron railing very high costly in India. My aim is all medium family for provide a low cast of villas.

Low cost of flooring material

- **Brick flooring:** - It is doing costly. It is used for cheap construction used in places where heavy article is to stone. e.g. – where houses, stores and godowns. Durable and hard, non supper, fire resistant, easy in maintenance.
- **Mud flooring:** - Used for important building, mainly in village. It is cheap and hard. Easy in construction and maintains, good thermal insulation. But for proper maintains, floor are required to be a given wash of cement cow dung plaster once or twice a week which is objectionable from sanitary considerations.

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Component of building

Plinth: - plinth height should not be less than 450mm from ground level.

Kitchen:- Area of kitchen with store should be at least 5.5m² having width 1.8m².

If store is not included in kitchen then the area of kitchen should be 4.5m².

Height of kitchen should be at least 2.75m.

Bathroom and WC: - Area should be at least 1.8m² heaving minimum width =1.2m².

Area of water closet (Wc) should be at least 1.1m² heaving width at least 0.9m. Height of water closet and bathroom should be at least 2.2m.

Mezzanine floor:- Area should be restrict 30% of ground floor area Height should be atleast 2.2m.

Staircase:- Residential building minimum width of staircase=1 m

- Riser: -Not more than 190 mm.
- Tread at least 250mm.
- Public building minimum width staircase = 1.5m
- Riser – not more than 150mm
- Tread- at least 300mm (width)
 - Habitable room: - Area for one room at least 9.5m, Width at least 2.4m.
 - Area for 2 rooms-
 - Frist room area = 9.5m²
 - Second room area = at least 7.5m²
 - Height of habitable room = 2.75m.

Construction principal

- Environmental protection.
- Safety.
- Asthetic.
- Economy.
- Speed.

Commonly used door size is

1.	Residential building	Height	Width
	External door	2.1m	1m
	Internal door	2.1m	0.9m
	Toilet/bathroom doors	2m	0.8m
2.	Public building	1.2m	1.2m

Type of windows

A.	Pivoted windows
B.	Casement window
C.	• Lowered Window
D.	Double hung Window
E.	• Lantern Window

Type of doors

A.	Rolling Steel Shutter Door
B.	Double Panel Door
C.	Three Panel Door
D.	Flush Door
E.	Five Panel Door
F.	Single Panel Door
G.	Glassed Door
H.	Sliding Door

Type of staircase

i	Timber Stairs
ii	Stone staircase
iii	Brick stair
iv	Metal stair
v	RCC stair

Type of bond is brick masonry

a.	English bond
b.	Flemish bond
c.	Stretcher bond
d.	Header bond
c.	Garden wall bond
d.	Rat trap bond

Type of stone masonry

There are two types

- i. Rubble masonry
- ii. Ashlar masonry

Rubble masonry

- a. **Uncovered rubble masonry:** - in this stone which are used for construction are directly obtained from Quarry.
- b. **Course rubble masonry:** - In this all course are of same height and the stone as superior rubber masonry.
- c. **Random rubble masonry:** - This is considered superior than uncoursed rubble masonry. In this hammer is used for knocking off the edges.
- d. **Dry rubble masonry:-** When the mortar is not used in random rubble masonry and coarse masonry it is known as Dry Rubble masonry.

Ashlar masonry

It is finely dressed masonry in which square or rectangular dressed stone has thin joints Ashlar masonry is further divided into following types:-

i.	Ashlar fine.
ii.	Ashlar chamfered.
iii.	Ashlar rough faced.
iv.	Ashlar chamfered.
v.	Ashlar facing.

Fire fighting

Aluminium: - It is good conductor of heat. It has got higher residence to fire.

Asbestos cement: - It is non combustible material. It posses high fire raistance.

Pop, thermocol & waste bons plaster:- 2 by 2 fit of manufacturing type of rectangular block brick are heat resistance.

Fly-ash brick/cemented brick- it is used to brick slab in home because it is low cost of RCC slab.

Plaster Of Paris (POP)

Plaster of Paris (POP) is a building material having Gypsum as its main component. It is used for coating walls and ceilings and also for creating architectural designs. Plaster of Paris is manufactured as a dry powder and is mixed with water to form a paste when used. Below are some of its advantages and disadvantages to give you an idea whether you should use it in your dream home or not.



Advantages of Plaster of Paris

1. It is light in weight and more durable.
2. It has low thermal conductivity.
3. It is very good fire resistant and hence a very good heat insulating material.
4. It does not shrink while setting. Therefore, it does not develop cracks on heating or setting.
5. It forms a thick surface to resist normal knocks after drying.
6. It mixes up easily with water and is easy to spread and level.
7. It has good adhesion on fibrous materials.
8. It gives a firm surface on which the colours can settle.
9. It has no appreciable chemical action on paint and does not cause alkali attack.
10. Plaster of Paris gives a decorative interior finish. Its gypsum content provides it a lot of shine and smoothness.
11. It can easily be moulded into any shape.

Disadvantages of Plaster of Paris

1. Gypsum plaster is not suitable for exterior finish as it is slightly soluble in water.
2. It is more expensive than cement or cement lime plaster.
3. It cannot be used in moist situations.
4. Skilled labour is required for precise application and thus labour cost for applying plaster of Paris is high.
- 5.



Fly ash brick is used in slab because low cost of RCC. Slab.



Yellow color of plastic sheets for decorating wall
Fig. This is used in inner wall

SIZE OPTION

We have standar size options and our regular size is 70 x 77cm.

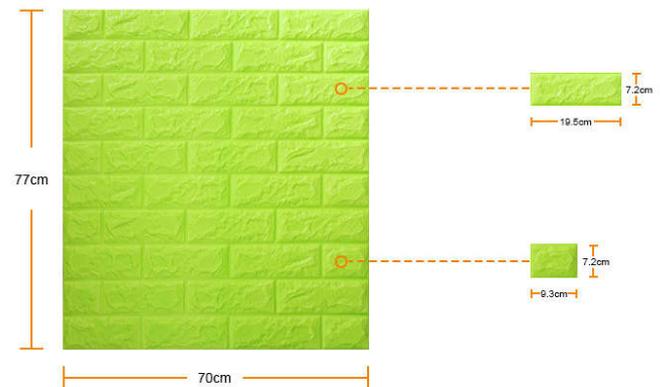
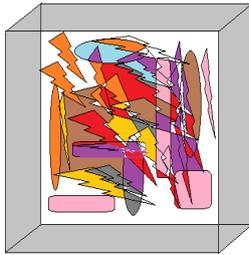
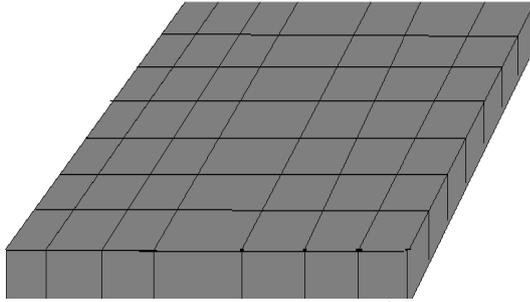


Fig. Plastic sheet attached to wall

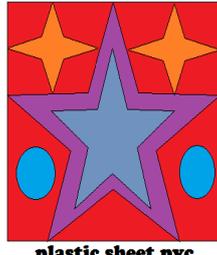


Fig. Low cost housing in wooden work

Slab of cemented Bricks



OUTER LAYER- THERMOCOL, PASTE OF P.O.P. LAYER.
INNER LAYER- WASTE MATERIAL OF BONSE PLASTER COLLECTED IN HOSPITALS.



plastic sheet pvc

Fig. Pop & waest bons plaster manufacturing brick



(A) Plastics used room

Room divider

A **room divider** is a screen or piece of furniture placed in a way that divides a room into separate areas. Room dividers are used by interior designers and architects as means to divide space into separate distinct areas.



A room divider for a conference hall

There are a number of different types of room dividers such as cubicle partitions, pipe and drape screens, shoji screens, and walls. Room dividers can be made from many materials, including wood, fabric, plexiglass, framed cotton canvas, pleated fabric or mirrors. Plants, shelves or railings might also be used as dividers. Portable room dividers have folded wall panels supported on wheels.

Types

In general, room dividers are used in one of these ways:

- To divide rooms, creating a more efficient use of the space within the room.
- As decorators and/or accent pieces to add character to room space.
- To hide areas of different usage or privacy protection
- To decorate rooms for better home design effect

Room dividers differ in nature being either:

- Permanent as in using wine shelves in restaurants
- Built in as in sliding partitions in offices
- Portable or temporary as for example in convention canters
- Fixed room dividers and hanging room dividers

They may completely obscure as in floor to ceiling dividers, or may allow sight through as for example when plant pots are used to divide areas

Uses

Houses, and other residences, use a room divider to divide the space more effectively or as a decorating focus point. There are many uses for a room divider including: dividing the room, adding privacy to any space, hiding clutter and increasing storage and accents to the room. Other uses include adding color, redirecting foot traffic, creating a foyer, adding a desk front modesty screen, creating coziness, or adding a decorative background. Most commonly used in the residence is a small room divider, sometimes called a folding shoji screen. Shoji screens are usually tri-fold walls. A shoji screen may also be used to section off part of a bedroom or family room as an office. Plants, bookshelves, railings, fireplaces light fixtures, and drapes have all been used to effectively create distinct spaces in individuals apartments and homes. In schools or religious facilities, room dividers primarily are used to create temporary classrooms for education in large open rooms. Since the rooms were designed originally to be open for other purposes, the most common type of room divider is a portable room divider on casters which can easily be moved from place to place. After class, the room divider is rolled back into its storage area for future use. Hotels and restaurants use two different types of room dividers. Commonly, you will see floor-to-ceiling room dividers in banquet halls and meeting spaces. These fixed dividers can be used to divide a banquet room into smaller facilities. In areas where room dividers need more flexibility, hotels and restaurants might use portable partitions similar to those used in schools. In offices, room dividers are typically more permanent in nature and attached directly to the floor. These office cubicles room dividers allow

taking a large office space and breaking it into quieter and more focused subdivided offices. Convention centers, by their very nature, are large facilities with wide open internal spaces. Consequently, they often need to be broken down into smaller areas. The most common room divider used in convention center is pipe and drape. The convention center sets up frames made of plastic, metal, or wire tubing. Fabric material is then hung over the frame to create backdrops and hide other unsightly places in addition to creating multiple subdivided rooms.

History

The folding room screens were found in China in the 7th century where they were mainly used by royalty. They were very heavy and ornate, and were not moved around. In the 8th century, the Japanese began using lighter, more portable room dividers for tea ceremonies, religious events and outdoor processions. European travelers developed their own version of Asian screen dividers using wood, leather, silk, mirrors and decoupage. Folding room dividers are now used in dwellings, hospitals, schools, restaurants, corporate offices and convention centers.

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