



ELEMENTS OF ARCHITECTURE

BY DIEGO LOPEZ

WHAT ARE THE DIFFERENT TYPES OF BUILDINGS?

- **Skyscraper:** a building of exceptional height and many stories, supported by a steel or concrete framework.
- **High rise:** Describing a building having a comparatively large number of stories and equipped with elevators.



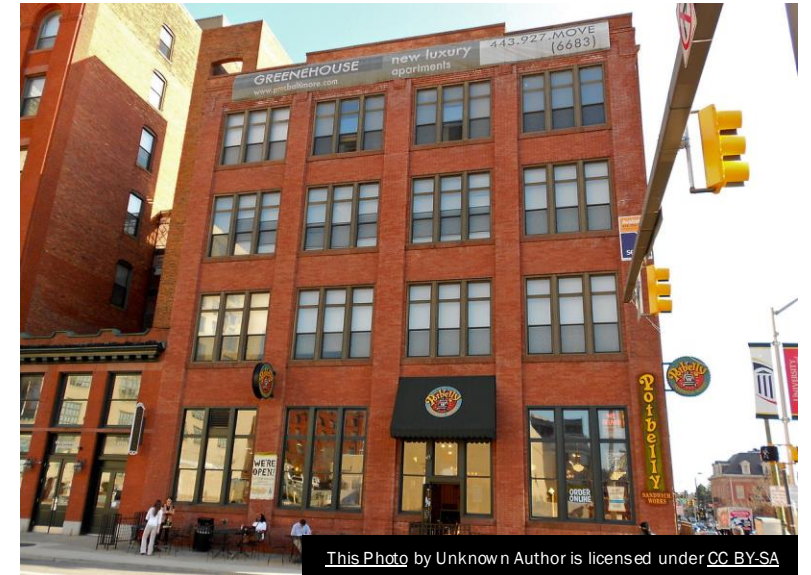
OTHER BUILDING TYPES



- **Mid-rise:** Describing a building having moderately large number of stories, usually 5 to 10, and equipped with elevators.
- **Low-rise:** Describing a building having one, two, or three stories and usually no elevator.

OTHER BUILDING TYPES

- **Loft-Building:** a building having several floors with large areas of unobstructed space, originally rented out for light industrial purposes and frequently converted to residential occupancy.
- **Loft:** One of the upper floors of a warehouse or factory, typically unpartitioned and sometimes converted or adapted to other uses, such as living quarters, artists' studios, or exhibition galleries.



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WHAT ARE THE BASIC ELEMENTS OF A BUILDING?



- **Roof:** The external upper covering of a building, including the frame for supporting the roofing.
- **Ceiling:** The overhead interior surface or lining of a room, often concealing the underside of the floor or roof above.

BASIC ELEMENTS (CONTINUED)

- **Room:** A portion of space within a building separated by walls or partitions from similar spaces.
- **Wall:** Any of various upright constructions presenting a continuous surface and serving to enclose, divide, or protect an area.



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BASIC ELEMENTS (CONTINUED)



- **Window:** An opening in the wall of a building for admitting light and air, usually fitted with a frame in which are set operable sashes containing panes of glass.
- **Door:** A hinged, sliding, or folding barrier of wood, metal, or glass for opening and closing an entrance to a building, room, or cabinet.

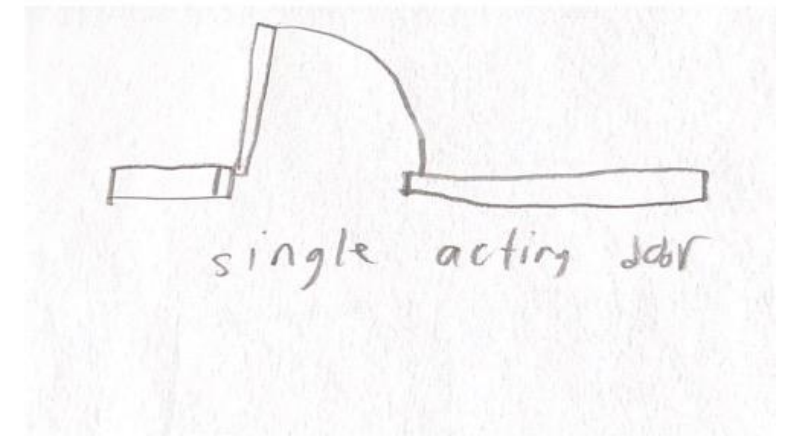
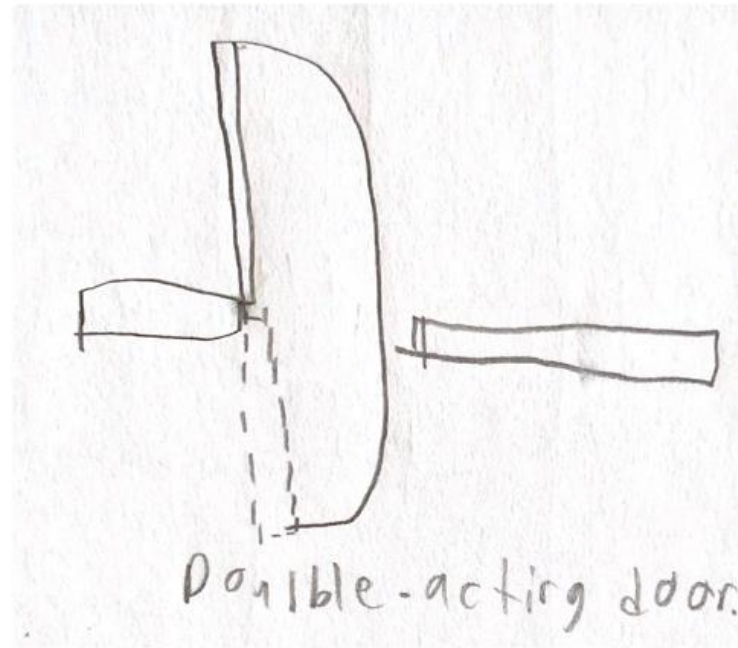
BASIC ELEMENTS (CONTINUED)



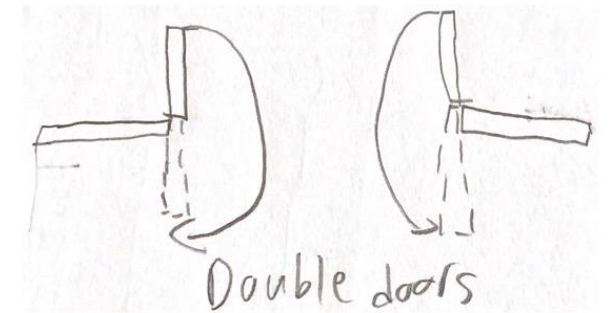
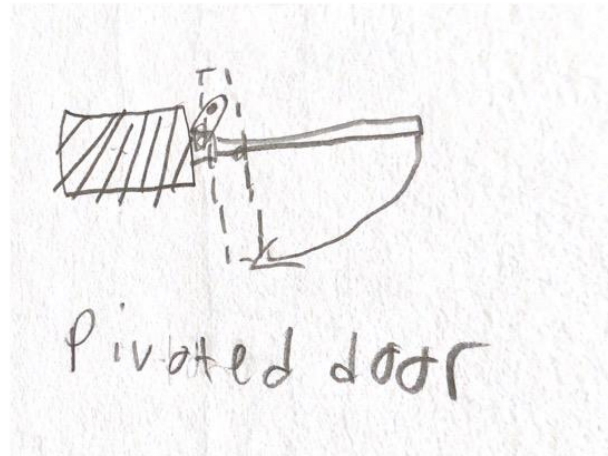
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- **Floor:** A continuous supporting surface extending horizontally throughout a building having a number of rooms and constituting one level in the structure.

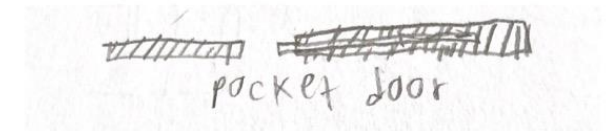
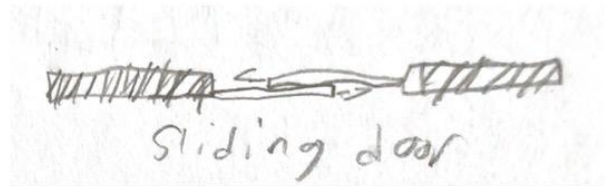
TYPES OF DOORS



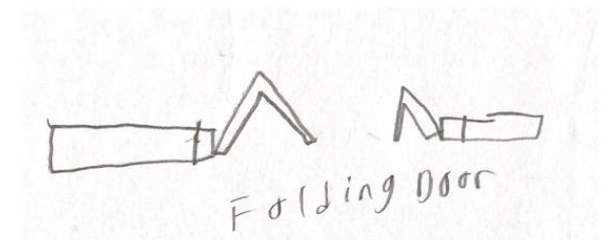
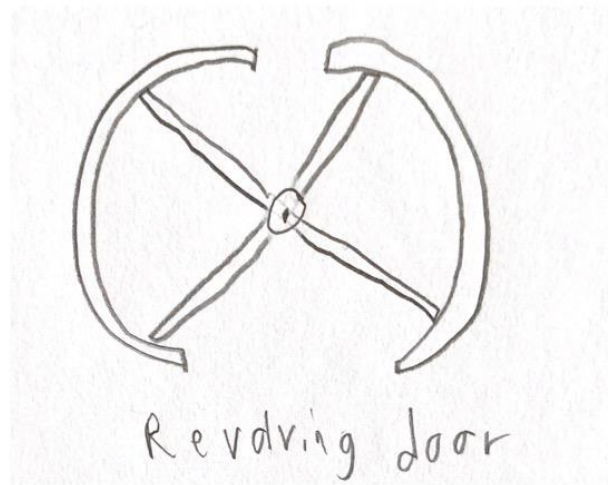
TYPES OF DOORS(CONTINUED)



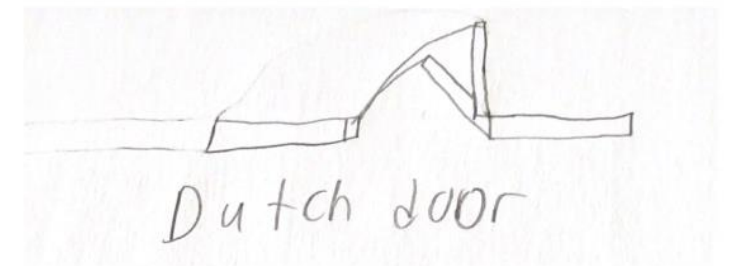
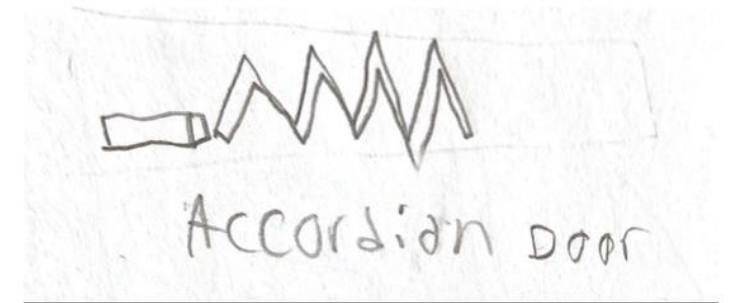
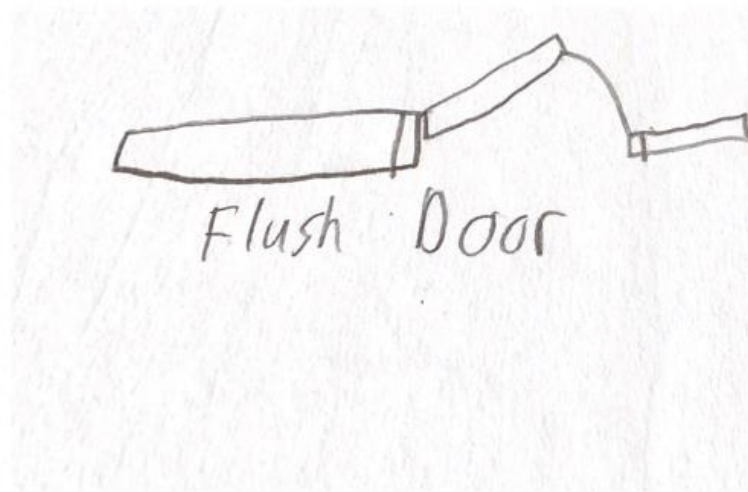
TYPE OF DOORS (CONTINUED)



TYPES OF DOORS(CONTINUED)



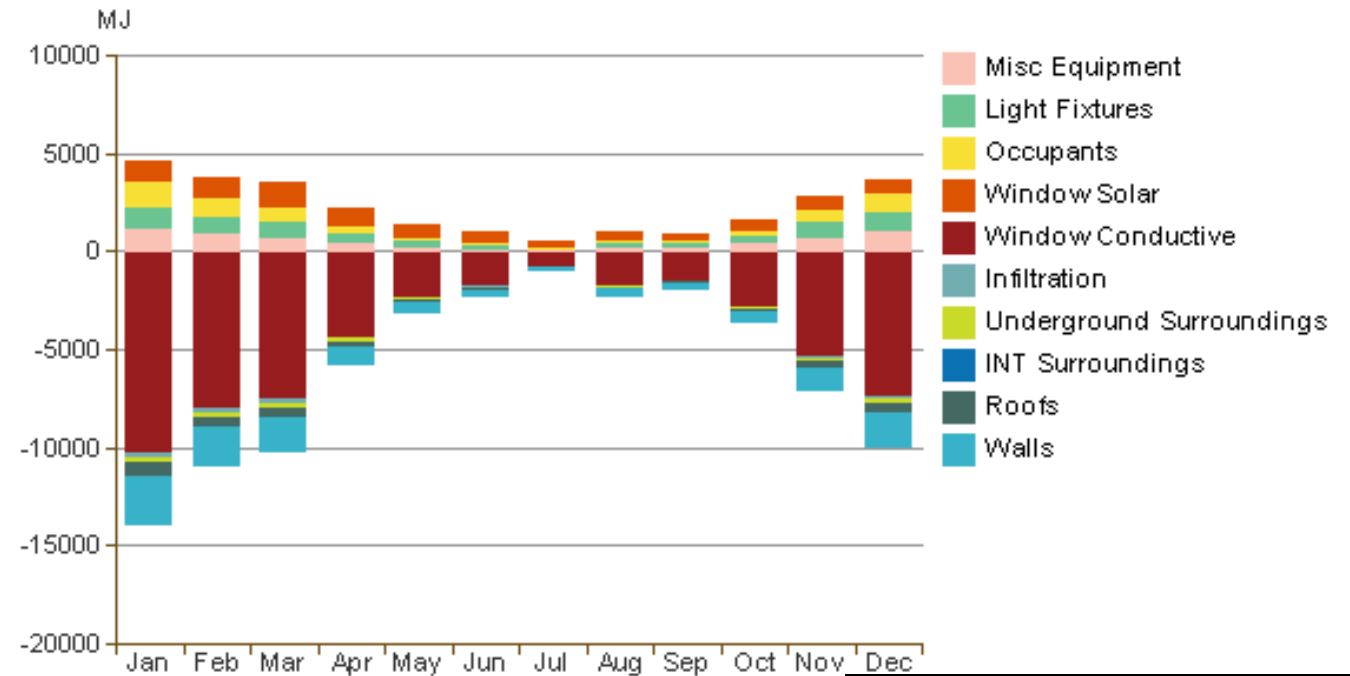
TYPES OF DOORS (CONTINUED)



WHAT IS A HEATING LOAD

- The hourly rate of net heat loss in an enclosed space, expressed in Btu per hour and used as the basis for selecting a heating unit system

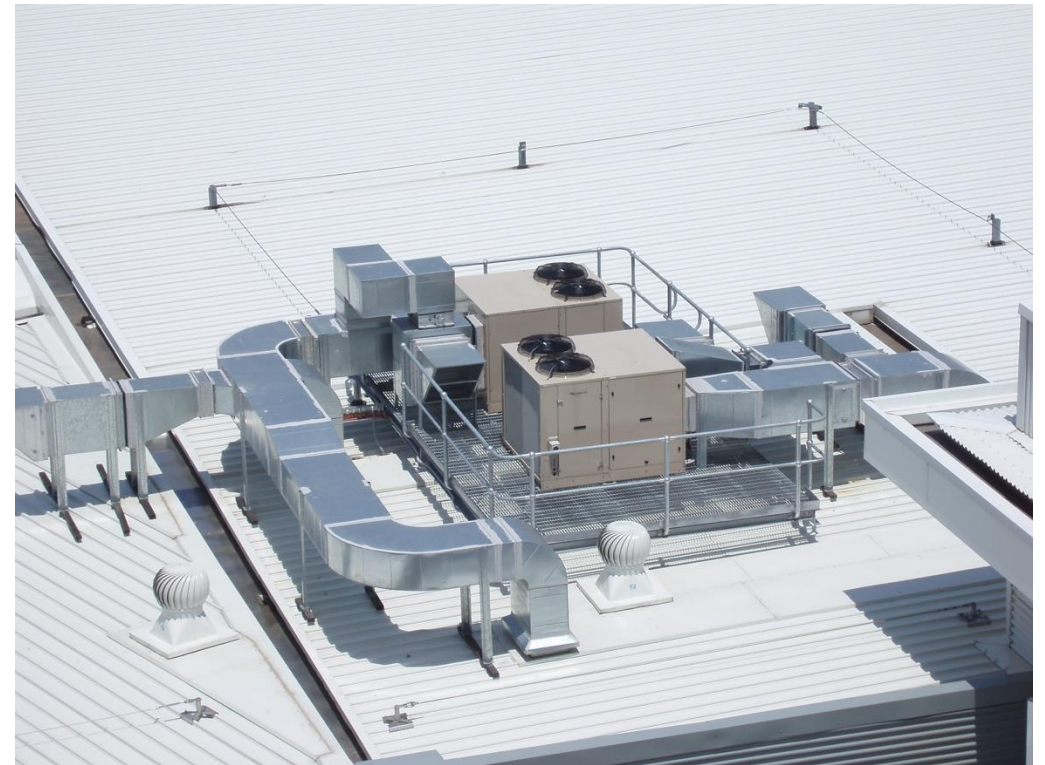
Monthly Heating Load



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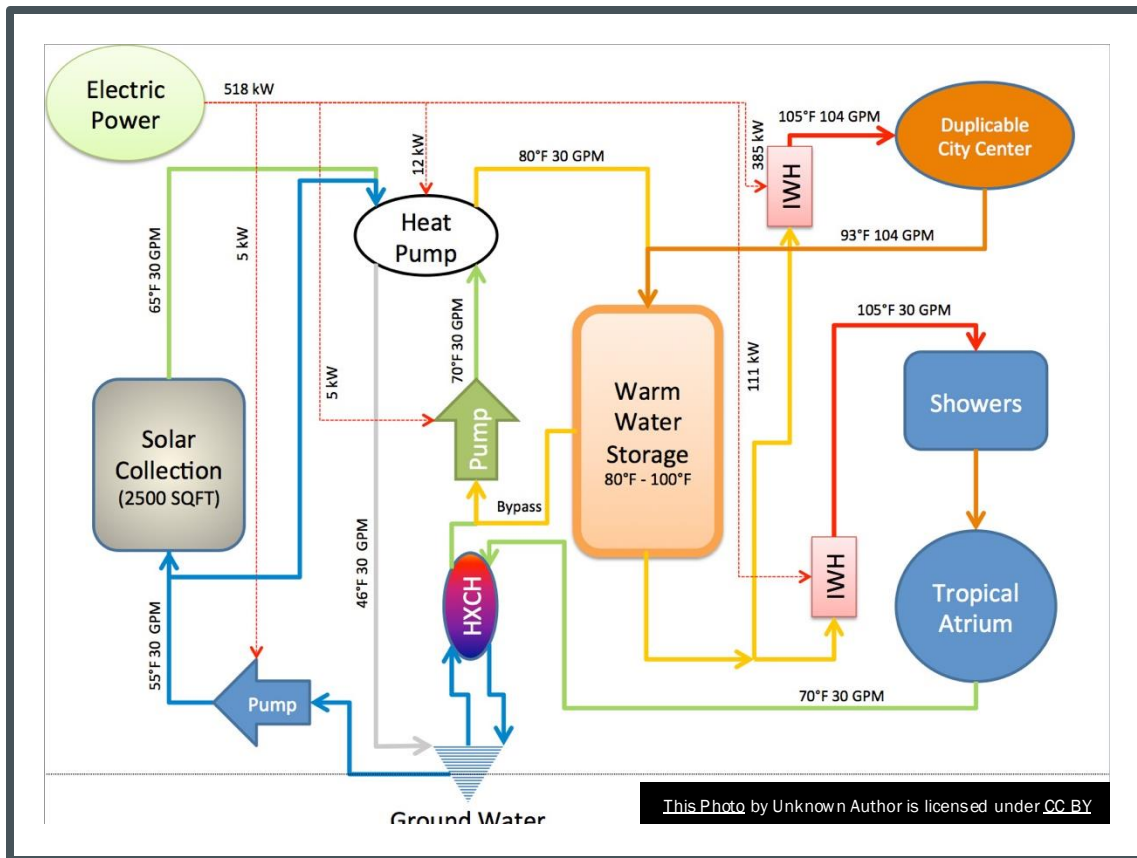
WHAT DOES THE ABBREVIATION HVAC STAND FOR?

- HVAC stands for Heating, Ventilating, and Air Conditioning.



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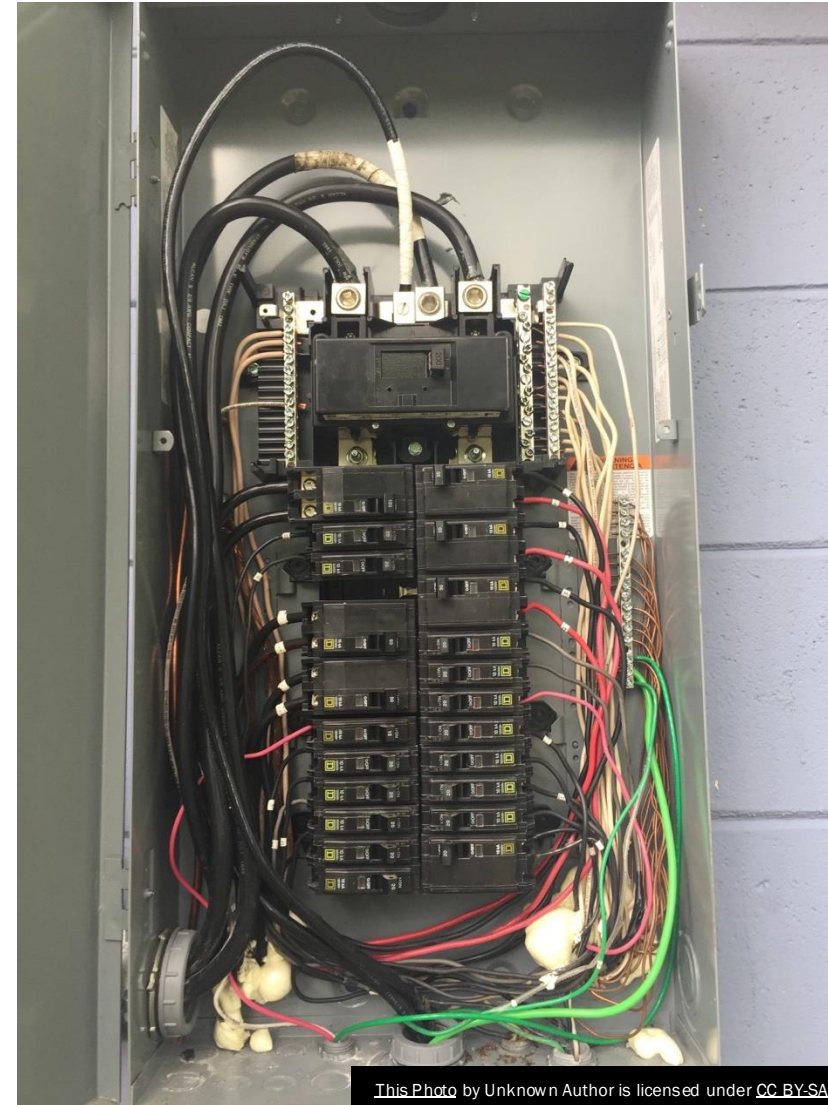
A HOT-WATER HEATING SYSTEM



- A system for heating a building by means of water heated in a boiler and circulated by a pump through pipes to radiators or convectors. Also called hydronic heating.

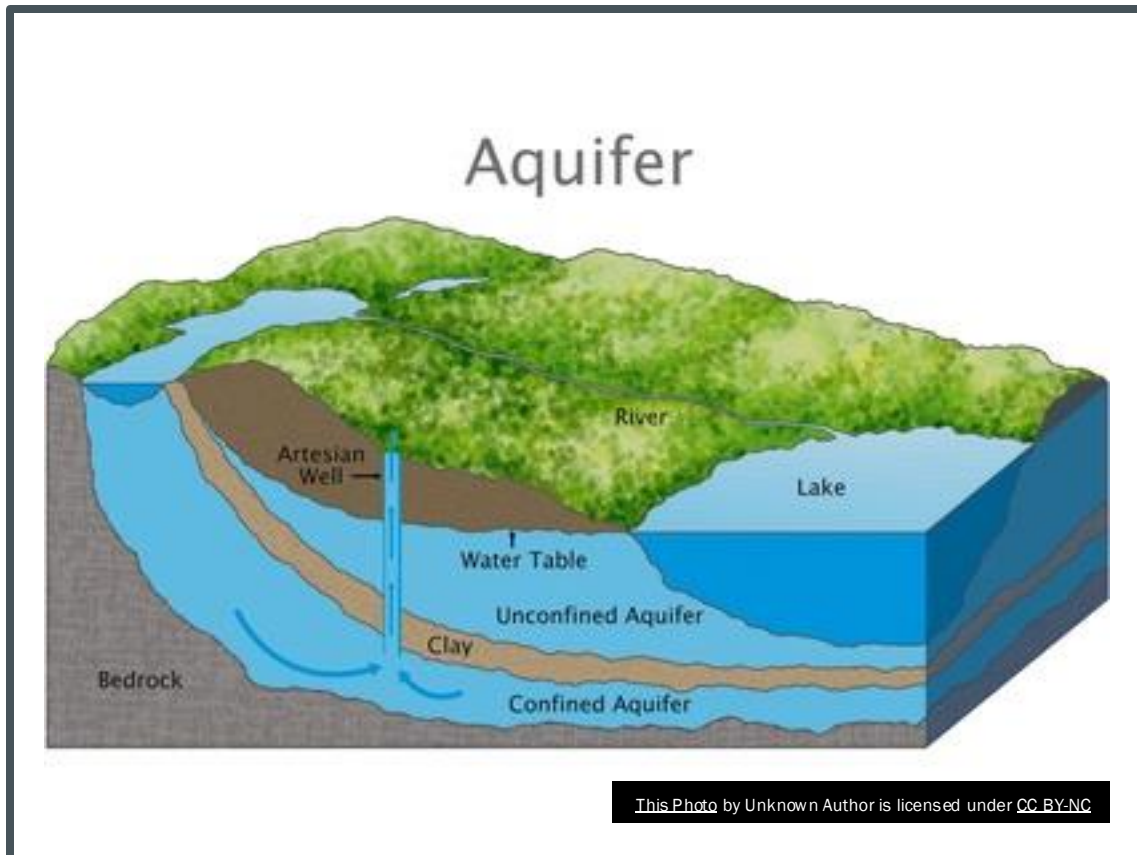
WHAT IS AN ELECTRICAL PANEL?

- A board on which are mounted the switches, fuses, and circuit breakers for controlling and protecting several similar branch circuits, installed in a cabinet and accessible from the front only.



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WHAT IS AN AQUIFER?



- A geological formation containing or conducting groundwater, especially one capable of providing water in usable quantities to springs or wells.

WHAT IS POTABLE WATER?

WATER FIT FOR HUMAN CONSUMPTION.



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WHAT IS A BEARING WALL?

A WALL CAPABLE OF OF SUPPORTING AN
IMPOSED LOAD, SUCH AS FROM A FLOOR OR
ROOF OF A BUILDING.

EXAMPLES OF PLUMBING FIXTURES



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Sink



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Toilet

EXAMPLES OF PLUMBING FIXTURES (CONTINUED)



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Bathtub



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Shower

WHAT'S THE DIFFERENCE BETWEEN A SEWER AND A SEPTIC TANK?

Sewer: A pipe or other artificial conduit, usually underground, for carrying off sewage and usually underground, for carrying off sewage and other liquid waste to a treatment plant or other point of disposal.



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Septic tank: A covered watertight tank for receiving the discharge from a building sewer, separating out the solid organic matter, which is decomposed and purified by anaerobic bacteria, and allowing the clarified liquid to discharge for final disposal.



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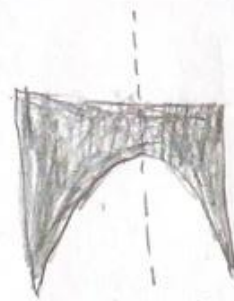
WHAT IS A PROMENADE?

- An area used for a stroll or walk, especially in a public place, as for pleasure or display.



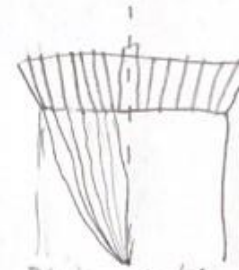
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TYPES OF ARCHES



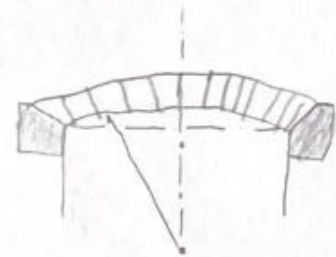
Round arch

• An arch having a continuously curved intrados, especially a semicircular one.



Flat arch:

• An arch having a horizontal intrados with voussoirs radiating from a center below often built with a slight camber to allow for settling.



Segmental arch:

An arch struck from one or more centers below the spring line



WHAT IS A GIRDER?

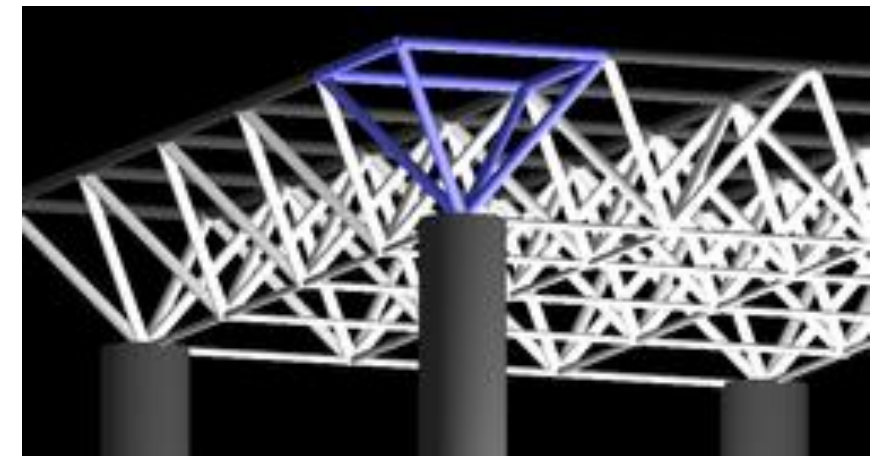
A LARGE PRINCIPAL BEAM DESIGNED TO SUPPORT CONCENTRATED LOADS AT ISOLATED POINTS ALONG ITS LENGTH.

WHAT ARE SPACE FRAMES?

- A three-dimensional structural frame based on the rigidity of the triangle and composed of linear elements subject only to axial tension or compression. The simplest spatial unit of a space frame is a tetrahedron having four joints and six structural members. As with plate structures, the supporting bay for a space frame should be square or nearly square to ensure that it acts as a two-way structure.



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MATERIALS FOR BUILDING WALLS

- **Brick:** A masonry unit of clay formed into a rectangular prism while plastic and hardened by drying in the sun or firing in a kiln.
- **Structural clay tile:** A hollow tile of fired clay having parallel cells or cores, used in building walls and partitions.



MATERIALS FOR BUILDING WALLS(CONTINUED)



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- **Terra cotta:** A hard, fired clay, reddish-brown in color when unglazed, used for architectural facings and ornaments, tile units, and pottery.
- **Concrete:** An artificial, stonelike building material made by mixing cement and various mineral aggregates with sufficient water to cause the the cement to set and bind the entire mass.

WHAT IS AN ISOLATED FOOTING?

- A single spread footing supporting a freestanding column or pier.



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WHAT IS A PILE FOUNDATION?



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- A system of piles, pile caps, and tie beams for transferring building loads down to a suitable bearing stratum, used especially when the soil mass directly below the construction is not suitable for the direct bearing of footings.

WHAT'S THE DIFFERENCE BETWEEN A GAZEBO AND A PIAZZA?

Gazebo: A freestanding roofed structure, usually open on the sides, offering shade and rest in a garden or park.



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Piazza: An open square or public place in a city or town, especially in Italy.



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