technical drawing
school of art, design and architecture
DRAWING

a mean to design reasoning
the ability to 'document imagination'.
Orthographic Views are **two-dimensional views** of objects where the viewpoint of the object is at **right angles** to (or looking directly at) surfaces.
Orthographic views: 3d, section, elevation

Figure 17.30  Evolution of construction documents.
Orthographic views: 3d, section, elevation
By definition, cross section is a view seen by cutting an object at right angle to the plan on which it stands.

Just think of an apple....
The longitudinal section became the plan.
The cross section became the section.
Cross-section views

Definition
a representation of an object as it would appear if cut by a plane, showing its internal structure.
A cross sections, or, simply, section, or section view which diagram the sliced-open picture of things to-be-built.

A section, or section view, or cross section is useful to make sure building layers are in the right order inside the surface of an elevation or a plan view.
Drawing a section

They are a way to, imaginary, cut through an object and create an orthographic view inside the object. It is as if the object were cut in two.

Where the object is cut is called the cutting plane and the direction of view is depicted by arrows. Conventionally it is labeled as SECTION A-A or B-B.
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Drawing a section

Plan of a room
Decide the cutting plane
Depict the direction of the view with arrows
Take projection lines on GL.
Locate the height of the slab and parapet
Give foundation details
add floor and roof finishing details
Take construction lines for details
Darken the walls. Remove construction lines
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Drawing a section

- 9'x4' 3/8"x 3/8" thick brick tiles
- 4-6" mud plaster
- 0.5 mm thick polythene sheets
- 2 coats of hot bitumen
- 6' R.C.C slab

- Thatch
- 6' wooden beam

- 1" floor finish
- 1 1/8" PCC (1:2:4)
- 4-6' brick ballast
- 6' band filling
- Compacted earth

Typical floor and roof details
All building components at section line are shown: **footings, foundations, walls, floors, ceilings, roofs, openings** etc.

All **areas** of activity are mentioned

All building **materials** (brick and concrete) are hatched
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Graphics in a section drawing

All the cut walls, roofs and surfaces are shown with darker lines

Necessary dimensions

Material depiction through hatching

Interior details are shown with lesser line weight
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Graphics in a section drawing

- Dimension
- Uncut part of the building
- Stone
- Concrete
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Detailed section

[Diagram of a wall with labels: Cap-stone, Rubble fill, Tie stone, Mortar]

[Diagram of a staircase with labels: 1, 2, 3, Timber Wedges]
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Section -examples
Intro to technical drawing

Villa Savoye ground floor
Intro to technical drawing
villa savoye 1st floor
Intro to technical drawing
villa savoye 2nd floor
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Section - examples
technical drawing introduction

Section - examples
technical drawing introduction

Section - examples

Site section
Section of site is cut for easy review of the context, plane and topography of the site.
and some times it is necessary to draw the section of immediate site.....

... to show the relation of building with the context.

...in practice, sites with undulating topography can be best represented through it.
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section - example
technical drawing introduction

section - example
technical drawing introduction
section - example

C-C’ SECTION
LOOKING NORTH THROUGH STAIR

6'-6" high kitchen cabinet wall surface to match cabinets
prefabricated, manufactured steel stair and railing system,
see structural, see specifications
submit shop drawings for architect’s approval, have engineered drawings on site.
2x6 framed landing
enclosed carriage framed stair on lowest run
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site section - example
technical drawing introduction

site section - example
technical drawing introduction

section - example
technical drawing introduction
section - example
technical drawing introduction
section - example
GROUND FLOOR PLAN

Living Room 11'4"x12'3"
Kitchen 7'0"x6'6"
Bath 6'0"x7'0"
Bed 11'5"x12'3"

Stone Area = 250 SF
Wooden Area = 135 SF

Canopy 1
Lamp 2
Bar Stools 3
Exhaust Hood 4
Fridge 5
Floating Wall 6
Revolving Table 7
1'-0" Wide Shelf 8

Wooden Floor

Scale 1:250"
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site section - example
technical drawing introduction

site section - example
technical drawing introduction

site section - example
The cut ground is shown in darker line

In case of contours or levels, height is also given

In some cases, the type of soil is also mentioned
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Site section - example
technical drawing introduction

Site section - example
Technical drawing introduction

ATTENTION ASSIGNMENT 4

Assignment:
Assignment: Create a section of your plan with a site section.
Before you think outside the box, you need a box.
Hope sees the invisible, feels the intangible and achieves the impossible.

Anonymous
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Quote of the day

I Don’t Listen to People Who Haven’t Done It

-David Lewis Kyle+

www.ABSTRAXX.com

Intro to technical drawing
sada, spring 2010
Dominus Winery, Napa Valley USA | Herzog & de Meuron

The building is Herzog & de Meuron’s first in the U.S, they’re the same architects that designed the De Young Museum in San Francisco and most recently the Bird’s Nest stadium for the Olympics in Beijing.
Dominus Winery, Napa Valley USA  | Herzog & de Meuron
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video of the day

http://www.youtube.com/watch?v=jDyvAp4IBUY
The Campaign for Drawing