

Building Sections

CMCE 1110 Construction Drawings
Professor Anderson



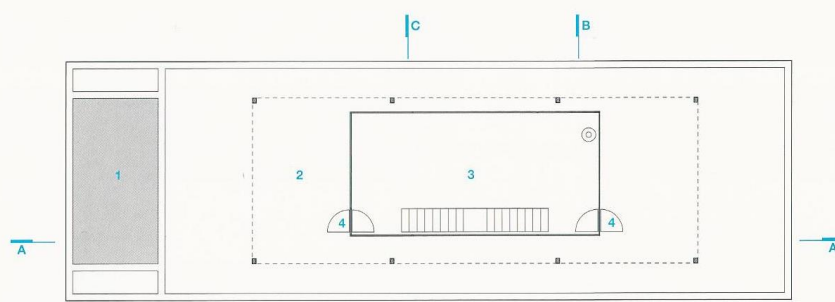
Splitting, 1974, Gordon Matta-Clark. Estate of Gordon
Matta-Clark/Artists Rights Society, New York



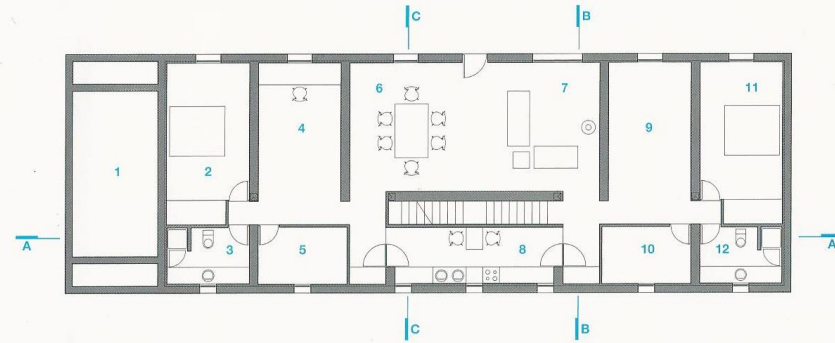
Office Baroque, 1975, Gordon Matta-Clark. Estate of Gordon Matta-Clark/Artists Rights Society, New York

How do *Plans* and *Sections* relate to each other?

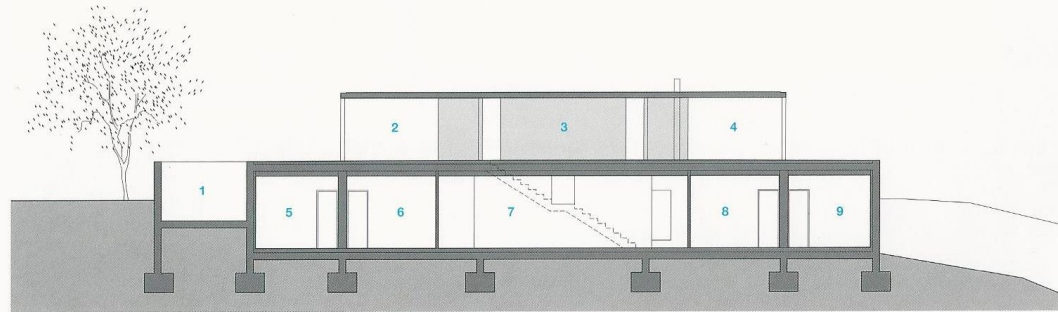
De Blas House, Spain
Alberto Camp Baeza
McLead, Virginia. Detail in Contemporary Residential
Architecture. Laurence King Publishing, 2007.



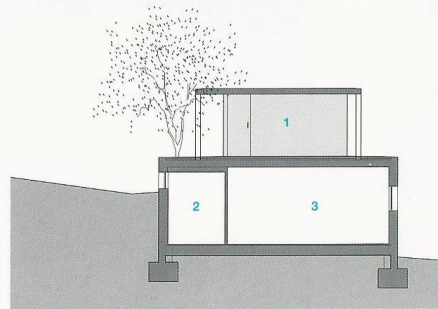
01.01
Upper Level Floor
Plan
1:200
1 Pool
2 Line of roof over
3 Contemplation
pavilion
4 Entry



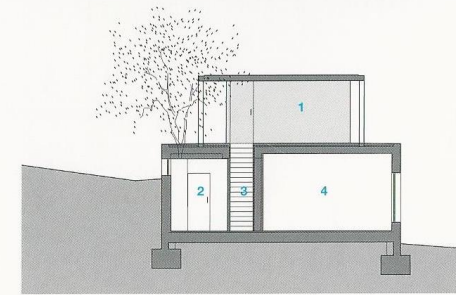
01.02
Lower Level Floor
Plan
1:200
1 Pool plant
2 Bedroom 1
3 Bathroom 1
4 Study
5 Utility room
6 Dining
7 Living
8 Kitchen
9 Dressing room
10 Store
11 Bedroom 2
12 Bathroom 2



01.03
Section A-A
1:200
1 Pool
2 Terrace
3 Contemplation
pavilion
4 Terraces
5 Bathroom 1
6 Utility store
7 Kitchen
8 Dressing room
9 Bathroom 2



01.04
Section B-B
1:200
1 Contemplation
pavilion
2 Kitchen lobby
3 Living room

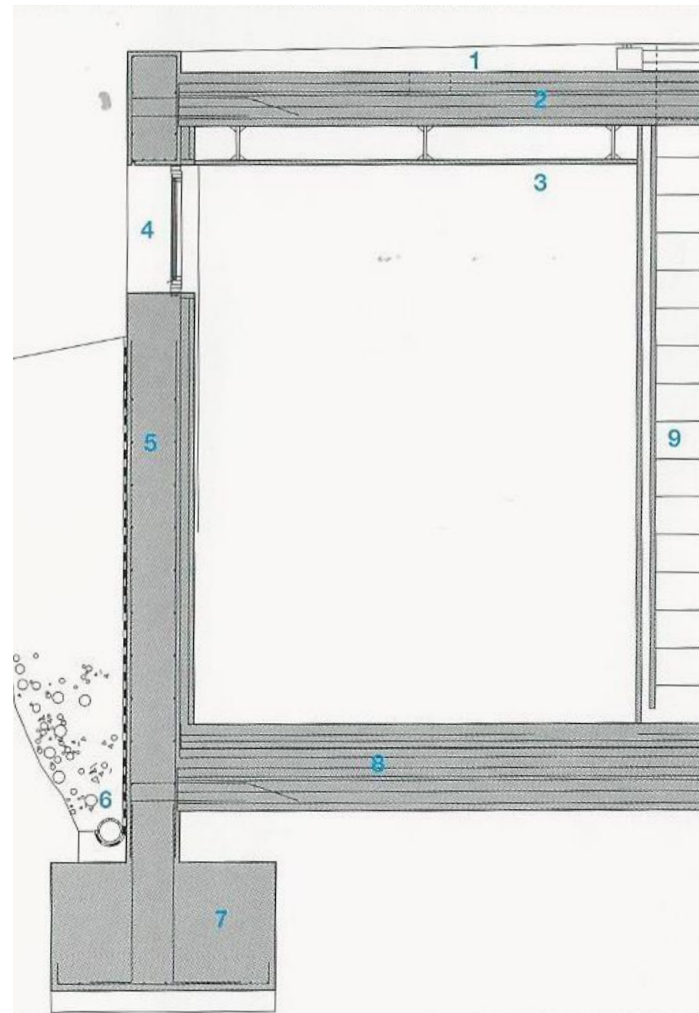


01.05
Section C-C
1:200
1 Contemplation
pavilion
2 Kitchen
3 Staircase
4 Dining room

What do *Building Sections* reveal?

1. Spatial layout
2. Changes in plane and heights
3. Structure and construction details
4. Materials
5. Interior views
6. Lighting studies

**Typically required by the Building Department



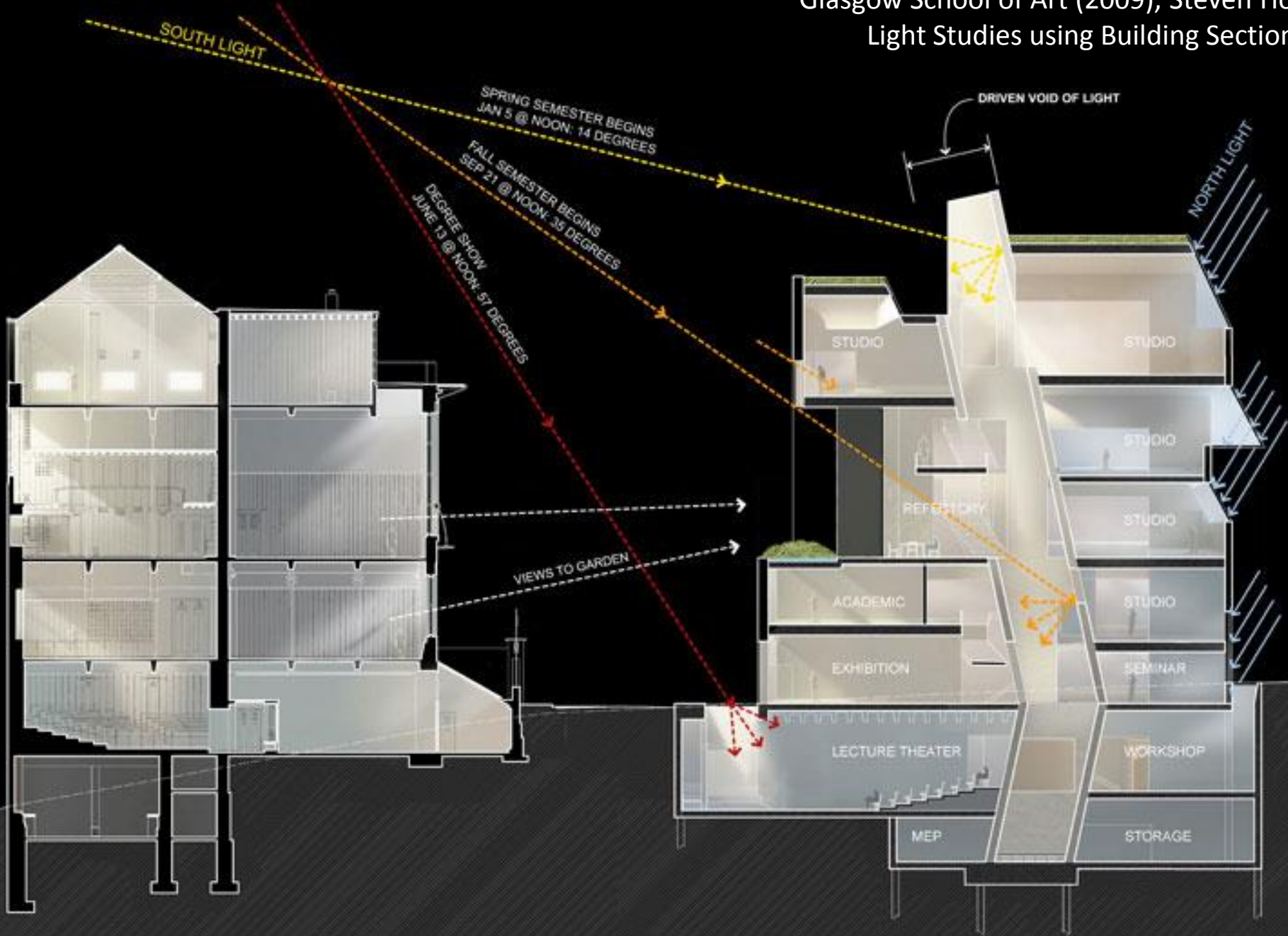
01.07
Detail Wall Section
1:50

- 1 Concrete paving
- 2 Reinforced concrete slab
- 3 Painted plasterboard ceiling
- 4 Thermal glass pivoting window
- 5 Cast in-situ reinforced concrete wall
- 6 Subterranean drainage
- 7 Reinforced concrete foundation
- 8 Reinforced concrete slab
- 9 Plasterboard wall

01.04
Section B-B
1:200
1 Contemplation pavilion
2 Kitchen lobby
3 Living room

De Blas House, Spain
Alberto Camp Baeza
McLead, Virginia. Detail in Contemporary Residential
Architecture. Laurence King Publishing, 2007.

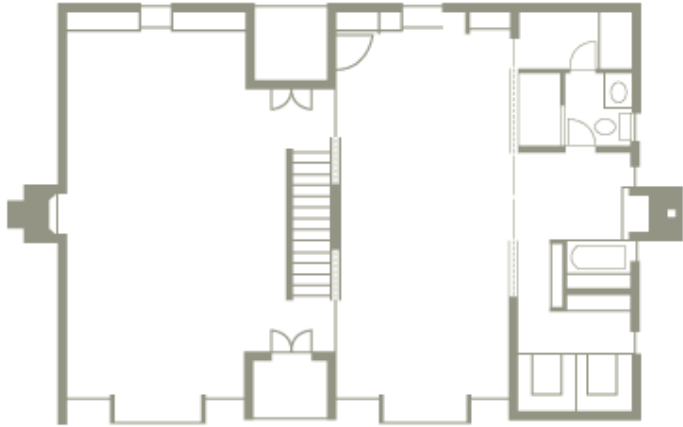
Glasgow School of Art (2009), Steven Holl Light Studies using Building Sections



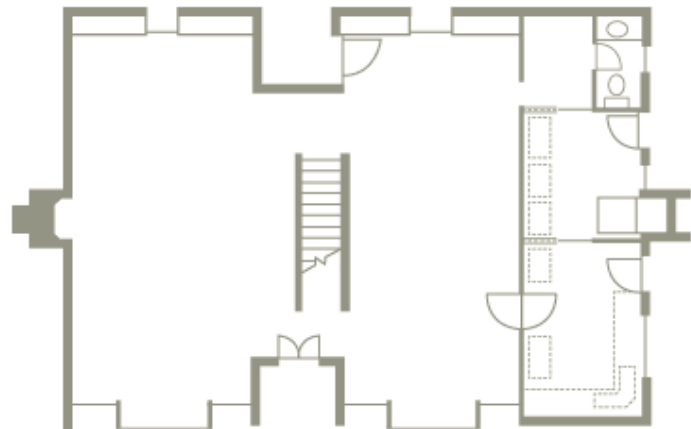
Escherick House

Louis Kahn, 1959-1961

204 Sunrise Lane, Philadelphia, PA



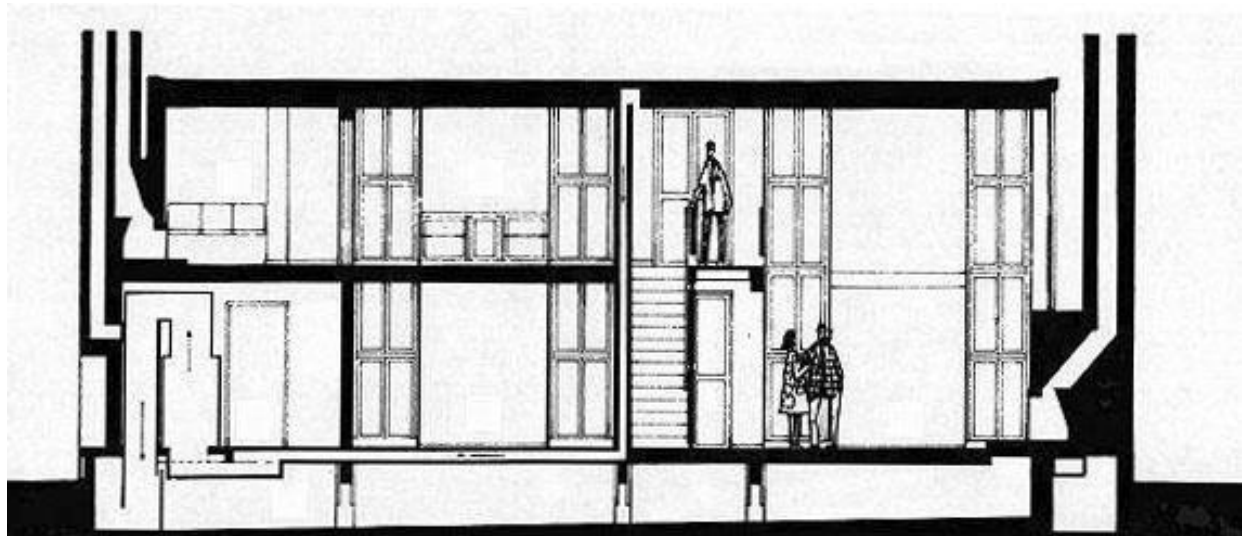
SECOND FLOOR PLAN



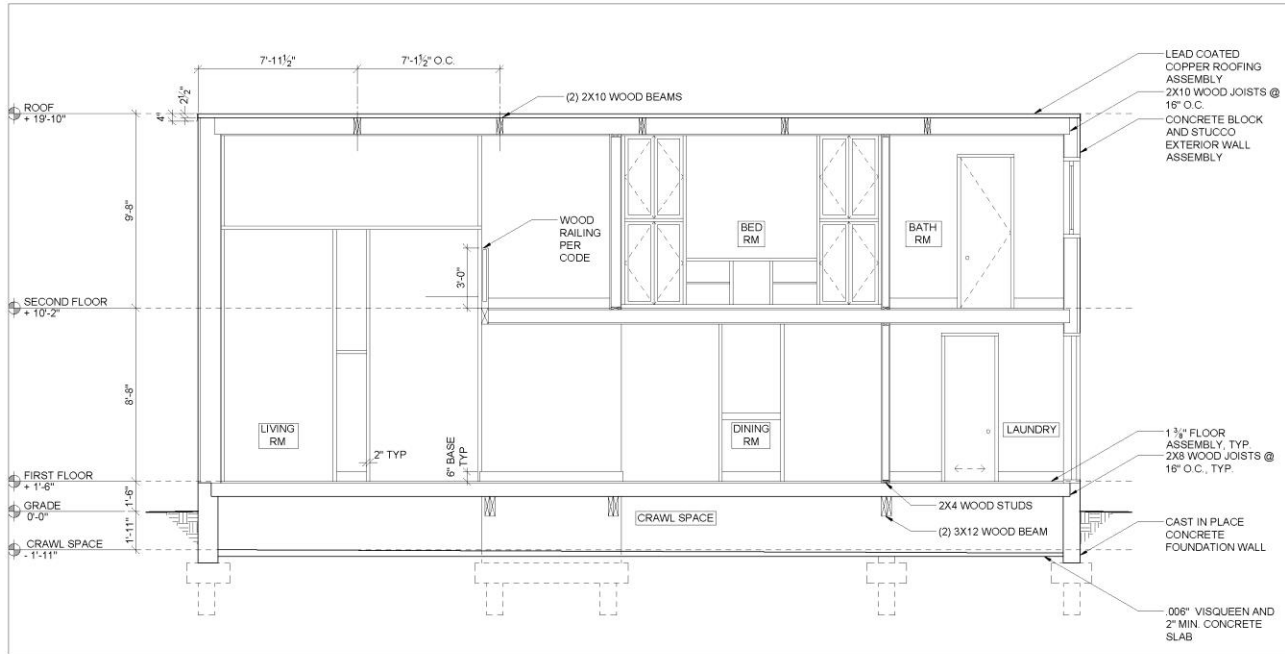
FIRST FLOOR PLAN



Escherick
House
Longitudinal
Section



NOTES:



1 LONGITUDINAL SECTION
 1/4" = 1'-0"

**NEW YORK CITY
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 TECHNOLOGY**

DRAWN BY:
 YOUR NAME

DATE:

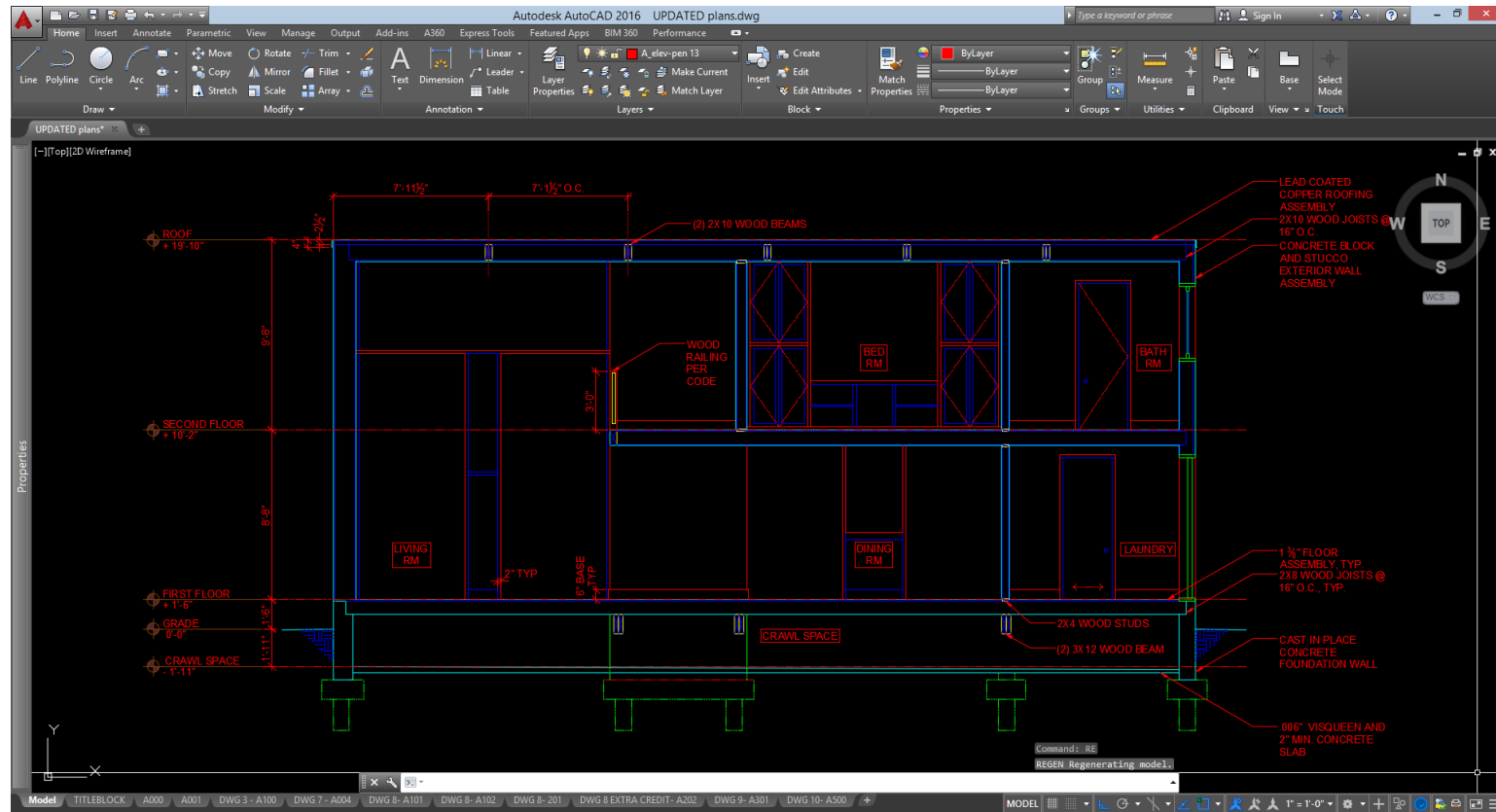
SCALE:

**BUILDING
 SECTION**

A-300

Autocad Techniques

- Mirror
- Stretch
- Array
- Divide
- Distance
- Measure



Tools you have learned:

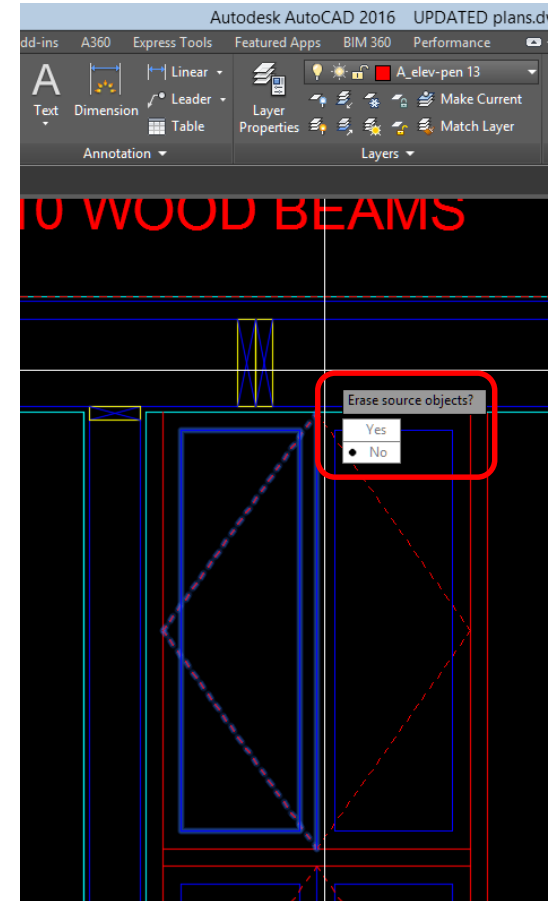
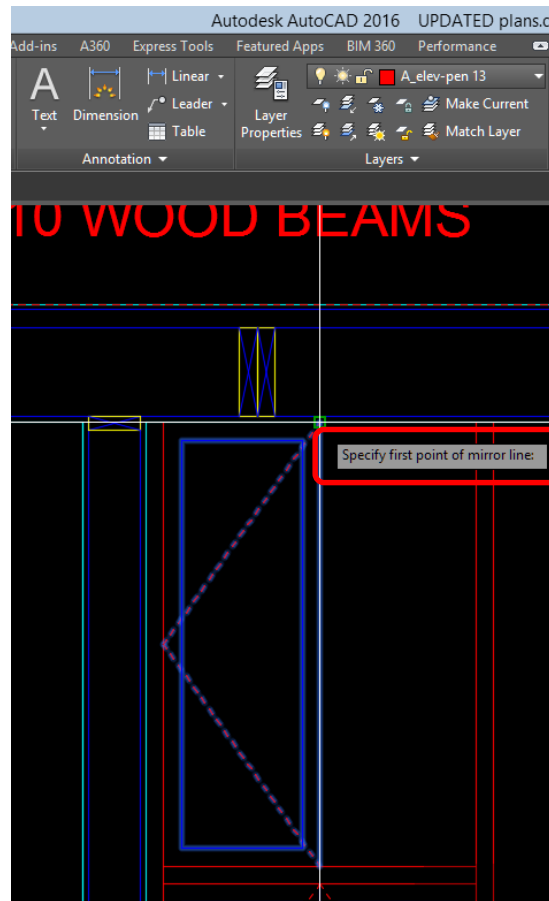
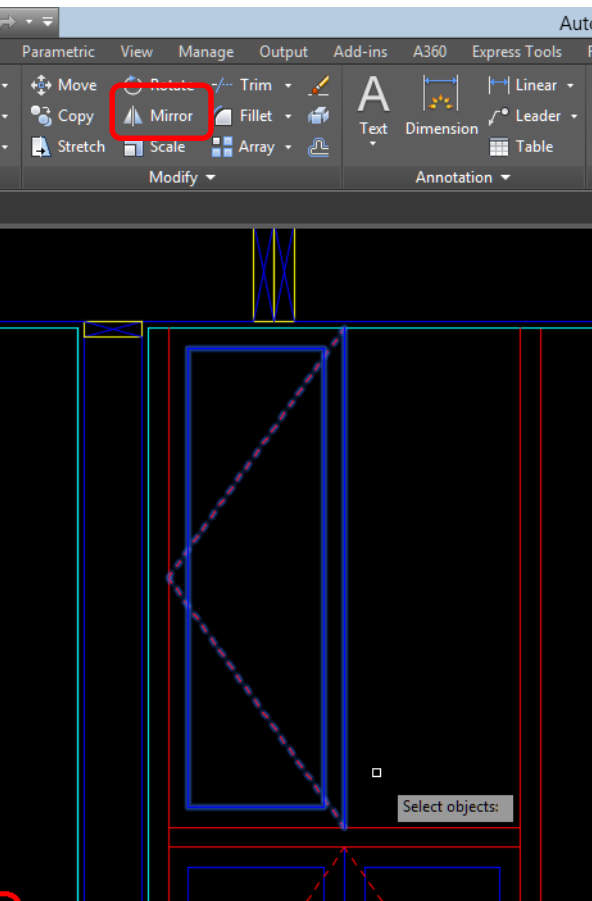
- Leaders
- Notes
- Hatch
- Line and X-Lines
- Offset
- Extend/Trim
- Fillet
- Copy/Paste
- Ortho Mode and Polar Tracking
- Object Snap
- Layers and Color Styles
- Line-types
- Dimensioning
- Paper Space vs Model Space
- Viewports
- Arc
- Ellipse
- Blocks

Mirror

Mirror creates mirrored copy of objects.

Activate: Home tab, Modify subtab or type “mi”

Resources: <https://knowledge.autodesk.com/support/autocad/learn-explore/caas/CloudHelp/cloudhelp/2016/ENU/AutoCAD-Core/files/GUID-595277C8-9B87-4CFB-A3AF-769537A22F3D-htm.html>



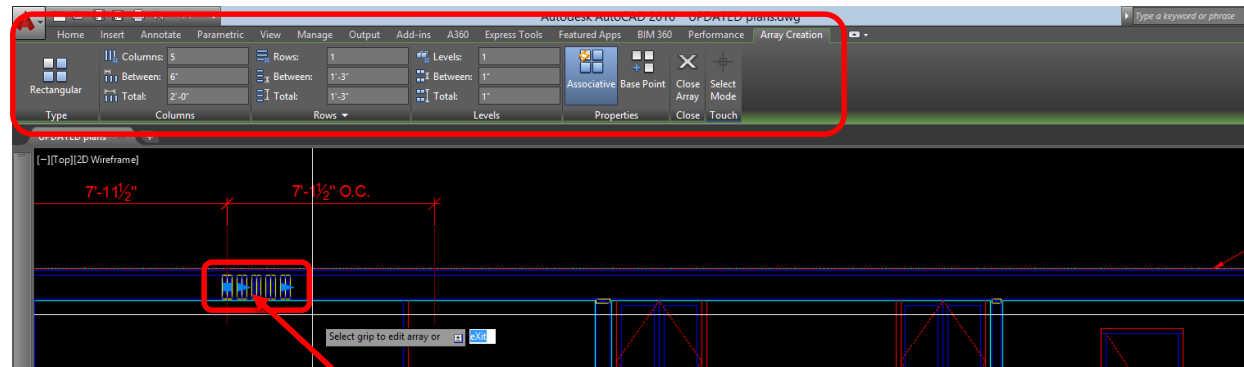
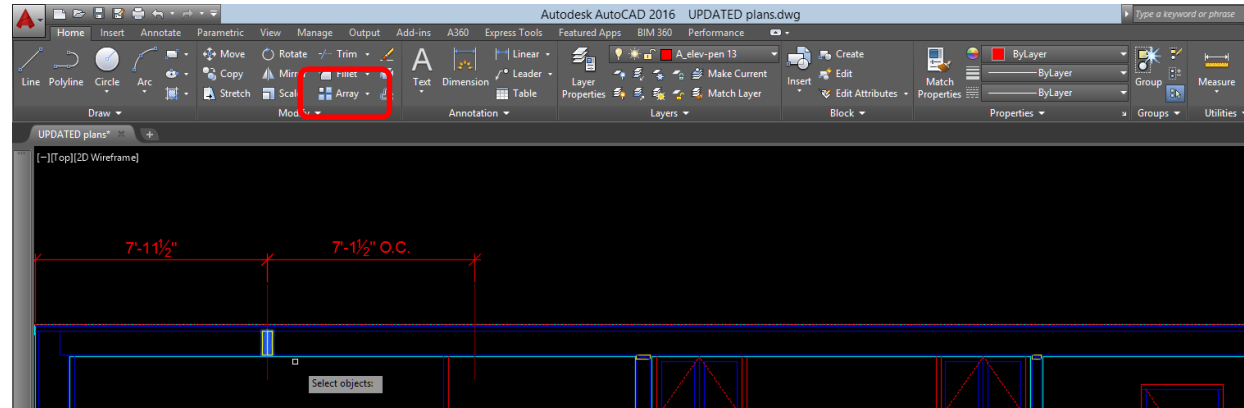
Array

Array distributes object copies into any combination of rows, columns and levels.

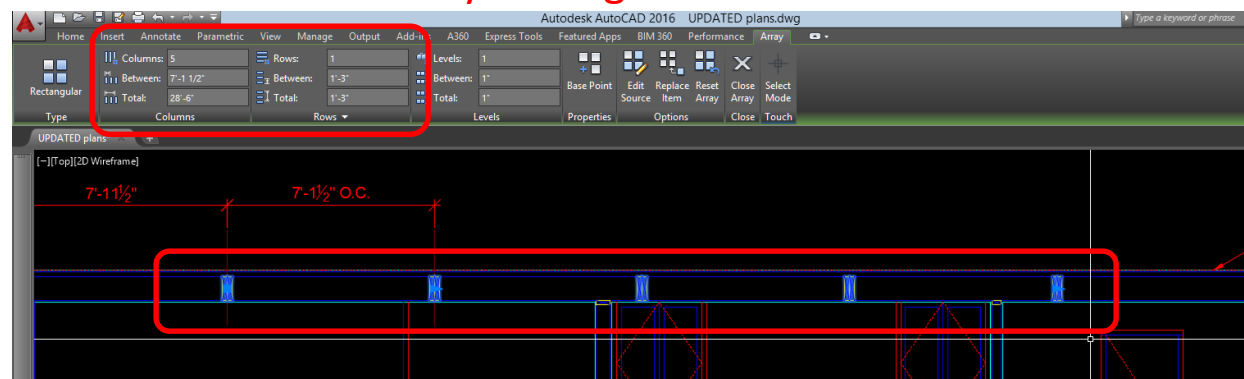
Activate: Home tab, Modify subtab or type “ar”

Resources:

<https://knowledge.autodesk.com/support/autocad/learn-explore/caas/CloudHelp/cloudhelp/2016/ENU/AutoCAD-Core/files/GUID-07CB282A-2C71-46FE-937F-BC3DFB2C068B-htm.html>



Click on nodes to adjust array settings.



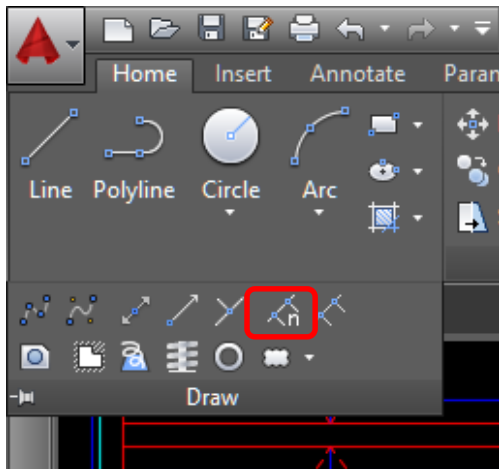
Divide

Divide creates evenly spaced points, objects or blocks along the length or perimeter of an object.

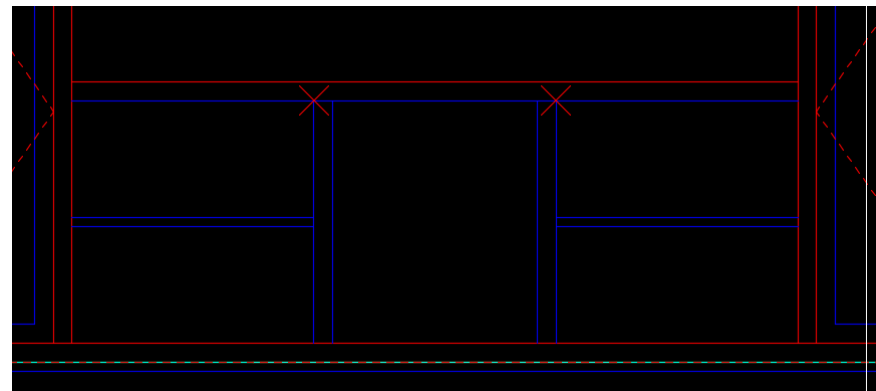
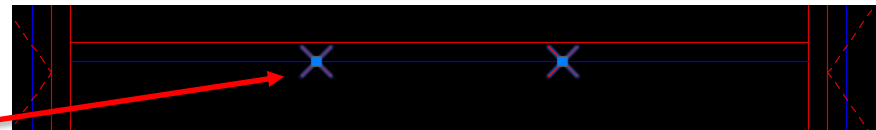
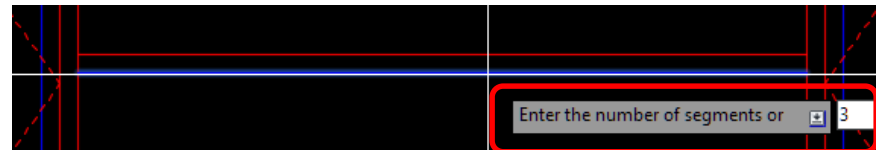
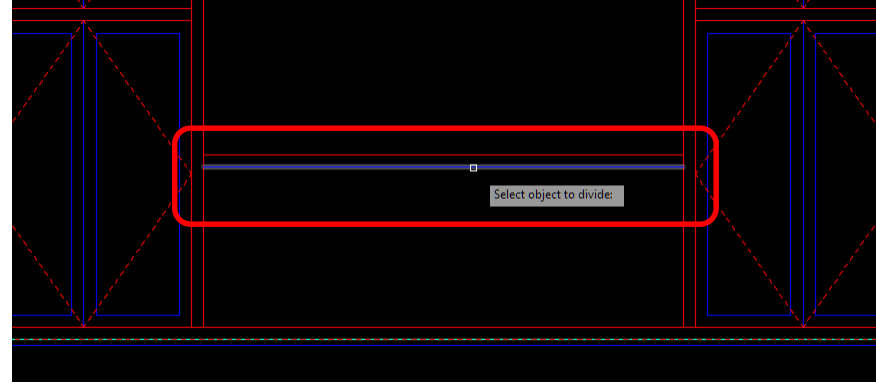
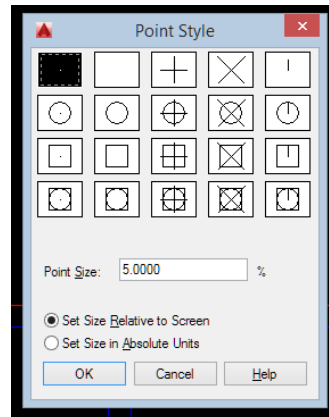
Activate: Home tab, expand Draw subtab or type “div”

Resources:

<https://knowledge.autodesk.com/support/autocad/learn-explore/caas/CloudHelp/cloudhelp/2016/ENU/AutoCAD-Core/files/GUID-3427CA9F-831C-4B53-A903-49EB6378335C-htm.html>



“ptype”



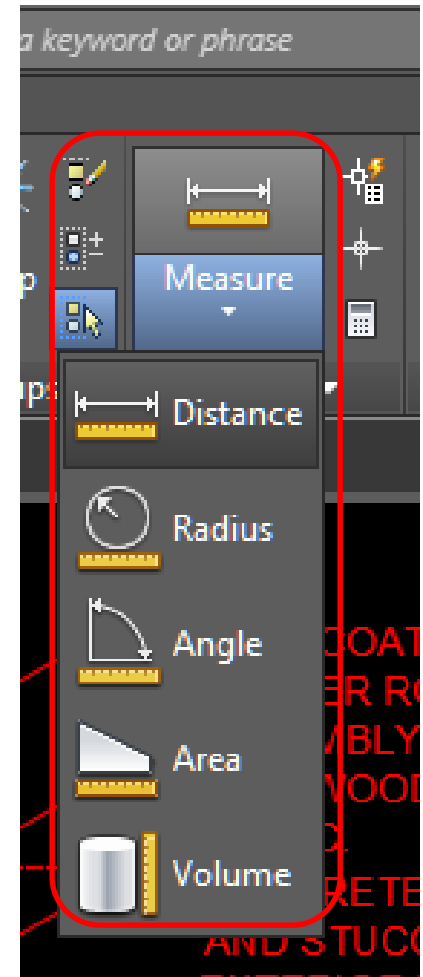
Measure to check your work

Measuregeom tools are used to measure the distance, radius, angle, area, and volume of selected objects or sequence of points.

Activate: Home tab, Utilities subtab, type “me” to activate general measure tool or “di” to activate distance command.

Resources:

<https://knowledge.autodesk.com/support/autocad/learn-explore/caas/CloudHelp/cloudhelp/2016/ENU/AutoCAD-Core/files/GUID-5D5B0EE1-DD90-47AE-8A55-642FBFF5E4E4-htm.html>

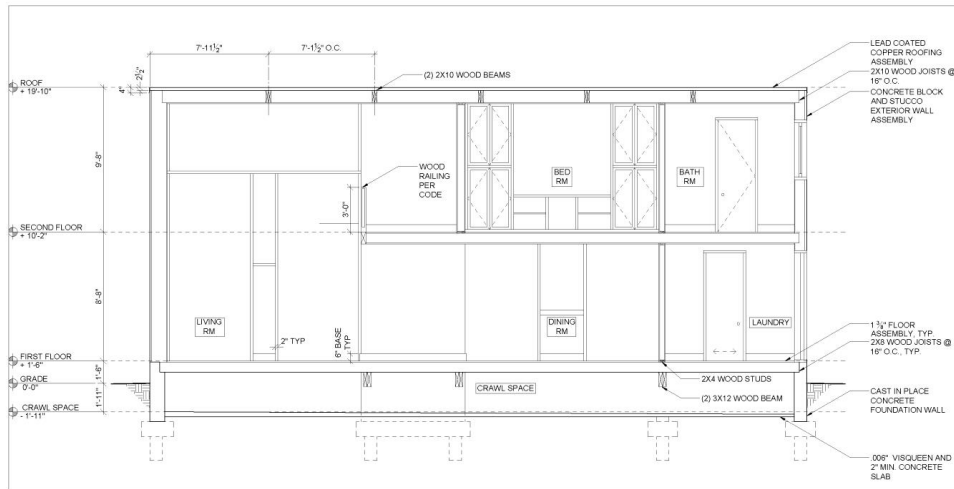


ESHERICK HOUSE
204 SUNRISE LANE
PHILADELPHIA, PA 19118
LOUIS KAHN, 1961

NOTES:

Process:

1. Regulating Lines
 - a) Building Control Lines
 - b) Overall Dimensions
 - c) Structural Lines
2. Walls
 - a) Walls
 - b) Doors
 - c) Windows
 - d) Construction details
3. Annotation
 - a) Symbols
 - b) Dimensions
 - c) Notes
4. Sheet
 - a) Drawing Title
 - b) Titleblock



1 LONGITUDINAL SECTION
1/4" = 1'-0"

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DRAWN BY:
YOUR NAME

DATE:

SCALE:

BUILDING
SECTION

A-300

Assignment Specifications:

- Email your progress drawing at the end of this class. *You must use your City Tech email address and email to the gmail submission email address. Include the assignment title in the email subject line.
- Name files: Last Name First Name – Assignment # Assignment Title.
- Example: Anderson Nicole – Assignment 8 First and Second Floor Plans
- Email final submission *BEFORE THE START OF THE NEXT CLASS*
- Submit 8.5"x11" plot of each drawing *AT THE START OF THE NEXT CLASS* - bind/staple as required