

## Architecture Studio: 1<sup>st</sup> Year Spring

Spring 2012, CMU, Arch #48-105, M/W/F 1:30-4:20  
Class Website: [www.andrew.cmu.edu/course/48-105](http://www.andrew.cmu.edu/course/48-105)

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Off. Hr: M/W/F 12:30-1:00pm & by appt. in MM302

(4/6/12)

### Project 4: COURTYARD HOUSE

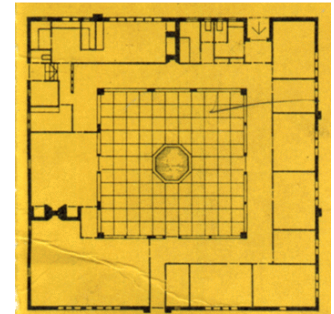
#### REQUIREMENTS / CONSTRAINTS:

Your client is seeking an urban courtyard house with plenty of indoor-outdoor living that maintains the general ambience her own modernist house, and the quiet, traditional upscale neighborhood. It must comply with the following constraints:

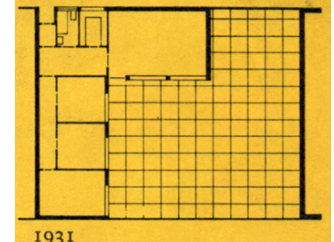
- Every student will be paired with a neighboring architect. You should coordinate with your neighbor regarding the overall composition of your houses, especially the front facade, and any massing or roof that sticks out over the 8ft wall.
- Each house must fit completely within the 50ft x 60ft brown-brick wall of your site.
- Since the houses will likely be rented or sold to affluent clients, who may well be older, the owner seeks to keep elevation changes within the house to a minimum. Avoid excessive steps, stairs, ramps or climbing, except access to a 2<sup>nd</sup> floor.
- The owner is discouraging all major excavation or soil removal from site.
- The absolute height limit is the Tillie Speyer house (approx. 22ft).
- There is a maximum "footprint" of 1500sf of enclosed living space, including raised, sunken, double-height, or overhanging indoor spaces (footprint = massing shadow).
- If you have a 2<sup>nd</sup> floor, it can be a maximum of 500sf of enclosed space on top of other occupiable space (indoor or outdoor). If it overhangs an outdoor area, it must be included in the max. 1500sf "footprint".
- You must include a 25'x25' covered 2-car garage off of Wightman. Use a minimum 16ft garage door. Consider how the garage links to house and any courtyards.
- You must include a rear door in the west wall, both for emergency exit reasons, and to access the shared communal garden behind the site.
- Site boundary walls are not allowed to be punctured, interrupted, or overhung in any way, except at garage and front and back entry (openings may include side-lights).
- Windows facing the neighboring courtyard house must be set back 4ft from the wall (i.e. no windows looking directly into the neighbor's house or garden).
- Work with the following rules of thumb for construction:
  - interior floor thickness of 12" minimum (from ceiling to floor above).
  - a maximum clear span of 20ft, except in the garage.
  - any space bigger than 20ftx20ft must include a column and beam, or wall, to support the ceiling/roof joists in at least one direction.
- Occupiable roofs must be flat/horizontal, and all flat roofs should be 18" thick.
- Your house should include at least "1½ baths"; one bath must be at least 6ftx8ft with toilet, sink and bathtub (use templates from Proj.3), include a "powder room" with toilet and sink (usually for more public use). Draw bathroom fixtures in all plans.
- You must include a place to store and make food (use kitchen templates from Proj.3). Draw primary kitchen appliances and built-in counters in all plans.
- You must include separate sleeping area(s). Draw the outlines of all beds.
- You must include a space for eating. Draw the outlines of a dining table.
- You must include a space for gathering/living. Draw the outlines of a couch or major sitting opportunities and built-in furniture.

#### ASSIGNMENT 1e: - Due. Mon. Apr. 9, 1:30pm

Create at least three separate proposals for a courtyard house design that focus on a rich sequence of transitions from inside to outside: 1) One "based on" ideas similar to those explored in your loft, but now for a new site, client, etc. 2) Another "based on" or referencing some aspect of any of the precedent studies (from your studio or others). Be specific about which precedent you build off. 3) At least one design that is of your choice, developed from some other source of inspiration. For each design create an 1/8" scale model using cardboard or thick chipboard. Discuss with your neighbor and classmates the benefits and down sides of each of the three plans. Draw a 1/4" sectional drawing through one of the designs, explaining a narrative sequence of carefully articulated experiences and transitions from inside to outside, through major spaces and courtyards of one design.



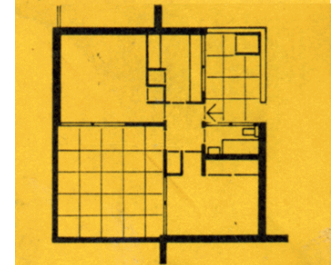
1908



1931



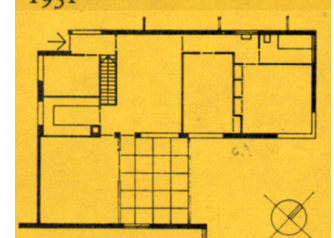
1960



1963



1931



1929