

Masonry

▶ Baker House at MIT



Masonry

► Masonry materials

- Stone
- Clay
- Calcium silicate
- Cement

Precast lightweight concrete blocks in Storer Residence
("Textile block" house), Hollywood (F.L. Wright, 1923)

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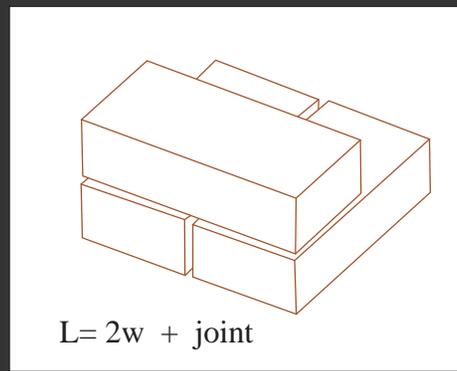
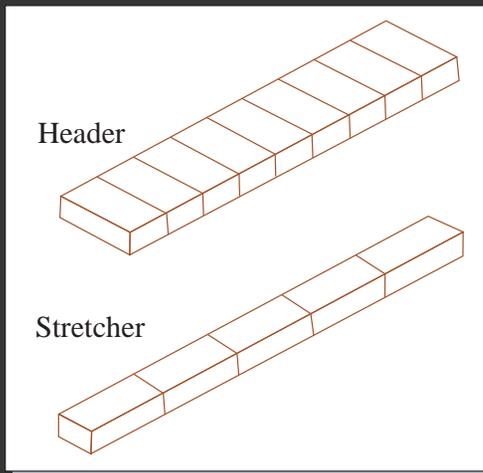
Fired clay bricks in Sarabhai house, India
(Le Corbusier, 1955)

Masonry

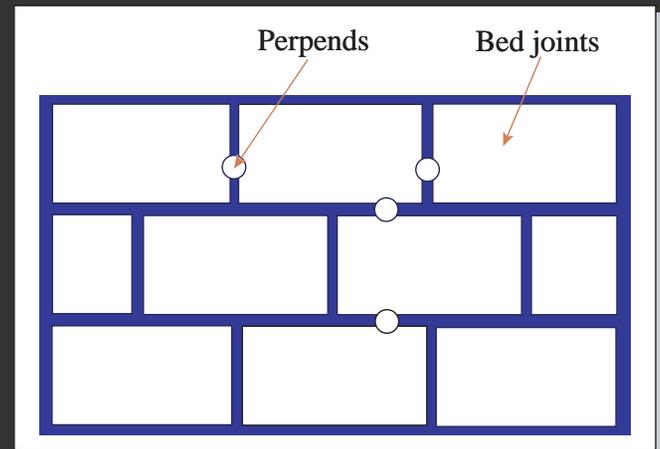
► Masonry components

- Bed joint and perpend
- Stretcher and header
- Course
- Bond and bonding dimension

Photographs removed due to copyright restrictions.



Monadnock Building, Chicago (Burnham and Root, 1889-91)

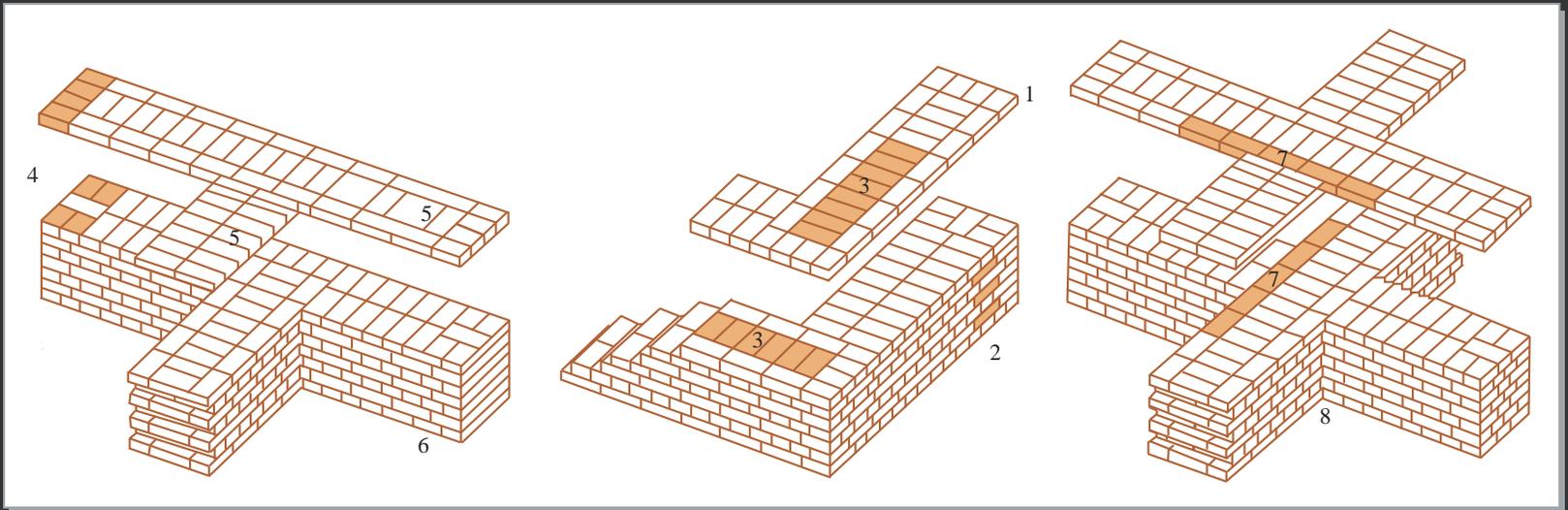


Images by MIT OCW.

Masonry

► Masonry bonds

- Dimensional coordination
- Offsetting of perpend on successive courses
- Priority to stretcher courses
- ...



Masonry

► Masonry bonds

- Stretcher bond

- Header bond

- English bond

- English cross-bond

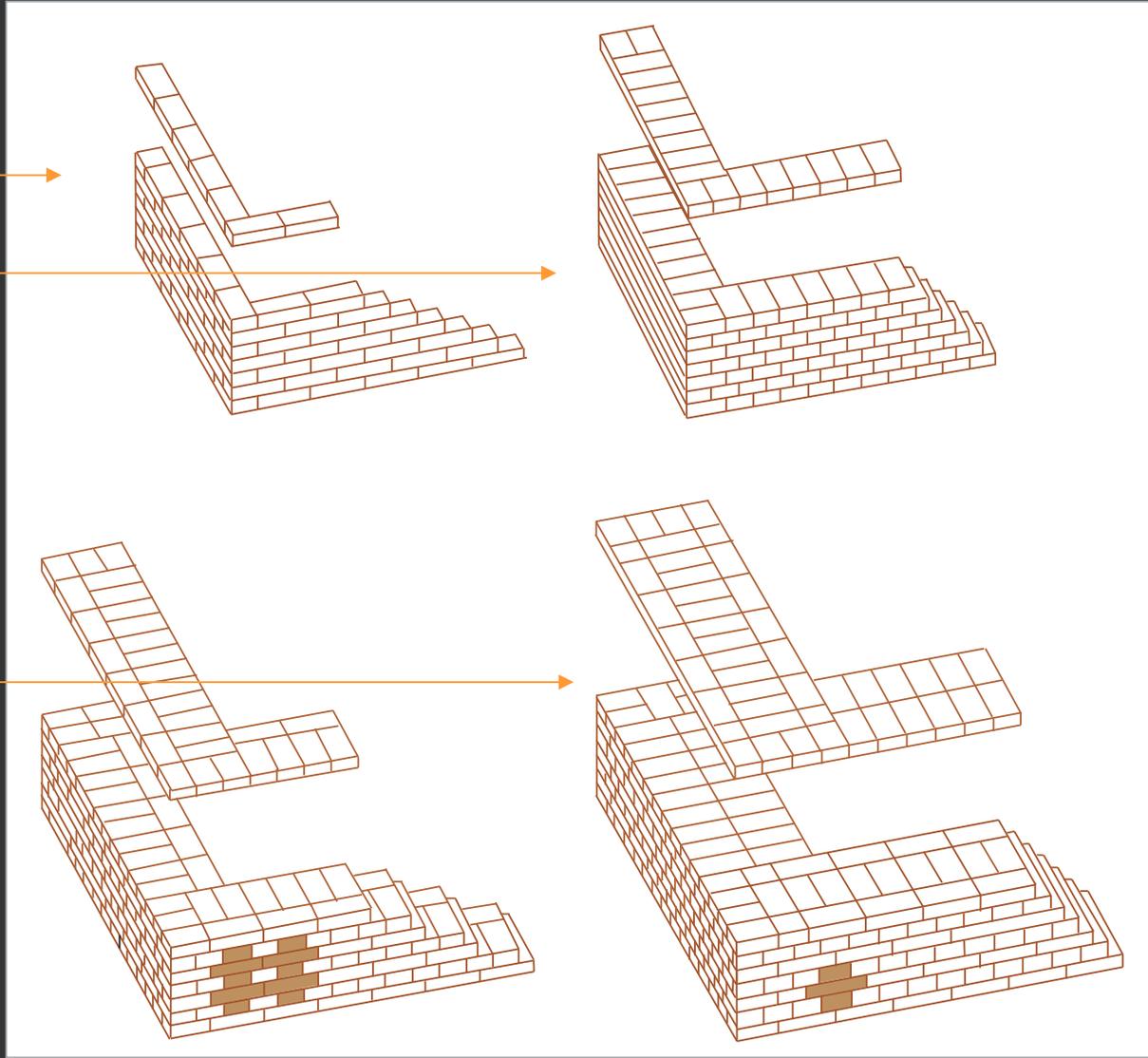


Image by MIT OCW.

Masonry

► Masonry bonds

■ Flemish bond

- Monk bond

- Dutch bond

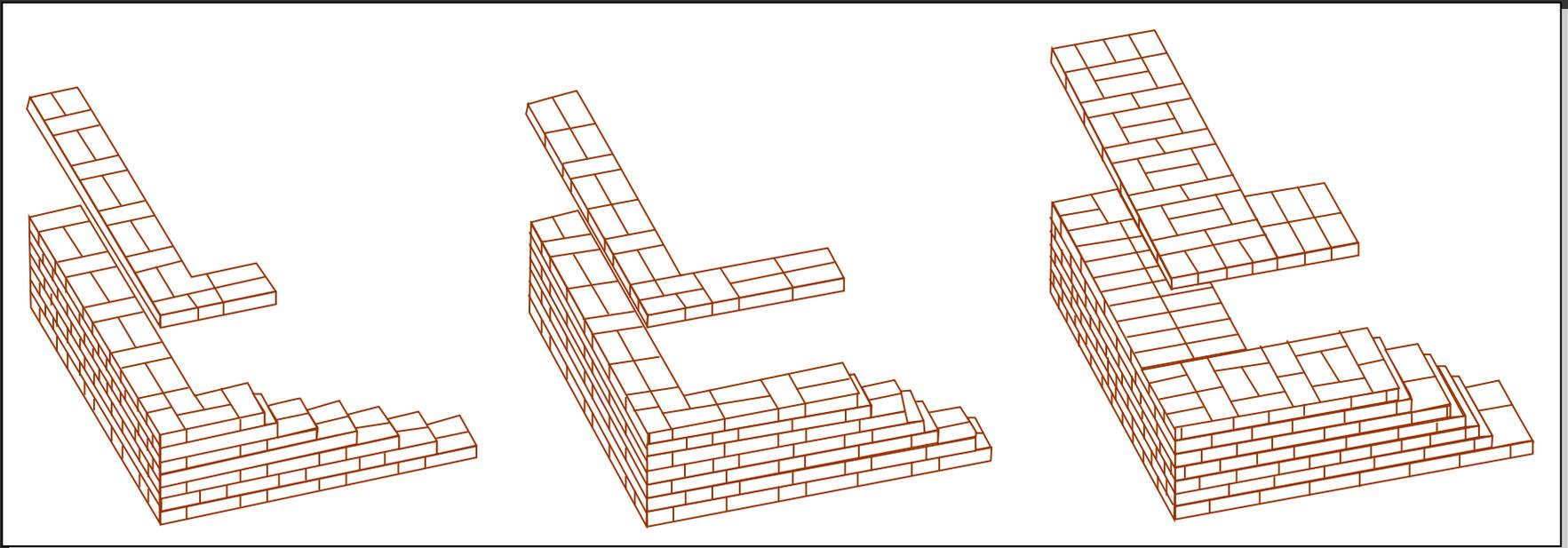
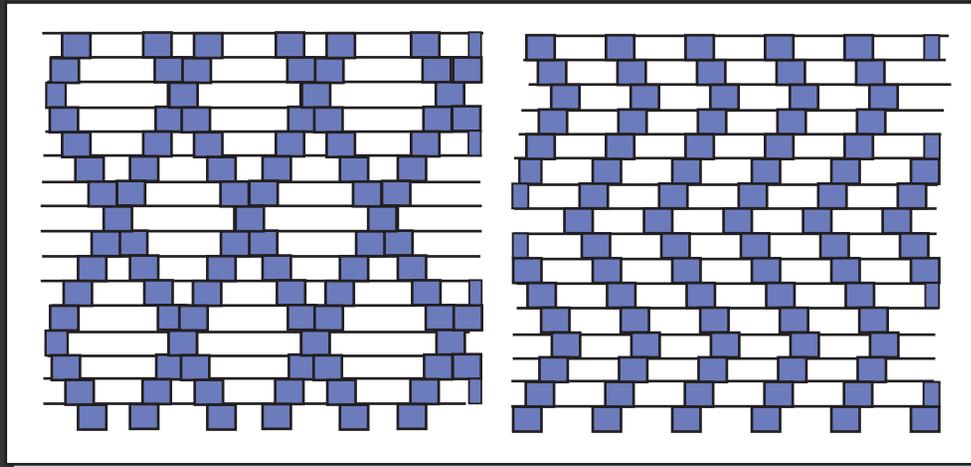


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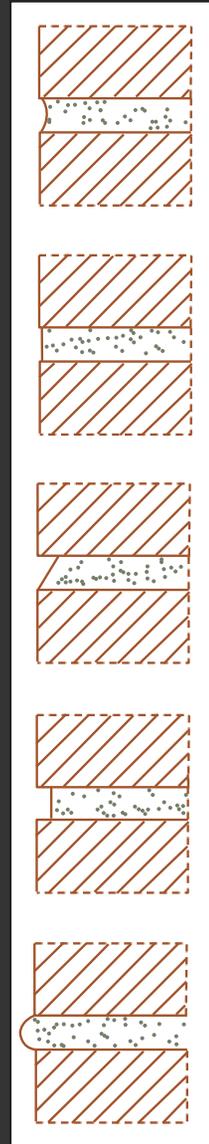
Masonry

► Masonry structure

- Double-leaf walls
- Appearance
- Ornamentation



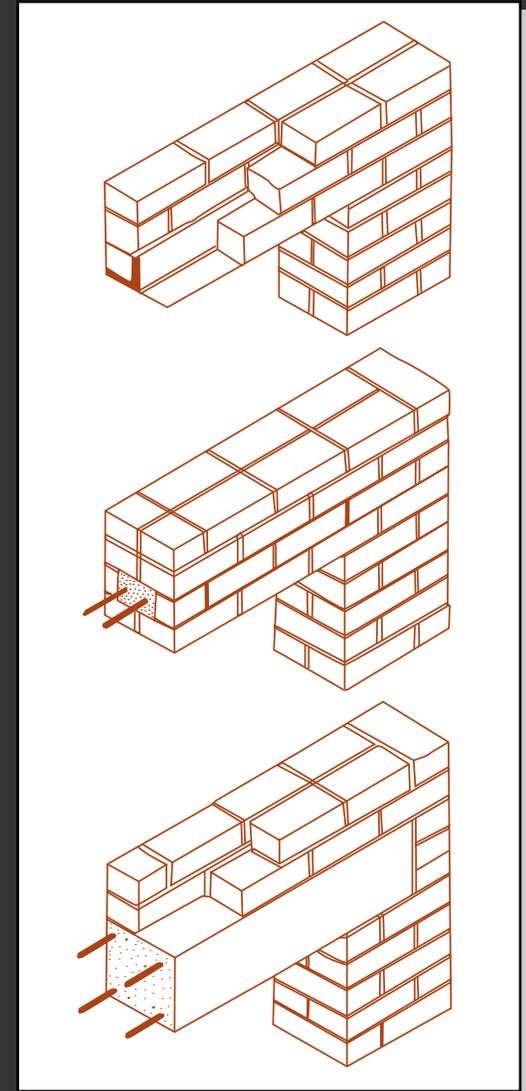
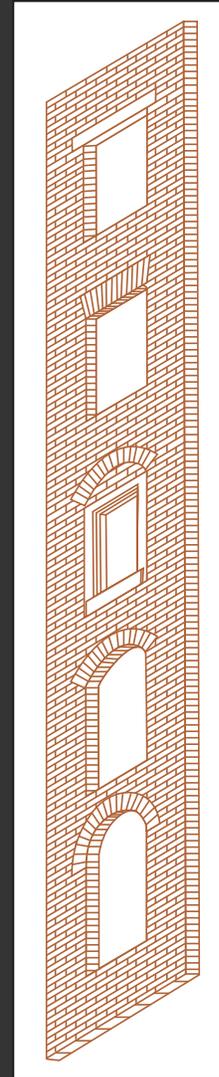
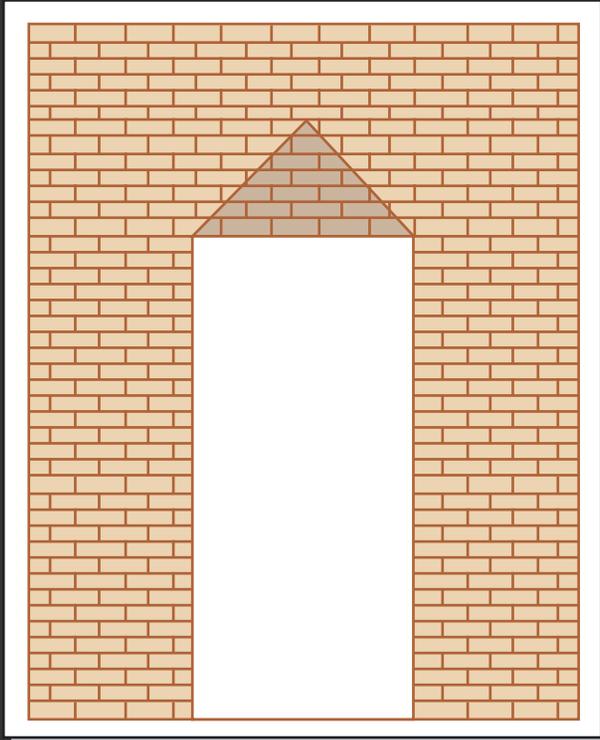
Images by MIT OCW.



Masonry

► Masonry structure

- Openings



▶ Masonry structure

- Thermal insulation
- Rationalization with prefabrication

- ▶ Main reference for lecture contents:
 - "Constructing Architecture" by Deplazes: pp. 23-55
- ▶ Additional readings relevant to lecture topics:
 - "How Buildings Work" by Allen: Chap. 18
 - "Fundamentals of Building Construction" by Allen: Chap. ...
 - "Building Construction Illustrated" by Ching & Adams: Chap ...