

# Shading for East/West Exposures

- Minimize east and west glazing
  - low-altitude angle of the sun
  - it is challenging to effectively shade using overhangs
- Screen walls, Vertical fins and Eggcrate elements
  - effectively blocks low-altitude sun
  - fins can be movable (rotating) or permanent
  - screen walls can be perforated metal, open ended masonry, etc.



## Millowners Association Building, Ahmedabad, India (1954)

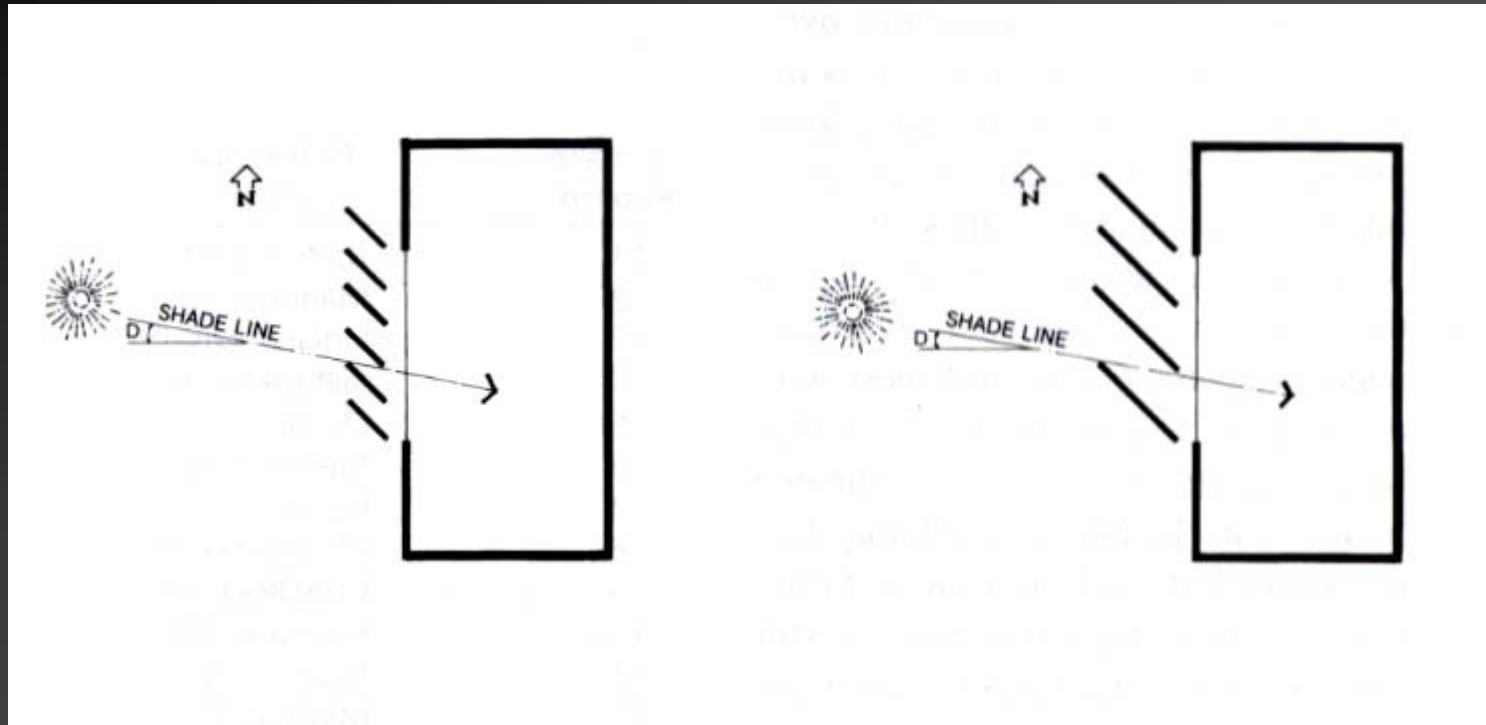
Walls of brise-soleils on the east & west facades to shade interior. Hall is indirectly lit by reflections from curved ceiling, which is kept cool by two gardens & a water reservoir on roof.



West Elevation at Bank One  
Phoenix



West Elevation at Bank One  
Phoenix

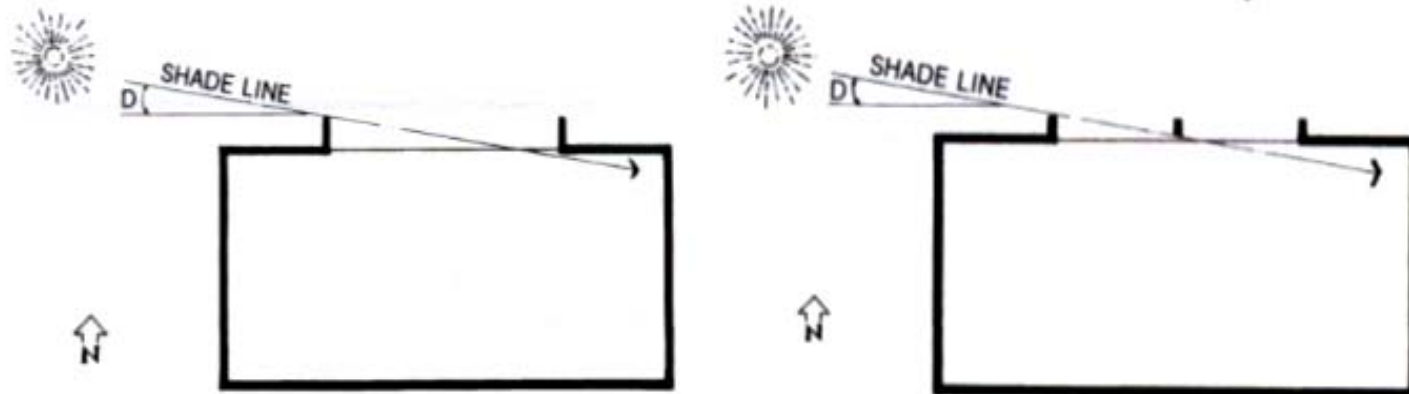


The “shade line” at angle “D” determines the combination of fin spacing, fin depth, and fin slate on east and west windows

**TABLE 9.12**  
**SHADE LINE ANGLE FOR SLANTED**  
**VERTICAL FINS \***

Latitude	Angle "D"
24	18
28	15
32	12
36	10
40	9
44	8
48	7

\* This table is for vertical fins slanted toward the north on east or west windows. Designs based on this table will provide shade from direct sun for the whole year between the hours of 7 A.M. and 5 P.M. (solar time). This table can also be used to design vertical fins on north windows for the same time period.



The “shade line” at angle “D” also determines the vertical-fin on north windows.



East Elevation from North

Foothills Academy



West Elevation from North





West facade, Phoenix City Hall  
Langton Wilson Architects



West facade, Phoenix Central Library  
Will Bruder Architects





West facade, Phoenix Central Library  
Will Bruder Architects



West facade  
Phoenix Central Library  
Will Bruder Architects



Inside West Screen Wall  
Phoenix Central Library







Louvered Skylights, Phoenix Central Library  
Will Bruder Architects



West facade  
Burnette House  
Wendell Burnette Architect





East & West facade  
Burnette House  
Wendell Burnette Architect







East facade, Burnette House  
Wendell Burnette Architect



Louvers (mini-overhangs) on West Elevation in August



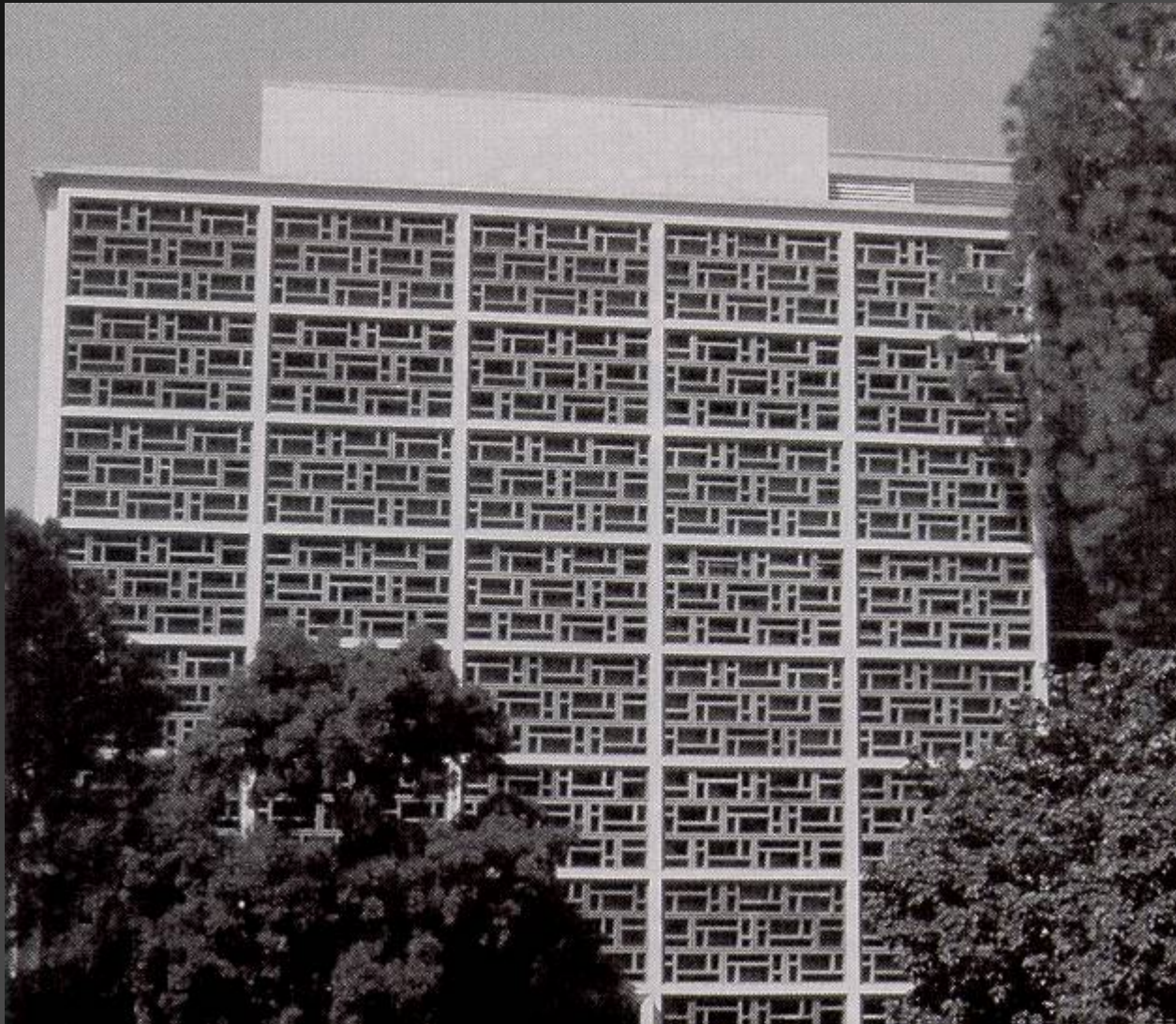


East and west facade - Arup Campus, Solihull, UK  
(Arup Associates, 2001)



Chimney flue tile (16 x 16 x 24) wall on west facade  
AZ Cardinals Training Facility (Jones Studio, 1988)





Eggcrate shading device made of masonry units.



Nelson Fine Arts Center at ASU  
Antoine Predock





West Elevation at DC Ranch



Insufficient Shading on  
West Elevation at DC Ranch





Movable shading at west elevation home remodel



Northwest Elevation at Loloma 5, Scottsdale  
Will Bruder Architect



Northwest Elevation at Loloma 5, Scottsdale  
Will Bruder Architect



Southwest Elevation at Loloma 5, Scottsdale  
Will Bruder Architect





East Elevation at Loloma 5, Scottsdale  
Will Bruder Architect