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>
<thead>
<tr>
<th>Latitude</th>
<th>Angle “D”</th>
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<tbody>
<tr>
<td>24</td>
<td>18</td>
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<td>28</td>
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<td>44</td>
<td>8</td>
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<td>48</td>
<td>7</td>
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*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.
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