

## ACI Clear Cover Requirements

### 7.7 — Concrete protection for reinforcement

#### 7.7.1 — Cast-in-place concrete (nonprestressed)

Unless a greater concrete cover is required by 7.7.6 or 7.7.8, specified cover for reinforcement shall not be less than the following:

	Concrete cover, in.
(a) Concrete cast against and permanently exposed to earth .....	3
(b) Concrete exposed to earth or weather:	
No. 6 through No. 18 bars .....	2
No. 5 bar, W31 or D31 wire, and smaller.....	1-1/2
(c) Concrete not exposed to weather or in contact with ground:	
Slabs, walls, joists:	
No. 14 and No. 18 bars .....	1-1/2
No. 11 bar and smaller.....	3/4

### R7.7 — Concrete protection for reinforcement

Concrete cover as protection of reinforcement against weather and other effects is measured from the concrete surface to the outermost surface of the steel to which the cover requirement applies. Where concrete cover is prescribed for a class of structural members, it is measured to the outer edge of stirrups, ties, or spirals if transverse reinforcement encloses main bars; to the outermost layer of bars if more than one layer is used without stirrups or ties; or to the metal end fitting or duct on post-tensioned prestressing steel; or to the outermost part of the head on headed bars.

The condition "concrete surfaces exposed to earth or weather" refers to direct exposure to moisture changes and not just to temperature changes. Slab or thin shell soffits are not usually considered directly exposed unless subject to alternate wetting and drying, including that due to condensation conditions or direct leakage from exposed top surface, run off, or similar effects.

## CODE

Beams, columns:	
Primary reinforcement, ties, stirrups, spirals .....	1-1/2
Shells, folded plate members:	
No. 6 bar and larger .....	3/4
No. 5 bar, W31 or D31 wire, and smaller.....	1/2

## COMMENTARY

Alternative methods of protecting the reinforcement from weather may be provided if they are equivalent to the additional concrete cover required by the Code. When approved by the building official under the provisions of 1.4, reinforcement with alternative protection from the weather may have concrete cover not less than the cover required for reinforcement not exposed to weather.