

CONCRETE

General

In general, follow the guidelines below when designing and specifying concrete work. Unless specifically indicated otherwise, these guidelines are not intended to restrict or replace professional judgment.

Design Requirements

Structural Elements - ACI 318, designed for calculated structural requirements. A/E's may use their own office standards for details such as chamfered vs. square edges. Include the following language in specifications:

Water shall not be added to concrete at the jobsite.

Sidewalks - Design walks to comply with the requirements of Section 02510 "Walks, Roads and Parking Paving" of these Design Guidelines.

Floors, General: The University supports the use of floor flatness and levelness "F-numbers" as described in ASTM E 1155-87 and ACI 117. Flatness and levelness specified in terms of "1/8-inch in 10 feet" or similar descriptions are difficult to enforce. Job-site quality control will be provided by a testing firm engaged and paid for by the Owner, unless otherwise determined by the University Project Coordinator.

Supported Slabs: Design slabs at least 5-1/2 inches thick, unless otherwise required by code or expected live loads. Do not use thinner slabs even if structurally feasible, without the approval of the University Project Coordinator.

Strength: As required, but not less than 3500 psi at 28 days.

Flat Slabs-On-Grade - Design slabs-on-grade to comply with the following requirements:

Vapor Barriers: Usually required. Omit vapor barriers only in consultation with University Project Coordinator. The practice of perforating vapor barriers to avoid the phenomenon of "slab curling" is not acceptable.

Thickness: Comply with the following:

- General: 4 inches, or greater if required by expected live load.
- Mechanical Rooms: 5 inches, or greater if required by expected live loads.
- Strength: As required, but not less than 3000 psi at 28 days.

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