



Design Standard Concrete

Purpose:

This design standard has the purpose of creating a consistent application of concrete throughout the South San Francisco Unified School District therefore achieving a standard of aesthetic quality, maintenance and performance throughout all renovation and new building projects.

Design Standard:

Submittals

- Submit product data for proprietary materials and items, admixtures, joint systems, curing compounds, dry-shake finish materials, and others if requested by District.
- Submit design mixes for each class of concrete. Include revised mix proportions when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.
- Submit laboratory test reports for evaluation of concrete materials and mix design tests.
- Provide material certificates in lieu of material laboratory test reports when permitted by Architect.
 - Provide material certificates signed by manufacturer and Contractor certifying that each material item complies with or exceeds requirements.
 - Provide certification from admixture manufacturers that chloride content complies with requirements.

Cast-in-Place Concrete

- Test slabs for moisture and alkaline content and include remediation procedures within specifications to prevent finish-flooring failures.
- Submit shop drawings showing elevations, control joint layout, finish, and rebar schedule.
- Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars," for details and methods of reinforcement placement and supports, and as therein specified.



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Sections 03 30 00, 03 35 00 and 03 39 00

Version 1, 2011.9.30

Prevent damage to adjacent concrete curbs, walks, utilities, walls, during installation:

- Repair any damage to concrete edges or breaks in concrete at no cost to the District, by removal and replacement of complete sections.
 - Patching will not be acceptable.
- Provide expansion joints/ saw-cuts and isolation joints. Slab on grade- provide 1/8 inch wide by 1-1/4 inches deep joints at 20 feet maximum spacing in each direction, unless otherwise shown or noted on plans

Concrete Finishing

- Concrete finishes shall receive a hardener and sealer.
- Integral Colored Concrete - L.M Scofield Company, Davis Colors Inc., Solomon Colors.
- Schedule of Locations for Concrete Finish Types:
 - Slabs or Stairs to receive toppings and fills: Scratched.
 - Exposed Stair Fills: Non-slip.
 - Exterior Paved Areas: Light Broomed.
 - Formed Surface to receive paint: Smooth Formed.
 - Concealed Concrete Surfaces: Rough Formed.
- Spaces to receive exposed concrete floors: storage rooms, mechanical rooms, and should be considered in locker rooms and art rooms
- Exposed surfaces shall be graffiti resistant. Apply graffiti-resistant coating on vertical surfaces.
- Concrete sealers shall be able to withstand urine.

Concrete Curing

- Liquid Membrane Curing - W.R. Meadows Company
- Sheet Material Curing - Fortafiber Building Systems Group

Substitutes Allowed?

- Approved equal, if performance and quality equivalency can be evidenced



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Associated Design Standards and Construction Specifications

- ACI 301 Structural Concrete for Buildings
- ACI 302 Guide for Concrete Floor and Slab Construction
- ACI 308 Standard Practice for Curing
- American Society for Testing and Materials (ASTM).
- California Department of Transportation (CALTRANS) Standard Plans (CSP) and Standard Specifications (CSS).
- American Concrete Institute (ACI).

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