

Concrete Testing

Construction Materials Consultants, Inc.

The Cement, Aggregate, and Concrete Division of CMC provides microscopical, physical and chemical testing of hardened concrete.

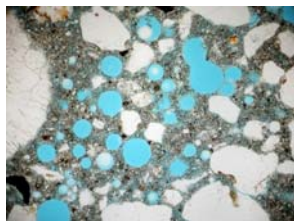
- Condition survey of concrete structure for visual examination and selection of locations for sampling for detailed laboratory investigations.
- Petrographic (microscopical) Examinations (ASTM C 856), Air-Void Analysis (ASTM C 457)
- Chemical Analysis of Concrete such as Chloride (ASTM C 1152, C 1218), Chloride Permeability (ASTM C 1202), Sulfate (ASTM C 114), Major Oxide (ASTM C 114, XRF, AA), Cement Content (ASTM C 1084), Depth of Carbonation (ASTM C 856), Analysis of Organic Admixtures in Concrete.
- Density, Absorption, Voids (ASTM C 642); Length Change (ASTM C 157, C 341, C 490), Scaling Resistance (ASTM C 672); Compressive Strength (ASTM C 39, C 42), Flexural Strength (ASTM C 78, C 293); Tensile Strength (ASTM C 496, C 880); Freeze-Thaw Durability (ASTM C 666, State DOT Tests); Abrasion Resistance (ASTM C 418, C 779, C 944)
- Alkali-Silica Reactivity—Length Change (ASTM C 1293); Alkali-Silica Reactivity—Mortar Bar (ASTM C 227, C 1260); Alkali-Carbonate Reactivity—Length Change (ASTM C 1105); Alkali-Aggregate Reactivity—Petrography (ASTM C 856)
- Failure Investigations of Concrete Surface Defects such as Scaling, Spalling, Blistering, Delamination, Discoloration, Staining, Cracking, Cracking, Cracking, Mortar Lift-offs, Aggregate Popouts, Dusting, and Abrasion.—Why, How, and What to do.
- Investigation of various Chemical Attacks in Concrete such as Corrosion of Reinforcing Steel in Concrete, Acid Attack and Chemical Alterations, Alkali Attack, Sulfate Attacks, Alkali-Aggregate Reactions, Chloride Attacks such as from Deicing Salts, Marine Attacks.
- Frost and Fire Attacks in Concrete—Cyclic freezing and thawing distress, Physicochemical alterations in concrete due to exposure at high temperatures.
- Investigation of Strength Loss, Slump Loss, Slow Setting, and other abnormal behaviors of concrete
- Investigation of Cement and Concrete Burns
- Failure of Protective Coatings, Paint Failure from Drywall, Plaster and Concrete Surfaces, Moisture-related problems

CMC

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For detailed information about other testing, evaluation, and consulting services, please visit us online at:

www.cmc-concrete.com



A thin-section of an air-entrained concrete



Spalling due to corrosion of reinforcing steel in concrete



Concrete exposed to high temperature in a chimney

Concrete Structures We Examine are: Building, Bridges, Pavements, Driveways, Sidewalks, Patios, Pipelines, Residential and Commercial Constructions, Portland Cement Plasters, Precast/Prestressed Concrete Panels, Industrial Floors, Tunnels, Foundations, Retaining Structures, and Architectural Features.