



City of North Miami Beach, Florida

BUILDING DEPARTMENT

PROCEDURES OF CONCRETE RESTORATION

All applicants shall follow the following procedures for the permits for Concrete Restoration.

- 1) The engineering for all concrete restoration work shall be performed by a registered Structural Engineer.
- 2) The Engineer shall perform a detailed condition assessment at site.
- 3) The Condition assessment shall include survey for cracks & spalls in concrete members.
- 4) A certified laboratory shall be hired to perform chloride ion and compressive strength test of concrete.
- 5) The cracks shall be classified as -large, medium & small.
- 6) The cracks and the spalls shall be mapped on the plan with identifications.
- 7) A legend shall be included on the plan describing the type of crack or spall.
- 8) An estimate of each type of crack (in Linear Feet) and spalls (in Square Feet) for each floor shall be provided on the plan.
- 9) Repair details for each type of crack and spalls shall be provided on the drawings.
- 10) Specifications of materials for each type of crack and spalls shall be provided on the drawings.
- 11) A note from the Engineer requiring experienced Applicators of the restoration materials shall be provided on the drawings.
- 12) If deterioration is noted in the reinforcing steel and it is larger than 10% in diameter, then the reinforcement shall be replaced or additional reinforcement shall be added. A detail regarding the reinforcement splice shall be provided.
- 13) The chipping and cleaning of concrete shall be addressed on the drawings.
- 14) A Special Inspection Plan shall be provided.
- 15) Submit the City of North Miami Beach Special Inspector form. The Engineer or his/her authorized representative shall be present at the site at all times when the restoration work is performed.
- 16) The Inspection reports shall be submitted to the City of North Miami Beach Building Department every alternate week.
- 17) At a minimum, the following standards shall be referenced on the drawings. The Engineer may add other standards, if deemed necessary. A copy of the ICRI Guidelines for Concrete Restoration shall be included with the specifications.
 - Florida Building Code (Existing)
 - Concrete Repair Manual - International Concrete Repair Institute & American Concrete Institute
 - ACI 437R- Strength Evaluation of Existing Concrete Buildings
 - ACI 201.1R - Guide for Making a Condition Survey of Concrete in Service
 - ACT 228.1R – In-Place Methods to Estimate Concrete Strength
 - ACI 546R - Concrete Repair Guide
 - ACI 503.4 - Standard Specification for Repairing Concrete with Epoxy Mortars
 - ACI 506.2 - Specification of Concrete
 - ICRI Guideline No. 03733 - Guide for Selecting & Specifying Materials for Repair of Concrete Surfaces
 - ICRI Guideline No. 03731 - Guide for Selecting Application Methods for Repair of Concrete Surfaces
 - ICRI Guideline No. 03730 - Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion