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LEED ordinance buoys integral waterproofing

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With the Los Angeles City Council adoption of a 'green' building ordinance requiring new commercial and high-rise residential structures exceeding 50,000 sq. ft. of floor space to meet a Leadership in Energy and Environmental Design (LEED) standard, Hycrete is poised to play an increasingly high-profile role in City of Angels construction. Its admixtures effecting integral waterproofing of concrete render external membranes, coatings and sheeting treatments unnecessary, thereby minimizing buildings' carbon footprint by eliminating high embodied-energy materials while reducing toxins and waste of nonrenewable resources.

Though Los Angeles is the largest city to date to impose 'green' building rules, an even stricter ordinance before the San Francisco Board of Supervisors would establish a 25,000-sq.-ft. threshold for LEED compliance at a higher level. Nonetheless, L.A. city officials note that the new law, which also covers major renovations and low-rise developments of 50 units or more, is expected to prevent about 85,000 metric tons of carbon dioxide emissions — the equivalent of removing 15,000 cars from the roads — over the next five years. They predict that about 150 new and renovated buildings, totalling approximately 7.5 million sq. ft., will be covered by the ordinance annually.

Attuned to the accelerating 'green' construction movement, Hycrete, Inc., aims to occupy a leading position among companies providing sustainable development strategies. Accordingly, concrete batched with its liquid admixtures achieves hydrophobic performance, i.e., less than 1 percent absorption under BSI-1881 122. Thus, Hycrete admixtures transform concrete from an open network of capillaries and cracks into a waterproof building material characterized by ultra-low absorptivity, company representatives affirm. Eliminating the entire external waterproofing process, an integral approach offers extensive benefits, they add, including simplified design, reduced material demands, increased site mobility, safer conditions, and time savings. Among the most common applications are deep foundation slabs and walls, podium and plaza decks, roof, parking and tunnel structures.

Hycrete's recent use as the waterproofing technology in a prominent L.A. project, the Solair-Wilshire building, signals a growing recognition of its 'green' assets. Upon completion in early 2009, the property will feature 186 condo units, a 578-car garage, business center, pool, and library, in addition to retail space covering 40,000 sq. ft. The project's two-level, below-grade parking substructure includes shotcrete walls finished by Superior Gunitite and a hydrostatic mat for which ready mixed was supplied by Associated Concrete's Los Angeles plant. The 6- to 8-ft.-thick slab waterproofed throughout the top 12 inches, plus 12-in.-thick shotcrete walls, consumed 3,512 yards of Hycrete-enriched concrete. A low water/cement-ratio (0.4) mix with hydrophobic additive yielded 0.5 to 0.8 percent absorption levels, an order of magnitude lower than conventional concrete, Hycrete officials assert. Moreover, they report, the admixture package was adjusted to deliver desired placement, set time, and finishability.

A second Los Angeles project now in progress, Village Walk at Tarzana, will employ Hycrete admixtures in cast-in-place and shotcrete totaling 5,100 yards for below-grade, deep basement construction. Supplying ready mixed for the mat is National Ready Mixed, Sun Valley plant. Shotcrete for mostly 12-in. walls (about 15 percent of the project's shotcrete walls will be 10 or 14 inches thick) is produced by the Sun Valley plant of Standard Ready Mix and applied by Structural Shotcrete. Completion is slated for mid-2009.