

Calgary Bus Barn

Calgary, AB, Canada

BACKGROUND

Air Entrained Concrete

In September 2003, Calgary Transit constructed an 92,666 ft² (8,609 m²) addition to their bus barn facility involving 1,290 cubic meters of both air and non-air entrained abrasion resistant concrete. Abrasion resistant concrete was specified to withstand heavy wear of bus traffic. The bus barn entrance aprons specified 4% to 7% air entrainment for the CSA Class C2 exposure conditions with the remainder of the interior concrete being non-air entrained (Class N). The slab thickness was 6" (150mm).

The project manager Devitt & Forand, and the concrete supplier Inland Concrete, recommended Hard-Cem, an integral concrete hardener to provide a superior abrasion resistant concrete floor. Hard-Cem was simply added at the Inland Concrete batch plant mixer from a silo at a rate of 40kg/m³ and supplied over three days of pumped concrete placement. The finishers appreciated the quality controlled mix which was "creamier" and easier to work and finish. Hard-Cem was ideal for this application requiring both freeze-thaw durability and superior abrasion resistance.

SOLUTION

Hard-Cem is engineered to provide concrete with superior hardness and improved durability for demanding construction projects. Hard-Cem is unique in its ability to enhance the integrity of air-entrained and non air-entrained concretes. When added to concrete, Hard-Cem's proprietary technology increases the hardness of the concrete paste and reduces fine and coarse aggregate exposure that creates degradation to concrete surfaces. Since it is integral it continues to offer surface wear resistance throughout its life. Increasing the abrasive-erosive resistance of concrete means maintenance costs are reduced and its service life substantially extended. Hard-Cem provides significant advantages for projects needing enhanced durability including: paving, bridges, parkades, industrial floors, precast pipe, dams, spillways, stilling basins, and erosion control structures.

OWNER:

City of Calgary Transit

PROJECT MANAGER:

Devitt & Forand Contractors

CONCRETE SUPPLIER:

Inland Concrete Ltd

CONCRETE PLACER:

Dynamic Concrete Pumping

TOTAL AREA:

92,666 ft² (8,609 m²)

PRODUCTS:

Learn more at kryton.com
Hard-Cem®



Hard-Cem extends concrete wear life up to 6 times under harsh conditions.



Hard-Cem is the only hardener that can be used on air-entrained concrete.