



Meticulous Concrete Oversight Pays Off at New Google World Headquarters

Nestled amongst acres of natural woodlands and marshes, Google's newly constructed 600,000 sq. ft World Headquarters clearly stands apart. Rising out of nature, this visually striking campus features a sweeping canopy roof and dragon-scale solar skin panels that harvest rainwater and optimize natural light. Coordination between world-renowned Architects Heatherwick Studio of London and BIG of Copenhagen effected Google's very first ground-up, living/working, regenerative main campus that is expected to meet LEED-NC v4 Platinum certification. Built with flexibility at its core and a sense of community at heart, 3,000 Googlers enjoy enormous interior atriums, floor to ceiling natural light and workspaces nestled in a park-like setting. No doubt, Google achieved its goal of constructing a distinctive, adaptable workplace that supports evolutionary approaches to work.

FST Design Build Concrete is today's leader in concrete design and oversight

Preparations for interior floors began two years prior to construction where FST and the design team planned a large-scale, exposed polished concrete installation using **Mirrorcrete™ Concrete Polishing System**. Critically important for FST was formulating a unique concrete design mix to specifically meet Google's architectural specifications and stringent LEED-NC v4 Platinum requirements. Following approval of 20' x 20' mock ups, FST's concrete oversight proved key to perfecting the surface of these substantial, multi-year pours.

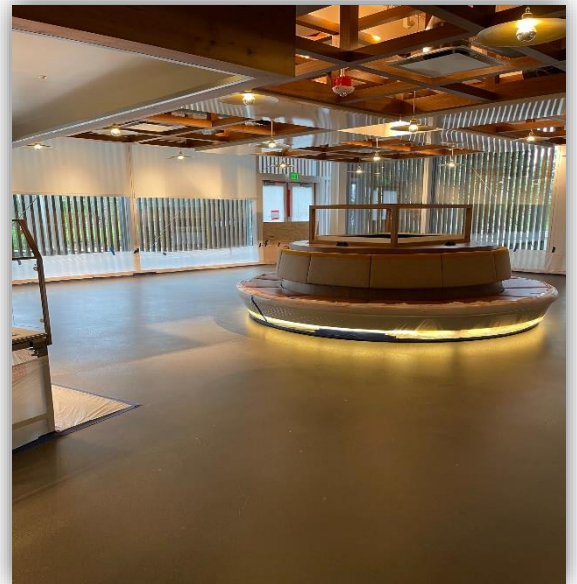
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At Google World Headquarters, concrete oversight involved 5 steps:

1. Collaborating with Central Concrete to formulate a LEED Platinum mix design.
2. Ensuring the specified cement, sand, slag and lightweight aggregate remained consistent over a four-year installation period.
3. Overseeing crews during concrete placement to optimize installation quality, color and flatness.
4. Utilizing **FST's patent-pending, advanced 3D laser management** device for precise floor flatness measurements and outcomes.
5. Managing application of **Mirrorcure™** curing agent to prevent cracking and create exceptionally flat floors.

Ultimately, diligent oversight resulted in an impressive final **Floor Flatness Average Value of FF 48** over unshored suspended metal decks, as confirmed per Google's Independent Testing Agency. As a result of exceeding specifications for floor flatness, FST produced a stunning polished concrete floor which provided an ideal foundation for SPM Design's colorful artwork.

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Creating an exceptional palette for amazing artwork

Plans for Google's concrete floor color and accompanying aggregates were made in partnership with U.S. Concrete's Head of QC, Patrick Farley. Following an architectural pivot, the original high gloss polished concrete floor was retinted towards a darker, matte shade, providing a brilliant backdrop to best highlight SPM Design's artwork. Googlers now enjoy colorful pops of art, integrated throughout the polished concrete surfaces of the two main floors.



Contemporary TekFlor™ concrete stairs

When it came to constructing close to 1,000 stairs that connected the upper and lower floors, cast-in-place concrete was the installation of choice. To create the perfect marriage between floors and stairs, Architects relied on FST's **TekFlor™ System** to create a cement terrazzo topping that was custom-engineered to match the concrete slabs for an elegant polished, high impact- and abrasion-resistant finish.



Project	New Google World Headquarters Mountain View, CA
Year of construction:	2019-2023
Scope:	600, 000 sq ft on 2 main floors + 300,000 sq ft basement
Owner:	Google parent company, Alphabet
Architects:	Heatherwick Studio, London Bjarke Ingels Group, Copenhagen/New York
General Contractors:	Hathaway Dinwiddie: Core and Shell Devcon Construction: Interior
Concrete Placement:	Dolan Concrete
Artwork:	SPM Design
Concrete Design, Placement Oversight & Polishing:	FST Design Build Concrete

Products and Systems:

- Mirrorcure™ curing agent
- Mirrorcrete™ Concrete Polishing System
- TekFlor™ System
- FST's patent-pending, 3D laser-management device



Keeping Concrete Clean and Green

To complement Google's deep commitment towards green building design, FST maximized recycling efforts by creating an on-site cement slurry compressor station that repurposed cement slurry into clean, reusable water and concrete aggregates. As a result, ***fresh new concrete was produced with environmentally friendly, silica dust-free measures.***



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