



# Cellular Concrete

Cellular concrete is a low-density fill material that is mostly used for geotechnical applications. It is made from liquid cement mixed with water, foam, and air to turn it into a concrete product that is much, much lighter than regular concrete.

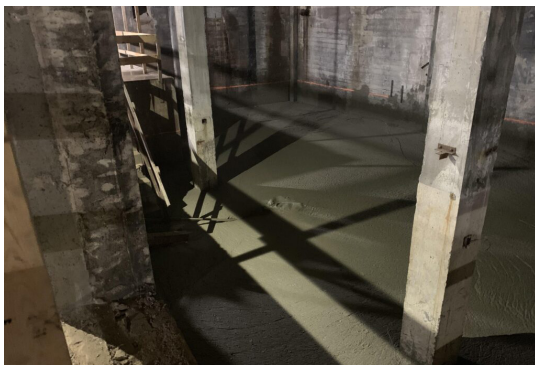
Pound for pound, cellular concrete stacks up at a fraction of the weight.

- Cellular Concrete = 30lbs/cu ft
- Water = 62lbs/cu ft
- Dirt = 100lbs/cu ft
- Regular Concrete = 150lbs/cu ft

## How We Use It

We use cellular concrete (similar to the large Styrofoam blocks you may see on road construction projects) as lighter-weight fill that still has the strength of the soil. Since it is so much lighter, there is less settling and underlying soil consolidation as compared to regular concrete, dirt, or gravel. You can crumble it with your fingers or encase underground utilities with it and use a shovel to excavate.

Cellular concrete can be pumped which makes it ideal for projects where you can't access the area with traditional construction equipment. For example, filling in the pool in the basement of the Warrior Hotel in downtown Sioux City was easier to do because we could pump it. It was a better solution for the Warrior since it was lighter weight and caused less settlement. And at a lower cost, cellular concrete is a more economical option than other solutions.



## Why We Use It

We've been using cellular concrete for several years. We have the expertise to do the job right the first time and avoid costly mistakes.

- You have to know a lot about concrete because you're making it.
- It's a liquid and it needs to be pumped for long distances, so it takes an expert in pipes and underground utilities.
- You'll need to know how to mix the product, what proportions of ingredients to use, and what the proper mix design is for the specific application you're working on. That all comes from an in-house engineer.

We can do all of that, so, why wouldn't we?

Cellular is more complex than it appears; it takes a team of highly-knowledgeable people to be successful - which is what we have. That's what makes us one of Sioux City Metro's best construction & engineering companies.

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