

Project Profile



Levelrock® CSD® Floor Underlayment

Application/Building Type:
Multi Family Construction

Project
Stonebridge

Location
Cleveland, Ohio

Product(s)
LEVELROCK® CSD® Floor Underlayment



A total solution framing package using LEVELROCK® CSD® floor underlayment and light-gauge steel proves durable and economical for a Cleveland condominium development.

In 2004, the owner of the Stonebridge condominium development in Cleveland needed help. He wanted a total-solution framing package, including the flooring application, without compromising quality. He had the view that poured-in-place concrete floors were practical, but time-consuming to install.

"We showed him how to build with our steel framing system, but without using concrete," said Mike Whitticar, President, Dietrich Building Systems, a Worthington Industries Company. "It can be done in less time, with higher quality and for less cost. He really liked hearing that."

Dietrich proposed a value-engineered design solution: Its patent-pending framing technology that contains the TradeReady® Floor System combined with LEVELROCK® CSD® floor underlayment from the Specialty Products Division of United States Gypsum Company.

The system was unbeatable. The framing technology shaved installation time. The light-gauge steel floors eliminated the need for drop ceilings, and U.S. Gypsum's new underlayment - used instead of concrete - reduced the weight of the building and provided a tremendous scheduling advantage. Trade traffic resumed the day after each LEVELROCK CSD floor underlayment pour.

"The owner was frustrated by the cost and delays of traditional flooring systems. We were able to push back the 'wet trades' and save him time and money," said Whitticar. "He got over his frustrations as soon as we erected the framing and flooring ahead of schedule and ahead of budget."

The success at Stonebridge, and on other jobs, has architects and builders across the country asking questions: Why use poured-in-place concrete over corrugated steel deck when something lighter-weight and faster-applying is available? And why use wood framing at all when cold-formed steel flooring systems go up quickly and economically?

Insurers Like Steel

For several years, light-gauge steel framing and steel joists have been coming on strong in light-commercial building construction. More and more often, hotels, condominiums, school dormitories, small office buildings and a variety of mixed-use projects utilize steel framing rather than wood.

For big developers who build many structures each year, light-gauge steel offers the ability to build five to eight stories economically," said John Mandel, market manager for U.S. Gypsum's Specialty Products Division. "One of the other advantages of steel is that it is noncombustible, and many insurers are advocating its use."



Architects and developers find that steel opens doors to greater design flexibility and cost savings. Pre-engineered, panelized light steel framing, for example, can be installed in irregular-shaped buildings. Light-steel floor joists speed up project schedules, and poured underlayments save time.

The inherent strength of lightweight poured underlayments also provides key benefits. LEVELROCK CSD floor underlayment, for example, provides 3500 to 4500 psi compressive strength, allowing it to be applied at much lower thicknesses than poured-in-place concrete.

"The advantage from a material standpoint is cost, but significant savings are achieved due to its lower weight," said Mandel. "Since LEVELROCK underlayment weighs only 12.8 pounds per square foot, architects have greater design flexibility and the potential to build higher structures."

Conventional concrete requires a pour of 3 inches or more. LEVELROCK CSD floor underlayment, on the other hand, requires only 1-9/16 inches from the bottom of the corrugated steel deck fluting to 1 inch over the crest of the flute. Less material means less overall weight and less setting time. A concrete pour requires seven to 10 days before resuming trade traffic (28 days to cure fully), while a LEVELROCK CSD floor underlayment pour handles sub-trades within 24 hours.

"No other flooring manufacturer has a product formulated for steel that pours right onto the diaphragm, is UL listed and has sound attenuation properties that exceed International Building Code standards," said Mandel.

As more projects convert from wood framing to light-gauge steel, LEVELROCK CSD floor underlayment is helping to pave the way.

- Dietrich Building Systems, for example, recently used LEVELROCK CSD floor underlayment in the construction of the Parkview Condominiums, a high-end project in Columbus, Ohio. The new underlayment was chosen to deliver the look and feel of concrete and provide high performance, but with less weight and cost.

"LEVELROCK CSD underlayment allows us the ability to reduce construction time. Our clients save money on insurance costs and open their building quicker," said Whitticar. "Imagine how much money a 120-room hotel generates when they can open 10, 20 or 30 days quicker. That money goes straight to the bottom line."

- Pymer Plastering Inc., Columbus, Ohio, recently poured LEVELROCK CSD floor underlayment in a six-story condominium project in Columbus. Company officials said that the sub-trades were impressed with the hardness and evenness of the surface, and were surprised to be working on the underlayment the day after



it had been poured. Most flooring installations put tradesmen off a job for days or even weeks, but LEVELROCK CSD floor underlayment sets up quickly. It can significantly streamline the trade scheduling.

"I spoke to a number of subcontractors after one pour, and they were amazed," said Sherry Pymer, Vice President, Pymer Plaster. "LEVELROCK CSD underlayment doesn't chalk, flake or gouge like the other poured gypsum underlayments they know."

It's not often that new products revolutionize design and construction practices. Yet LEVELROCK CSD floor underlayment and light steel joist systems have created a real buzz among architects, builders and contractors. But more than just talk, steel framing and poured gypsum underlayment are being used on more and more projects. It seems the new systems are here to stay.

"We've used USG products as a company for more than 100 years, and we know their reputation for quality and for doing their homework," said Pymer. "I'm convinced the company is onto something big by producing an underlayment that can be used with corrugated steel decking. These systems are the wave of the future."

