

Part of the Advancing Prefabrication Series

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AN EXCLUSIVE INTERVIEW WITH:



Dr Garry Vermaas
Institutional Director
STONEPILE Construction College

Following my recent discussion with Paul Doherty about the future of industrialization in the Age of Pandemics, it was great to be joined by **Dr Garry Vermaas, Institutional Director of STONEPILE Construction College** this week to focus on how IC is opening up doors for future leaders across the AEC industry.

As a new institution of higher education, STONEPILE Construction College is the first of its kind - dedicated to the industrialization of construction via innovation and leadership. Here, we find out more about where this adventure started, how the first group of students are getting on, and what this means for industry partners looking for the new generation of leaders to lead prefabrication and modularization to new heights.

So tell us Garry, what led you to establish STONEPILE Construction College? Why now?

I have been working in construction for 30 years, starting by working with my father's construction firm. In this time, what I have realized is that the level of talent in the field has only decreased. It never made sense to me that you could get a bachelor's degree in communication, but not in construction... it is one of the hardest professions there is, requiring a robust skillset, so why doesn't this exist? When I was a senior in high school, I asked my counselor about a college where I could major in construction. She looked it up in a book and told me I should major in structural engineering. That was my closest option. So, I did that!

But we need more than that as an industry, especially in the current crisis of fewer dedicated tradespeople and the need for a tech-savvy influx of talent. This created the perfect moment to launch STONEPILE Construction College. As far as I know, there still are no other colleges dedicated 100% to the field, so we aimed to change all that.

It's a great initiative and very much needed that's for sure! And it's interesting to see that STONEPILE provides three routes to success: an Associate's in Applied Science in Construction, a Bachelor's of Applied Science in Construction Management and a Master's of Applied Science in Prefabricated, Offsite, and Modular Construction. I appreciate one of these is solely dedicated to prefabrication and modular expertise, but I know that actually all of your programs highlight IC as a cornerstone of your curriculum. Why is that? What led you to dedicate your programs to the skills needed for offsite construction?

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In the last 10 years, construction costs have continued to rise about 5% per year. Many projects no longer make financial sense, leading to the need for innovation. It costs more money to build homes and apartments than the average American can afford. But construction as an industry is not keeping pace with technology and innovation. We are in the fourth industrial revolution, and the jobsite has missed almost all of them. Therefore, I truly believe offsite construction is the future of construction - at least one major part of it - and anyone planning to work in this field must understand that the industrialization of construction is a solution that cannot be overlooked any longer. That's why we have built elements of this into each curriculum.

Our Associate and Bachelor students are focused on learning the six main components of construction: architectural design, building codes, engineering mechanics, trade installation, products, and manufacturing. We use a six touch-point learning system, which is asynchronous and online, allowing students to set their own schedule. The students also have a practical class that offers them experience on the field and all the components of site construction.

Whereas the Masters students are focused solely on industrialized construction, offsite, prefabricated, and modular construction. Their curriculum focuses on knowledge through the application of

discussion boards and research papers dedicated to innovating for the future. Together the class is mastering the cutting-edge and continually evolving world of IC - it's a really exciting space to be working and learning in!

It's clear a lot of what you are doing is not only improving the quality of education for those coming into the construction industry, but also showing younger students that construction is so much more than standing in a muddy field in a hard hat and boots. How have you been working with schools and colleges to get this message out there?

Every week, we send our newsletter to 60,000 high school counselors around the country. Step one is educating the counselors to understand what the construction industry is all about, including topics about leadership, women in construction, and the new technology that allows us to build better, greener, and faster than ever before. Then, they can get the right message out to students. The world of higher education has been lying to us for the past 30 years, telling us that construction jobs are for those who cannot afford or succeed in college. We are committed to changing all that, showing young people the incredibly lucrative and fulfilling careers in the construction industry.

You're completely right. But it's going to take a village to change perceptions and reinforce this message. I mean, we have a long way to go even within the industry when it comes to everyone realizing the opportunities offsite construction affords when leveraged in the right way. In your opinion, what more do we need to see from the industry to help grow the adoption of prefabrication and modular right now?

The biggest problem in construction is the fragmentation of the industry, with each player only focused on their small piece of the puzzle. No one is looking at the process as a whole—that is the problem. The question is: who can take that on? To revolutionize the construction industry and take us into the future, we need teams to understand the whole project from beginning to end and optimize the process. That is where our institution of higher education comes in. I believe we need college-level thinking and research to bring all the pieces together into a cohesive, problem-solving plan of action. Our goal at STONEPILE Construction College is to train students in BIM, robotics, AI, and logistics, so they can understand the whole and create more efficient ways to build. We are analyzing all the technologies coming at us to understand which make practical sense and how to logistically make them work together for the industry.

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Well we are certainly looking forward to seeing the great things that come from your students and working with them across our Advancing Prefabrication event series in the future. Starting again with our collaboration for Prefab Connect in just under two months' time. What are you looking forward to most about the opportunity to connect virtually again as an industry in January?

For me it's the opportunity to kick off 2021 meeting other like-minded futurists who want to collaborate on how to harness the power and potential of prefabrication, modular, and IC to help build the world better. The time is now to work together on bringing technology, experience, and process analysis to create an optimal path to success, and these platforms are critical to starting those partnerships.

To find out more about **STONEPILE Construction College** and the way you can collaborate with their programs, visit www.stonepile.us or **join us in January at Prefab Connect** where you will have the opportunity to meet with Garry and hundreds of industry trailblazers like him to help forge that path for the future of our industry.

DOWNLOAD YOUR COPY OF THE FULL PROGRAM HERE

