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Project of the Month: Aberthaw completes work on New England's 1st mass timber construction for Farley White at 90 Arboretum

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Newington, NH September marked the end of the first phase of construction at 90 Arboretum, located within the Pease International Tradeport. What started as an out of the ground office building is now a structure that will forever hold the distinction of a first of its kind for New Hampshire.

Farley White Interests wanted to provide a class A office building that would transcend traditional design, and also reduce the carbon emissions from construction. They found that with Mass timber framing, characterized by the use of engineered wood columns, beams and decks, CLT fabrication and installation creates an environmentally sustainable method that produces fewer carbon dioxide emissions than traditional steel framing methods. With an added ability to utilize the exposed wood into a warm and light space design with results that are only fully realized when seen in person. This construction type is now seeing a shift from a specialty system to more mainstream. With the Pacific Northwest gaining lots of attention in its pioneering use of these materials, the North East has also seen considerable momentum build in the last few years.

Teaming up with SGA Architects and enlisting Aberthaw Construction Company the team started working together in the preliminary stages to conceive, design and manage the viability of the

project. What they have ended up with is a building that has drawn interest from across the country. Most notably with perspective tenants. When the project broke ground it did so on the speculation of gaining a tenant or tenants once the building was completed. Working with this plan, the overall design was left that the building could be a single tenant for the entire building, an entire floor, or floors and MEP's were designed so sub areas of individual floors could be leased to separate tenants. With the start of COVID-19 during the mid-stage of construction, it would seem that there would not be much positive news to report on per tenant agreements. But that is again where this project and this building shines. As of now two of the three floors are under agreement with designs in progress. Aberthaw Construction will continue with the fit out of these floors and will be delivering them to the tenant in February of 2021.

Some of the most complex issues with the construction of this building and that are inherent to mass timber construction is the need to protect the timber from UV and moisture during the construction. Although the erection is quick, moisture particularly ice can make things go wrong quickly. As decking panels that can come as long as 60 ft and 10 ft wide are lifted into place they really need to be protected for bad weather.

Ken Seitz, site superintended of Aberthaw Construction, said, "We had temporary protection built on-site to wrap all the vertical columns in the building because the columns would be a finish aspect of the design, we needed to make sure that nothing would damage them, UV, moisture, or say a man lift accidentally bumping into one." When asked about some of the challenges in making sure all the MEP's would hit their mark on the prefabricated cutouts that were done during the manufacturing of the beams and decks Seitz went on to say "The team spent a considerable amount of time modeling the mechanical and electrical systems to ensure all systems were coordinated with the structural components because there wasn't a tenant for any of the floors, there was a need to make sure that every MEP configuration needs were met for future tenants" When you look around, you see here and there factory cutouts through ceilings and beams that seem to be right at home and add more depth and interest to the design.

Soon people will be returning to work, and for some lucky people they will be returning to work to brand new space that will always hold the distinction of being New Hampshire's first mass timber – CLT office building project.

The project team included:

Farley White Interests - Owner/Developer

SGA Architects - Architect

Aberthaw Construction - Construction Manager

Cushman & Wakefield - Exclusive Leasing Agent

Berkshire Bank - Financing/Lender

Colliers International - Capital Markets