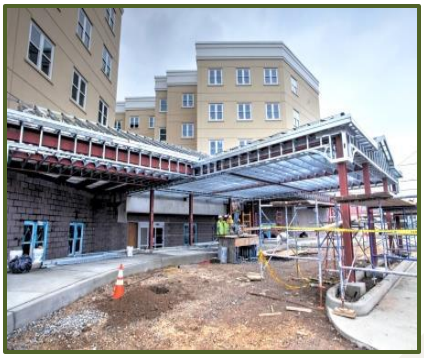
Every Building Tells a Story



There is a story behind every major building project. A story within a story if you will. ***The Premier's*** back story is as unique as its physical plant.

The story begins more than 12 years ago when ***The Premier's*** ownership team looked into the future and saw the new face of senior care. They saw the need for a building that could support a more acute level of nursing care with the flexibility to provide a wide array of evolving services on a long term, short term and outpatient basis. Over the next 9 years, ownership patiently acquired the land adjacent to its existing headquarters along with several parcels "across the street". The primary tract, which fronts on 3 streets, would house the main structure. The parcels across the street would serve as satellite parking fields for visitors and staff.

Although the site had many advantages, it also presented some significant challenges. It was our job as the architects to overcome these challenges, coming up with solutions that not only solved problems, but that also made for a better building and project.

We overcame a zoning height restriction by selecting the shallowest structural system available to us, a poured-in-place concrete frame. This not only solved the "height problem", it produced an extremely structurally stable and fire proof building with a very high level of safety. To further manage the height issue we needed to specify an HVAC system that would allow for shallow ducts. We chose a combination of a VRF System paired with a dedicated outside air system. This allowed for small ducts to deliver fresh air to resident rooms where small decentralized units located above ceilings would heat or cool the air depending on the season. In addition to the benefit of small ducts, this approach provides an extremely high level of energy efficiency. The VRF system, coupled with the specification of a highly insulated exterior skin and LED lighting throughout the building produces an overall level of building energy efficiency that significantly exceeds that required by the energy conservation codes.

The design and construction team also had to overcome several obstacles created by "mother nature". In order to create the space needed to house ***The Premier's*** service, storage, maintenance mechanical and food service areas, it was necessary to build a partial cellar beneath the building. Unfortunately, the ground water table was higher than the level of the proposed cellar. This presented two problems; how to temporarily dewater the site so we could excavate the cellar and how to keep water out of the cellar after it was built.

The project's general contractor (G. Fazio) and the owner's construction representatives (Whiting-Turner) came up with a novel solution. Whenever you pump water out of the ground to create a "dry excavation" you must return that water to the ground. Our site footprint was too small to put the water "back into the ground" without flooding out our own excavation. Obtaining DEC permits and trucking the water off-site would be exorbitantly expensive. Fazio's solution was to install the required underground drywell drainage system for one of the new parking lots across the street prior to excavating for the new cellar. With the permission of the local building authority (which we received) we could then pump the ground water "across the street" using temporary piping/hoses.

This same parking lot also became a "life boat" to solve an issue related to the roof storm water. Every municipality has restrictions on how much storm water from a building or site can flow unrestricted into a public sewer system. In our case, we were not permitted to put any site storm flow into the municipal system. Instead, we were required to install drywells, which are buried concrete rings with perforated sides that allow water to slowly leech into the ground over time. Our problem was, we did not have enough property to physically situate all the drywells we needed. The project's civil engineers (VHB) came up with the solution by simply putting more drywells beneath the parking lot across the street and connecting them to the building's roof drainage system via permanent storm piping beneath the street.

So, with solutions for building a "dry cellar" and managing our roof storm water, there was one problem remaining: How to Keep the Cellar Permanently Dry!

Working with the experts at Langan Engineering, we specified a sophisticated membrane waterproofing system that had to be carefully coordinated with the building's concrete foundations so that every structural joint and pipe penetration was water stopped.

Every building's cellar has piping running beneath it. At ***The Premier***, this underground network was extensive due to the fact that the central kitchen is located on the cellar level. So, we were faced with the challenge of creating a watertight cellar floor slab that would be penetrated by a multitude of piping, each penetration a potential leak source. The solution was somewhat counter-intuitive. Beneath the kitchen, we sank the foundation deeper "into the water table". This allowed us to create a crawl space (pipe-way) between the waterproofed foundations and the now non-waterproofed kitchen floor.
The pipe-way was filled with sand, providing a solid bed for the underground piping. As the kitchen floor was no longer a waterproofed slab, it could be penetrated by piping without issue.

So as you can see a good part of every building's "story" is hidden below the surface and sometimes even under water. At John W. Baumgarten, we are extremely proud to be the architect's for ***The Premier*** and we have been fortunate to be able to work with a great team of construction and engineering professionals backed by a supportive ownership team.