References

Uponor expertise supports state-of-the-art children's hospital



Uponor involvement

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Uponor was proud for the chance to contribute to such a worthy initiative – a facility dedicated to the care of sick children. Uponor specialists made a point of actively participating early on in the need-assessment and design phases of the project. Their contributions included a range of much-valued municipal engineering and building technology solutions.

Project Facts:

Location
Helsinki, Finland

Completion
2017

Building Type
Health Care

Product systems
Storm water

Project Type
New building

A custom-build for a worthy cause

Among these was an Uponor designed and fabricated Weholite stormwater tank with a capacity of one hundred cubic meters. It will be used to attenuate stormwater runoffs from the grounds of the new hospital prior to the water being discharged into the municipal stormwater network. As Teemu Salminen, Project Development Manager at Uponor, explains, "The current capacity of the city's stormwater network is no longer sufficient to handle stormwater formed in the area, so it needs to be held back in a sufficiently large tank like the one Uponor experts advised for this project."

The Weholite tank was custom-built at Uponor's Vaasa factory, and was tailored to meet the specific requirements of the new facility. Salminen notes,
''Among other things, the length of the tank, its inlet and outlet connections with their elevations, and the service hatches were designed according to the unique configuration and characteristics of the hospital's site. Likewise, several inlet connections and inspection manholes were built into the tank, since stormwater enters the tank from several directions.''

Early cooperation delivers the best results
Uponor's expert specialists were involved in the project even from the planning phase. Together with the designer, they were able to position installations such as connections, inspection manholes and accessories in the manner that will best serve the needs of the facility. Salminen notes, ''The solution drawings we delivered were made available to the designer at the beginning of the project. Later in the project we were also able to give advice on the anchoring of the tank after it became clear that it would not be possible to use anchoring slabs in the manner envisaged by the original plan.''

Close partnership – the Uponor way
Indeed, Salminen considers it very important to be able to participate in projects right from their early stages. ''If cooperation between the designer, client and contractor begins during the design stage, this ensures that projects remain on schedule and budget, and no unexpected, additional work is required on the work site, even for the most demanding deliveries. For this project we were able to precisely match the design and manufacture of the tank with the other design and construction work on the site. The earlier we can do things together, the easier it is to make changes as the project progresses.''

He points out that Uponor offers dimensioning and design for all of its stormwater solutions, as well as installation and welding services for its customized Weholite solutions. ''Together with the customer, we can find a high-quality solution that is the best fit for each site.''

Installation was quick and seamless
Because the stormwater tank has an inner diameter of 2.4 meters and a length of 25 meters, special arrangements had to be made for its transportation. Uponor's project sales team also handled the transport arrangements and provided the contractor with precise instructions on lifting and installation of the tank. ''The excavation and the mooring anchors were ready and waiting, and the tank could be positioned quickly. The connections were made, and the tank was installed in just a couple of hours – and covered with soil on the same day.''

All Uponor fabricated Weholite tanks are delivered ready for installation, which saves considerable time and work at the work site. The tank was installed in mid-October 2016, so that it could be taken into use before the completion of the building's roof. As Teemu Salminen points out, ''After all, stormwater accumulates on the grounds during the construction period as well,''.

Innovative anchoring
Salminen also notes, ''Another, somewhat unusual feature of the tank is its anchoring method; it is anchored directly into the bedrock in order to overcome the buoyancy effect of groundwater, rather than relying on the more commonly used anchoring slabs. Onsite, it became evident that this was the best solution for this case as the installation place was rather limited and solid bedrock was available for anchoring the tank's straps."

A range of integrated products

In addition to the stormwater tank, Uponor delivered wastewater, rainwater and stormwater pipes, drainage pipes, pressure pipes and various chambers for the municipal engineering of the work site. The compatibility of all the products ensures a safe and tight system that works as planned, and in which no additional work is required. Thanks to Uponor and other leading companies, Finland's newest children's hospital can be confident its facilities are constructed to the highest standards.