References

Europe’s largest ever plastic culvert goes to Norway



Uponor involvement

- 44 m Weholite road drum with 3 m diameter

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Record breaking culverts speed up road project in the north of the Arctic circle.
In the northernmost part of Norway, winter temperatures can go as low as -50 degrees Celsius and the mountainous terrain makes the long distances even more challenging. But this oil-rich country, located at the very top of Europe, has now invested EUR 65 million in an infrastructure project to modernize the oldest road between the regions of East and West Finnmark and to make it possible to cross Ifjordfjell mountain the whole year round.

Project Facts:

Location	Completion
Finnmark, Norway	2011
Building Type	Product systems
Municipal	Storm water
Project Type	
New building	

The road crosses several rivers and streams and the contractor needed large culverts that will stand the test of time, but also enable the crew to quickly complete the installation. The summer in the far north is short and during winter, construction work is impossible. For this reason, most of the 70 people involved in the road construction spent 14 days working long hours followed by 14 days off. North of the Arctic Circle, the sun never sets during the summer, which also made it possible to use night shifts from Monday to Saturday. Utilizing the time efficiently was a priority, so Weholite with its fast installation was a natural fit for this project.

Weholite benefits raise interest

Weholite structured-wall pipes have been utilized in many countries for culvert applications using both normal installation methods and in sliplining damaged metal or concrete culverts. It is lightweight and easy to handle, does not corrode and withstands heavy traffic loads thanks to its flexibility. Pipe lengths up to 22 metres and a unique threaded joint facilitate its easy installation. Our partner Geosyntia has a great deal of experience delivering many types of products for road projects and has introduced Weholite to Norwegian road builders. Managing Director Terje Ottesen says: ''Customers generally don't find talking about culverts is very interesting, but as we present the benefits of Weholite, they usually get excited once they realize that we can help them lower lifecycle costs and drastically shorten the installation time. Frankly, most of them didn't even know that polyethylene pipes of this size existed!''

Size did matter

In this particular project, size did matter. The 44-metre-long road culvert needed for the river of Vestre Guttojohka had an internal diameter of 3.5 metres, which most likely is a European record for plastic road culverts. Additionally DN/ID 3 metre culverts and several smaller sizes were delivered. On the bottom of the culverts, a thick layer of rocks and pebbles slows down the water and makes it easier for fish to make their way through the pipe. Sales Manager Robert Osvaldsen at Geosyntia describes the project as groundbreaking and very successful despite the challenges involved in transporting pipes of that size. The largest pipes were delivered by boat and loaded onto trucks. As they were four metres wide, local law requires the truck to have a police escort in addition to the regular wide load escort cars. So did everything go as planned? ''Well, everything ran smoothly except for when the pipes were temporarily stored in the harbour. They were not anchored properly and strong winds set one pipe in motion, rolling several hundreds of metres before ending up in the sea. But this only proved Weholite's durability as the pipe survived the ordeal almost without a scratch,'' Osvaldsen laughs.

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