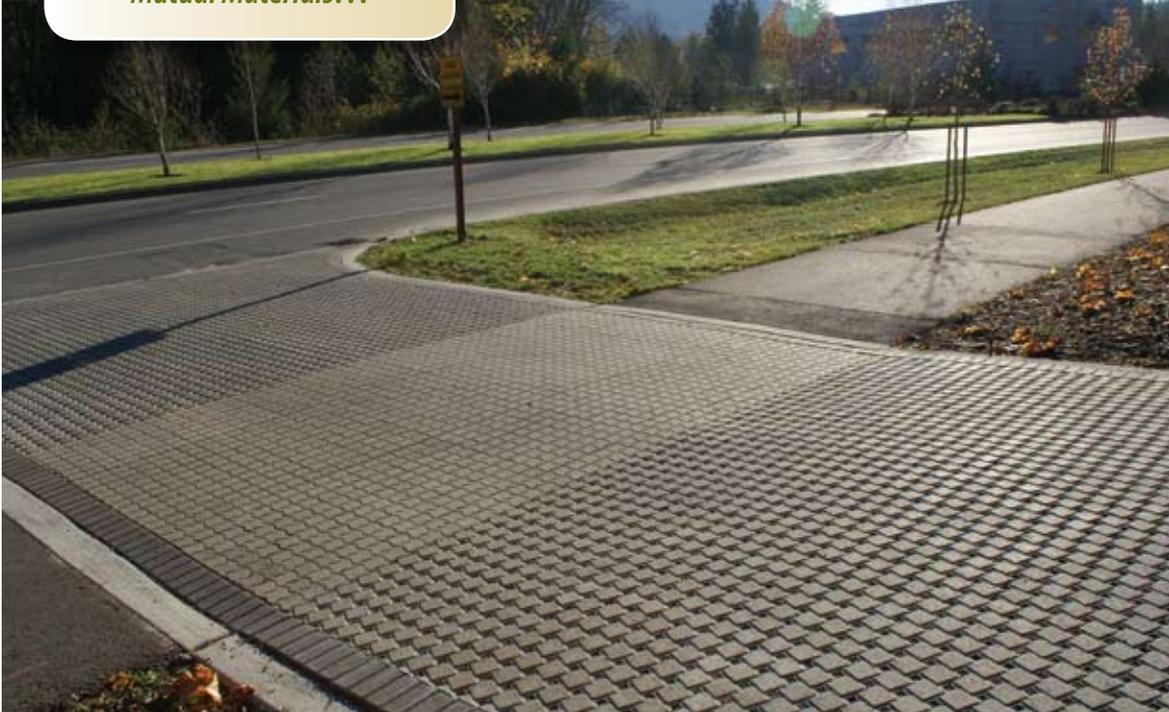


Snoqualmie Fire Station

Snoqualmie, Washington

TCA found a solution in permeable pavers from Mutual Materials...



Permeable pavers can sustain heavy apparatus loading.

The use of permeable pavement systems and their contribution to managing rainfall, is gaining popularity as momentum of low-impact development continues to grow. When the City of Snoqualmie wanted to expand their "green" efforts to include their new fire station, TCA Architecture knew permeable pavement would be an effective touch to their naturally ventilated building. The dilemma was to achieve sustainable design in areas designed for more industrial purposes.

A pervious pavement system would allow for rainwater to be filtered and returned to the water table, but as a frequent designer of fire stations, TCA knew the importance of having a pavement system strong enough to support vehicles as heavy as a hook-and-ladder truck (approximately 73,000 pounds). When an engine extends its ladder it stabilizes itself on four outrigger plates exerting up to 9,000 psf each. This weight can lead to a deflection of the pavement, where small movements in the outrigger plates can lead to significant swaying at the top of the ladder. With this potential for deflection in mind, TCA needed a permeable pavement system that could handle industrial size vehicles.

TCA found a solution in permeable pavers from Mutual Materials for the access road to the Snoqualmie fire station headquarters. Constructed mostly with permeable Uni-Ecoloc[®], the 1,800 square foot access road contains a strip of impermeable Uni-Anchorlock[®] which provides a smoother surface as an extension of the sidewalk. Both products used comply with the Americans with Disabilities Act. The result is a high-strength permeable pavement system that supports heavy traffic loads and allows rainwater to quickly return to the water table, avoiding the problems associated with surface runoff (higher water temperatures, pollutant discharge and peak flow damage).



Location:

Snoqualmie, Washington

Design Firm:

TCA Architecture - Planning, Inc.

Geo Technical Engineers:

HWA Geo Science

Paving:

BC Paver

Base Materials:

Glacier NW

Mutual Materials Products:

Uni-Ecoloc[®], Uni-Anchorlock[®], Cascade Holland (edge pavers)



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Uni-Ecoloc®

Uni-Ecoloc® is an environmentally beneficial heavy-duty paving system designed to reduce stormwater runoff on industrial and commercial pavements.

Uni-Ecoloc is a L-shaped interlocking concrete paver and part of the Uni-Anchorlock family of pavers. Ecoloc pavers provide a highly durable, yet permeable pavement capable of supporting the highest vehicle loads. When installed, the unique patented design creates drainage openings in the pavement's surface, which facilitate rainwater infiltration like the Uni-Eco-Stone® system. Uni-Ecoloc is a mechanically installed product.

Uni-Ecoloc pavers are perfect for municipal, commercial and industrial applications.



3 1/8" x 8 7/8" x 8 7/8"
8 cm x 22.5 cm x 22.5 cm

Uni-Anchorlock®

The unique interlocking shape of Uni-Anchorlock® offers superior resistance to tipping and twisting under heavy industrial loads and is specially designed for rapid mechanized installation of large-scale projects such as ports, airports, and depots. Uni-Anchorlock's patented design features shorter joints resulting in a stronger, more stable pavement surface.

Anchorlock pavers are perfect for municipal, commercial, and industrial applications.



3 1/8" x 8 7/8" x 4 1/2"
8 cm x 22.5 cm x 11.25 cm