



GEOFABRICS CASE STUDY



CREATING A LOOK LIKE NO OTHER WITH VERTI-BLOCK

PRODUCTS USED

VERTI-BLOCK

- Has a unique size and design – a mass hollow block measuring 610mm (h) x 1200mm (l) x 910mm (w), and is offered a variety of shapes, including corner blocks
- Strong and versatile thanks to its interlocking connection design
- Easy installation as blocks can be moved and put into place with smaller equipment
- Engineered for strength as the hollow nature of Verti-Block improves its ability to retain earth
- Lightweight design lowers labour, equipment and transportation costs
- Rockwork appearance makes a finished Vert-Block wall appear more like stacked stone and is easily stained to complement its surroundings with a beautiful, weather and UV-resistant finish

PROJECT DESCRIPTION

Set alongside the scenic Raisin River, Comstock Park in Adrian, Michigan, is a popular recreation spot. The water fountains and lush flower gardens provide an impressive entry into Adrian's downtown.

A failing retaining wall along the banks of the river became both a safety hazard and an eyesore for the city. Built in 1974, the approximately 145-metre-long timber and steel beam wall was deteriorating - the wood planks were beginning to rot, and the wall was tipping. City officials required a solution for this unique retaining wall which is constantly in contact with water.

OUR SOLUTION

While durability and aesthetics were certainly important to the city of Adrian, the project posed another challenge: constructability.

The site had an actively flowing artesian well, so controlling the water both during and after installation was a real challenge. The wall needed to be installed quickly while the water was being diverted with temporary sheet piling and due to a tight working area, access for heavy equipment was limited.

Due to its innovative open-core design, Verti-Block is bigger than comparable blocks while actually weighing less, allowing for easier handling and reduced installation time. Verti-Block's lighter weight allowed the contractor to use smaller equipment to set the blocks.

An additional benefit of Verti-Block's open-core design is the ability to add gravel fill not only inside the wall but also behind it, unlike solid retaining blocks that only allow for gravel fill behind them. Gravel fill inside and behind the wall was a required specification for the project due to increased drainage and more effective alleviating of hydraulic pressure.

The cavities within the blocks were filled upon installation, ensuring that the accurate amount of gravel is used every time – reducing the cost of material and taking the guesswork out of the gravel-fill process. The high-water table required engineers to design a one-foot tremie concrete base that displaced water as it was poured in place.

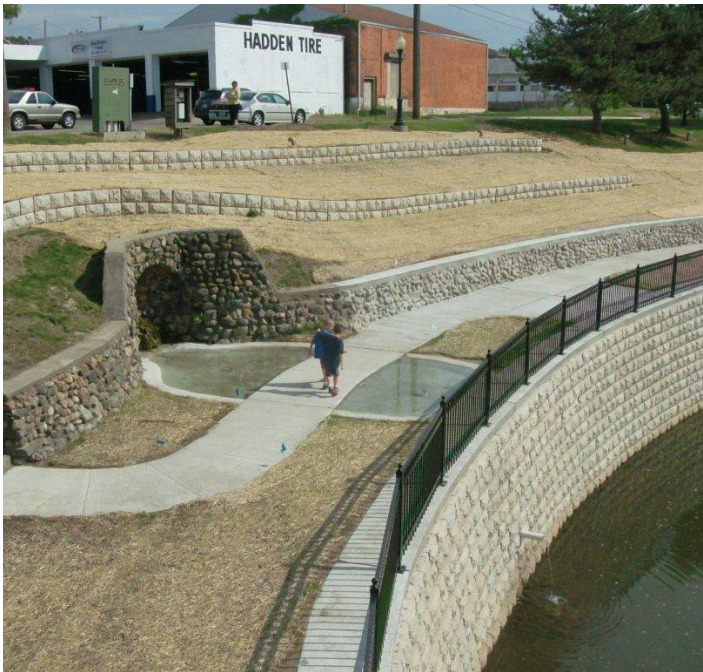


To strengthen the walls foundation and its ability to resist washout, rebar dowels were placed into the concrete foundation, which extended through the centre of each Verti-Block on the first course. The first course of Verti-Blocks was then filled with concrete to anchor them to the concrete foundation. For additional durability, the wall was reinforced with geogrid, which was laid between each subsequent block course.

With its new retaining wall in place, Comstock Park now offers residents a place to relax and play that is safer and even more attractive than before.



Nothing
stacks up
quite like
Verti-Block



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