

CONCRETE CANVAS® EROSION CONTROL

Case Study

PROJECT DETAILS

Project Name	Austin Bluffs & Meadow Ridge Stairs Repair
Location	Colorado Springs, Colorado
Date of Installation	August 2023
Contractor Owner	Timberline Building Systems City of Colorado Springs
Salesperson	Ryan Anderson
Application/Solutions	Concrete Canvas® used to provide erosion control to eroding slope.

THE CHALLENGE

There was a severe erosion problem on a slope along a set of stairs in this Colorado Springs neighborhood. Water coming off the sidewalk eroded the slope and left a mess of sediment all over the sidewalk.

THE SOLUTION

Flowable fill was originally considered as a solution, but **Concrete Canvas®** (CC) was selected instead due to its ease of installation.

After the slope was regraded, rolling berms were added to slow the flow of water coming from the sidewalk. Next, batched rolls of Concrete Canvas® were brought on-site and laid by hand transversely across the slope and the berms.

The material was then secured within anchor trenches using anchor pegs and later backfilled with excavated substrate. The CC installed along the concrete sidewalk and stairs was attached to the concrete using a stainless steel clamping bar and through-bolts, a gasket, and a grout filler to prevent water ingress.

Each layer was overlapped by 4" in the directional flow of water. Stainless steel screws set at 4" spacings and 2" away from the overlapping edge were used to secure the CC material down.



Pictures of the erosion problem before Concrete Canvas® installation.



A sealant was used between layers, providing waterproof protection. After securing the Concrete Canvas® material, it was hydrated using a small water tank and hose. Finally, a small area of riprap was installed at the end of the channel to allow water to naturally dissipate while protecting against erosion.

PRODUCTS USED

Concrete Canvas® GCCM
(Geosynthetic Cementitious Composite Mat)

- 1022 ft² of CCX-M™ Bulk Rolls



Concrete Canvas® Attached to Concrete with Stainless Steel Clamping Bar and Through-Bolts, a Gasket & a Grout Filler



Overlapped CC Layers Secured Using Stainless Steel Screws



Concrete Canvas® Laid Transversely Across the Slope & Rolling Berms

THE RESULTS

The Concrete Canvas® manages water runoff from the sidewalk and creates a channel for the water to flow down, preventing slope erosion. The installation was completed very quickly in just four days. It took two days of grading to create a solid and uniform surface and then two days to complete the Concrete Canvas® installation.



Completed Installation



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