

Project Info



12 / 21 / 20



CC8™ Batched & Bulk
Rolls



10,980 sf



Transverse layers



Pasadena, Texas



Providing erosion
control to an already
existing ditch.



Completed works

In December 2020, work was carried out to install 10,980 sf of Concrete Canvas® GGCM* CC8™ to provide effective erosion control to an already existing ditch located at a petrochemical plant in Pasadena, Texas.

The ditch, located alongside the plant, was becoming increasingly damaged due to erosion from rainfall and water runoff which caused the bottom of the ditch to fill with soil and restrict water flow. To rectify the issue, a number of alternatives were considered, including slope paving. However the requirements for a concrete company to gain access to the site made this option difficult and expensive. A vegetated solution was undesirable due to the need for ongoing maintenance. CC8™ was chosen as the preferred solution due to its ease and speed of installation, the need for less machinery and man power, and the long-term zero maintenance requirement.

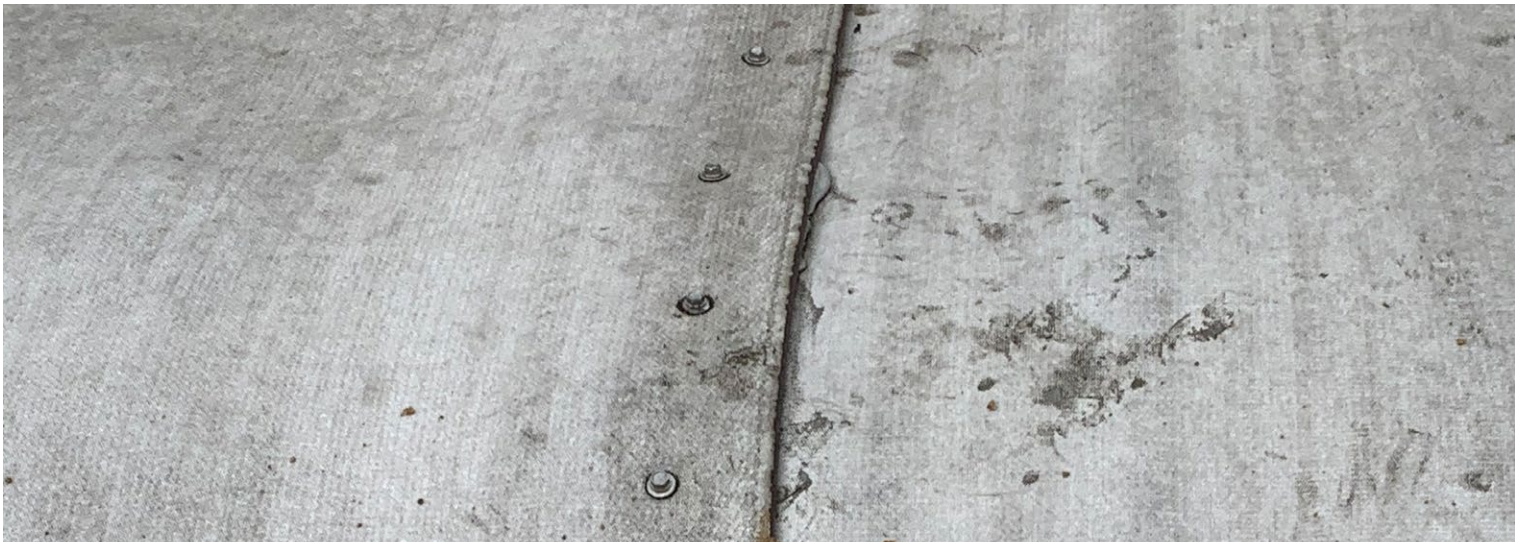
CC8™ is a [Type II](#) GCCM as defined in [ASTM D8364](#). It is suitable for use on soil subgrades and was chosen for this project to address the abrasion, wear and loading requirements. CC8™ is also [BBA](#) certified with durability in excess of 120 years when used in erosion control applications.

*Geosynthetic Cementitious Composite Mat





Ditch before re-grading



1.25-inch stainless steel screws and sealant used to secure CC8™ overlaps



CC8™ being hydrated



Completed ditch lining works

Before the CC8™ could be installed, the ditch needed to be re-profiled using a small excavator to compact the soil at the sides of the slope and at the base of the ditch. The Bulk Rolls of CC8™ were rolled out and cut to 28ft lengths, with the leading edge of the material secured in anchor trenches located at the crest of each side of the slope. Additionally, 12-inch Gripple Twist Anchors were used to secure the CC8™ at the crest and toe of the slope at each overlap. The layers of CC8™ were overlapped and joined using waterproofing sealant and secured with 1.25-inch stainless steel self-drilling screws with neoprene washers every 4-inches on the overlapped edge.

Once the installation was completed, the material was hydrated using water from an adjacent ditch which was pumped, allowing the CC8™ to be hydrated daily. Finally, the anchor trenches were backfilled with soil.

This installation was carried out during the winter season, however temperatures didn't drop low enough to affect the installation or hydration process. There were days of rain, but the CC8™ was protected onsite to prevent the material from hydrating prematurely. Once the material was installed, daily hydration removed this concern. The ditch was semi-active during the install with a limited flow of water running through the ditch. To prevent water flowing freely, the contractor built a small dam each day but opened it up in the evening.

Due to two national holidays, the project took longer than expected with the total CC8™ install time being approximately 3 weeks. It is estimated that the installation works could have been completed in 7 to 8 days with the crew installing approximately 1 Bulk Roll per day on average. The client was very happy with the outcome and has planned for additional projects using CC in 2022.