

CASE STUDY

2781 Glen Garden Drive

Fort Worth, Texas



PROJECT OVERVIEW

PRODUCT:

Concrete Canvas

ENGINEER:

Ferguson

CONTRACTOR:

City of Fort Worth

CHALLENGE:

The project was located on a 4:1 downhill slope spanning roughly 160 LF. A 6-7' flume was located at the topside of the project, directing water from the TX-Distillery plant to the bar ditch. The bar ditch was not originally designed to account for the heavy flow created by the flume. City of Fort Worth approached Ferguson to help design a long term solution that would allow water to flow down hill and prevent any and all erosion of the bar ditch.

SOLUTION:

Between Ferguson, Concrete Canvas, and the City of Fort Worth, our installation crew overlapped pre-cut sections of Concrete Canvas down the channel in accordance to its flow direction, similar to applying shingles on a roof. The Concrete Canvas made intimate contact with the existing flume by use of Elephant Armor, a fiber-reinforced, quick-setting concrete, to provide successful termination of the system at its entry and exit points.

PROJECT GOALS:

The goal was to revitalize a bar ditch that will support significant channel flow from the top of the slope, while providing the City with a long term solution they can replicate on future drainage projects to reduce costs related to installation, materials, time, and maintenance.

SITE CONDITIONS:

Site conditions were overgrown, ungraded, and in disarray. Leftover rock and other techniques attempted by the City to combat the erosion issues were found throughout the site.

CONSTRAINTS:

Removing the existing, unneeded materials from previous patch jobs and regrading the channel to provide a smooth and clean working surface was essential to ensuring an aesthetically pleasing finish for the Concrete Canvas installation.

RESULTS:

The side slopes were hydroseeded and protected with an erosion control blanket until adequate vegetation was achieved. After hydrating the Concrete Canvas and completing installation, the system passed several heavy water flow tests. The City of Fort Worth will be monitoring this project over the course of the next year. Their stormwater department hopes to implement Concrete Canvas as a standard solution for future City repair/maintenance projects.

OPTIMIZATION HIGHLIGHTS:

The City's participation in design and construction ensured a controlled, successful installation for Concrete Canvas. Once the site was prepared, the channel was constructed with a small crew and in short time.

TESTIMONIAL:

"I am really happy with this and cant believe it stood up to almost 9 inch of rainfall."

For more information, ask an expert: info@ferguson.com