

CANDLERIDGE PARK, FORT WORTH, TEXAS

Protecting homes from destructive erosion and slope instability with PROPEX



Industry: Site development
Sub-industry: Channel stabilization
Location: Fort Worth, Texas
Product: **PROPEX® Pyramattress®**
PROPEX Pyramat® 75

neighborhood. Once the outfall was completed, a combination of **PROPEX Pyramattress** was installed along the channel bottom, while **PROPEX Pyramat 75** was used to protect the side slopes from potential erosion. These systems are specifically designed to promote vegetation, creating a natural outcome that complements the aesthetic of the neighborhood.

Overview

Candleridge Park is an area located in the city of Fort Worth, Texas that comprises numerous walking trails, duck ponds, and neighborhoods. One of the neighborhoods in the area was facing erosion issues caused by slope instability on the adjacent property. It was crucial to address this problem promptly because it could lead to foundation exposure and compromise the structural integrity of nearby houses.

Challenge

To mitigate the risk, a channel outlet was constructed to divert water away from the endangered houses. The outlet featured large, reinforced concrete pipes with concrete outfalls and a turn to redirect the water away from the

PROPEX Pyramattress was installed along the channel bottom, while PROPEX Pyramat 75 was used to protect the channel's side slopes from future erosion. PROPEX Pyramat 75 is designed to promote vegetation, creating a natural outcome that complements the aesthetic of the neighborhood.

CASE STUDY

Protecting homes from destructive erosion and slope instability with **PROPEX** Pyramatress

Solution

PROPEX Pyramatress was chosen as a more cost-effective and sustainable alternative to the proposed gabion mattress or rock riprap. The structure's base was filled with stone and topsoil. A separator nonwoven geotextile was placed next and securely fastened. Finally, **PROPEX** Pyramat 75 High Performance Turf Reinforcement Mat (HPTRM) was installed across the channel and side slopes, effectively capping off the topsoil layer. Sod was then placed on top of the channel and side slopes following the installation.

The entire process of installing both **PROPEX** Pyramatress and **PROPEX** Pyramat 75 took approximately one week.

According to the contractor, installing **PROPEX** Pyramatress was easier and more efficient compared to using a gabion mattress. The **PROPEX** Pyramatress demonstrates superior performance when compared to gabion mattresses, primarily due to its reduced void space, which leads to decreased water velocities within the mattress and at the soil's subgrade below.



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