



Case History

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**Specializing in:
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Problem:

The South East Missouri (SEMO) Hospital is located near the New Madrid Fault, where earthquakes may likely occur. Engineers were unable to design buildings using normal construction principals. Taking extra precautions to find the correct solution, which would not place the buildings at risk during earthquake conditions, Helitech's® in-house engineers in conjunction with a geotechnical firm, presented a conceptual design utilizing A.B. Chance soil screws and shotcrete.

Solution:

Helitech® shored the hillside in front of SEMO hospital enabling the construction of the hospital addition and garage to commence. This involved excavating the embankment in 5 to 6 foot vertical cuts. The process was broken into multiple tiers working from top to bottom, allowing construction on one tier at a time, insuring that each tier wall was installed correctly. A. B. Chance soil screws were installed horizontally into the soil for soil stabilization first, then Hydroway® drainage system was placed behind and adjacent to the wall, Helitech® then applied a four inch thick layer of concrete across the wall to prevent the soil from sloughing and being exposed to the elements.

Resolution:

The shotcrete earth retention wall was a cost effective and efficient method to shore the embankment. The wall was designed to take lateral forces, allowing it to be an effective solution for buildings located in a geographical area where earthquakes may likely occur.



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