Tieback Anchors Repair Tilting Foundation Walls
Denver, Colorado

PROJECT SUMMARY

Product Installed:	TAF-150 Torque Anchor™ Tiebacks 1-1/2" Sq. Bar with 8" & 10" Diameter Helical Plates
Engineer:	J R Harris & Company Structural Engineers, Denver, CO

The owners of this chain store contacted JR Harris & Company Structural Engineers after distress along the walls were noticed and large cracks in the floor caused an unsafe working environment. The building was constructed on a lot containing fill soil. In addition, the foundation stem wall was exposed on the exterior and filled with soil on the interior to provide for a level floor. The force of the soil under the slab pressed against the stem walls causing outward rotation of the walls. The project required removing a portion of the concrete floor and the soil that was below the slab. Helical Torque Anchors™ were installed to provide supplemental lateral wall support and to restore the walls back to plumb (vertically upright). All of this work had to be accomplished while the retail business remained open. ECP Model TAF-150 solid square shaft Torque Anchor™ tiebacks were installed through the wall and into the soil below the structure. The tieback anchors were installed a distance of 25 to 35 feet under the building before reaching suitable shaft torsion to provide a working capacity of over 7,000 pounds at each placement. Once the Torque Anchor™ tiebacks were installed, the wall was moved 3" to 4" back to plumb using a series of hydraulic jacks. The only evidence of the work is the row of wall plates, threaded bars and nuts that are visible along the exterior surfaces of the stem walls. After the walls were realigned, fill soil was carefully placed into excavated areas and compacted. Reinforcing steel was installed and a new concrete floor was cast from the restored wall to where the floor had separated.

PARK RANGE
CONSTRUCTION, INC.

2755 South Raritan Street, Englewood, CO 80110
T: (303) 781-8936 F: (303) 781-8409
info@parkrangeconstruction.com
www.parkrangeconstruction.com