

UNDERPINNING ANCHORING REPORT

A CASE HISTORY

Chance Civil Construction Distributor:
Intech Anchoring Systems, Livonia, Michigan

Project: Wall Repair,
Peterson Farms

Structural Engineer:
Soils and Structures, Muskegon, MI

Underpinning Contractor:
Kent Companies, Grand Rapids, MI

Background Information:

Regrading along a 200 ft. side of a tilt-up-wall building resulted in undercutting the grade beam by as much as 2 ft. In less than one day, the grade beam, wall, and roof dropped in places as much as 14" and slid out horizontally as much as 6".

Constructed as a facility to bottle apple cider, 100 ft. x 200 ft. building was 26 ft. high, with 11"-thick concrete walls and roof supports on 50-ft. centers. The 2 ft. x 2 ft. grade beam supporting the wall was of un-reinforced concrete.



Above, building condition upon arrival at the jobsite



Job Description:

Kent Companies designed and completed a plan to stabilize and relift the wall.

It provided for installing 39 Atlas Resistance® piers on 5-ft. centers along the entire 200-ft. wall. Each pier was sleeved and grouted to maximize pier shaft stiffness.

Final Results:

The wall was lifted and the grade beam was moved laterally to near their original positions.

1. Above, excavating to set piers
2. Below, lifting grade beam and wall with hydraulic jacks



Torealign beam, 38 CHANCE® helical tieback anchors were installed between Atlas Resistance® piers.



With wall elevation restored and beam straightened, pier holes were filled to final grade.