

STRUCTURES

DIVISION



GEOTECHNICAL CONSTRUCTION SERVICES

Ellis Preserve Mass Timber Frame

Location:

Newtown Square, PA

H&K Company:

Structures Division

Client / Owner:

Equus Capital Partners, Ltd.



Services Included:

- Permanent Soil Nail and Shotcrete SOE

Additional Project Features:

- 469 EA Soil Nail Anchors: #9 Solid Bar, Epoxy Coated, 25', 30', 35' Lengths
- 13,810 LF of Soil Nails
- 13,533 SF of Permanent Shotcrete Wall
- 756 CY of 4,000 PSI Shotcrete placed



Project Description:

The scope of this project was to construct a three-sided permanent shoring system that the new building / parking garage exterior walls could be poured directly against.

The permanent shoring system is designed to support all the lateral earth pressure. The building walls only support the dead load of the building.

We started this wall with the traditional top-down shoring system, stepping down in five-foot lifts and placing 4" of shotcrete and then installing and testing the soil nails.

We installed permanent mechanically stabilized earth basket walls on two of the walls to provide a level grade contour at the top for final grading around the building.

Once we reached the buildings proposed bottom of footing elevation, we worked from the bottom up by placing an additional 8" - 10" of shotcrete and finishing the face of the shotcrete to a semi smooth surface. This final layer of shotcrete covered the initial shot as well as the wire wall baskets to provide a surface that a waterproofing membrane could be installed prior to placing the building foundation walls.