**Soil Conditions**

- The soils found on site were consistent with the prevailing soils in the area, mainly Silty Sand, Clayey Sand, and Lean clay
- Some construction debris and brick fragments were found in the samples
- The water table was not encountered in any of the boring samples, nor evident in the holes within 24 hours after the samples were taken

Based on the location of some of the clays found, there is potential for water appearing and de-watering will most likely be needed

*General Site Preparation Suggestions*

- The existing clay and clayey soils should be removed from the site

The remaining sand should be stockpiled for reuse as backfill

*Foundation Recommendations*

- The soil is quite capable of supporting a standard spread footing, but some of the underlying clay layers will most likely lead to some differential settlement
- A deep foundation system is suggested to remove the effects of the underlying clay soils
- Pressure injected concrete piles are suggested

Driven piles are not suggested due to the impact it may have on the existing structure

*Excavation*

- The suggested shoring method for excavation support is sheeting and shoring
- The depth of excavation ranges from 20 to 25 feet

The max effective stress value of 25 degrees and max cohesion of 150 psf is recommended for preliminary design of the sheeting and shoring system

*Chemical Analysis*

- A geoprobe of the soils on site were taken to assess the presence of hazardous compounds within the soil
- The test found the presence of arsenic, chromium, copper, lead, nickel, and zinc
- The levels of contaminants found were low enough that the soil was classified as non-hazardous for disposal purposes