

Date : 11/01/2024  
Project No : 2022C165  
Client Company : Toll Bros. Inc.  
Arrival Time : 11/01/2024 08:30  
Onsite Hours : 08:00

ASEC Report ID : 72815  
Name of the Project : Northfield @ Polo Fields - Phase2  
Project Location : Pittman Road, Cumming, GA  
Weather : Sunny  
Departure Time : 11/01/2024 16:30  
ASEC Technician Name : Micah Aycock

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AS Engineering and Consulting, LLC has completed an engineering evaluation of the slab and perimeter footings for the residential unit at the location referenced above. This evaluation included a visual inspection, hand probing, and dynamic cone penetrometer (DCP) testing of the footings. During the investigation, well-compacted fill soils were observed, underlain by residual soils. Multiple DCP tests were conducted using an automatic DCP machine and a manual DCP within the proposed building pads for Lots #4, #5, and #6.

### **Soil Bearing Capacity**

In general, these soils were found capable of supporting the building structure with an allowable soil bearing pressure of 2,000 pounds per square foot (psf), with certain areas requiring exceptions and remediation.

### **Lot-Specific Observations and Recommendations**

#### **Lot 4**

DCP tests in Lot 4 indicated low-consistency material and organic content in the top 8 to 12 inches of the footing excavation within the front half of the building pad closest to the road. We recommend removing approximately two (2) feet of soft, loose, and organic-laden material below bottom of slab elevation in these areas during foundation excavation and/or turn-down slab construction. This material should be replaced with well-compacted structural fill, following the "Fill Placement and Compaction" guidelines below.

#### **Lot 5**

In Lot 5, DCP tests showed low-consistency material and organic content in the top 8 to 12 inches of the footing excavation in the front left quadrant of the building pad near the road and Lot 4. We recommend removing approximately eight (8) inches of soft, loose, and organic-laden material from these areas during foundation excavation and/or turn-down slab construction. This material should also be replaced with either #57 stone, concrete or well-compacted structural fill, in accordance with the "Fill Placement and Compaction" guidelines.

#### **Lot 6**

DCP testing in Lot 6 did not reveal low-consistency material. However, if any organic-laden or soft zones are encountered during footing excavation, these should be removed and replaced with either #57 stone, concrete or well-compacted structural fill, in accordance with the "Fill Placement and Compaction" guidelines.

### **Fill Placement and Compaction**

All fill used in pavement and embankment areas outside the building footprint should be free of deleterious materials and compacted to at least 95% of the soil's maximum dry density, as determined by a laboratory Standard Proctor compaction test (ASTM D-698). We recommend that fill within the building

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pad area and the upper 12 inches of pavement area subgrade be compacted to at least 98% of the soil's maximum dry density, also per ASTM D-698. Fill should be uniformly spread and compacted in lifts of 6 to 8 inches (loose measure), with moisture content maintained within plus or minus 3% of optimum. Uniform and thorough compaction of all fill is essential. Accordingly, a qualified engineering technician, under the direction of the Geotechnical Engineer, should monitor fill placement and perform adequate in-place field density tests to confirm compaction levels.

AS Engineering and Consulting, LLC appreciates the opportunity to assist you with this project. Please contact us with any questions regarding this report.



**Ramchandra R. Mogulla**  
GA P.E. 036021  
Senior Engineer

A large, handwritten signature in black ink that reads "Kenneth Mosman".

**Kenneth Mosman**

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