

December 1, 2004

Mr. David Truxton
Lennar Corporation
10481 Six Mile Cypress Parkway
Fort Myers, Florida 33912
Phone (239) 278-1177
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Subject: Report of Geotechnical Exploration

Proposed Lake Excavations
Southwest Corner of Homestead Avenue and Milwaukee Boulevard
Lehigh, Lee County, Florida
Forge Engineering Project Number 984F-001.01

Forge Engineering Inc. (FORGE) is pleased to present this report of our geotechnical exploration for the proposed project. We have completed in general the services outlined in our proposal dated November 11, 2004 and authorized on the same day by Andy Paulet of your firm. This report presents the project information provided to us, the findings of our exploration, together with our geotechnical evaluation.

Purpose

The purpose of this geotechnical study was to explore the general soil conditions within the proposed lake excavations at this site. Environmental assessments or other studies were beyond the scope of our services.

This report has been prepared for the exclusive use of Lennar Corporation for specific application to the subject project. FORGE has endeavored to comply with generally accepted geotechnical engineering practice common to the local area. FORGE makes no other warrant, express or implied.

Project Information

Our understanding of this project is based on information provided by you, together with some assumptions that we have made based on our experience in the area. We have also received a copy of a site plan with the requested borings delineated, which was prepared by Heidt and Associates, Inc.

We understand your firm proposes to purchase a parcel of land located at the southwest corner of Homestead Avenue and Milwaukee Boulevard in Lehigh, Lee County, Florida. We assume the project will consist of single-family home sites, lakes, asphalt drives and conservation areas over the property. The excavated soil from the lakes is proposed to be used as fill within the proposed development.

Site Conditions

As shown on the appended Site Location Map, the site is located at the southwest corner of Homestead Avenue and Milwaukee Boulevard in Lehigh, Lee County, Florida. At the time of our drilling a majority of the property consisted of loose sand and scrub grass, with some lakes and clusters of trees also noted throughout the property.

Subsurface Conditions

The subsurface conditions were explored with ten soil test borings drilled to a depth of 20 feet below the existing ground surface and three borings completed to six feet below existing grade. One boring (B-1) was deleted by you due to heavy vegetation prohibiting access to our truck-mounted drill rig.

The boring locations were staked in the field by the project surveying firm prior to our mobilizing to the site. The approximate boring locations are shown on the Field Exploration Plan, in the Appendix.

Soil samples taken from the borings were classified by a geotechnical engineer from FORGE. Boring logs summarizing the findings are in the Appendix. The typical subsurface conditions encountered at the boring locations are generalized as follows:

GENERALIZED SOIL PROFILE			
USC ⁽¹⁾	SOIL DESCRIPTION	DEPTH (FT)	
		FROM	TO
SP	Very Loose to Medium Dense SAND*	0	12*
SC, SW	Loose Clayey SAND and Very Loose to Loose Silty SAND with Gravel	12	20
(1) Unified Soil Classification *Ranged from 7.5 feet to the termination depth of 20 feet.			

The groundwater level was encountered at depths ranging from about 1 to 4.5 feet below the ground surface at the time of drilling. This level will vary with rainfall and construction activities.

Evaluation

Our evaluation is based on the project information provided to us, the findings of our field exploration program, and our experience in the area. The subsurface conditions should be expected to vary between the boring locations. Should new information become available during design or the conditions encountered during construction be substantially different from the information presented in this report, please contact us so that we may evaluate the new information.

Our experience with similar subsurface conditions in this area indicates a majority of the soil overlying the clayey sand and silty sand with gravel layers will be suitable for use as structural fill, assuming the vegetation has been removed from the near surface soils. Based on the Standard Penetration Resistance Values recorded in the silty sand with gravel, it may be feasible to remove this layer with conventional excavating equipment, although this cannot be determined until excavation commences.

Laboratory testing completed on selected soil samples obtained in the clayey sand stratum indicates the layer has approximately 17 to 23 percent clay fines passing the number 200 sieve. We recommend structural fill contain less than 10 percent soil fines. However, a program of blending with clean granular sand can be utilized to reduce the clay fines content to less than 10 percent to provide structural fill for use at this site. FORGE should be engaged to provide monitoring and testing of this program during construction in order to evaluate the suitability of the blended soil for use as structural fill.

The soils below the groundwater table likely have an in-situ water content well above the optimum moisture content, and will require drying before placement as structural fill. Prior to placement, the soil should be allowed to dry to within about two percent of the optimum moisture content.

Additional Services

Although outside our current scope of authorized services, FORGE is available to review the earthwork specifications prepared by the designers for this project. We would then suggest changes in your specifications so our recommendations are properly interpreted and implemented.

Closing

We appreciate working with you as your geotechnical consultant and look forward to working with your design and construction team on the remainder of your development. Please contact us when we may be of further assistance, or if you have any questions regarding this report.

Sincerely,

Forge Engineering, Inc.

W. Mark Spang
W. Mark Spang, P.E.
P.E. 12/1/04
Vice-President
Florida Registration No. 44778

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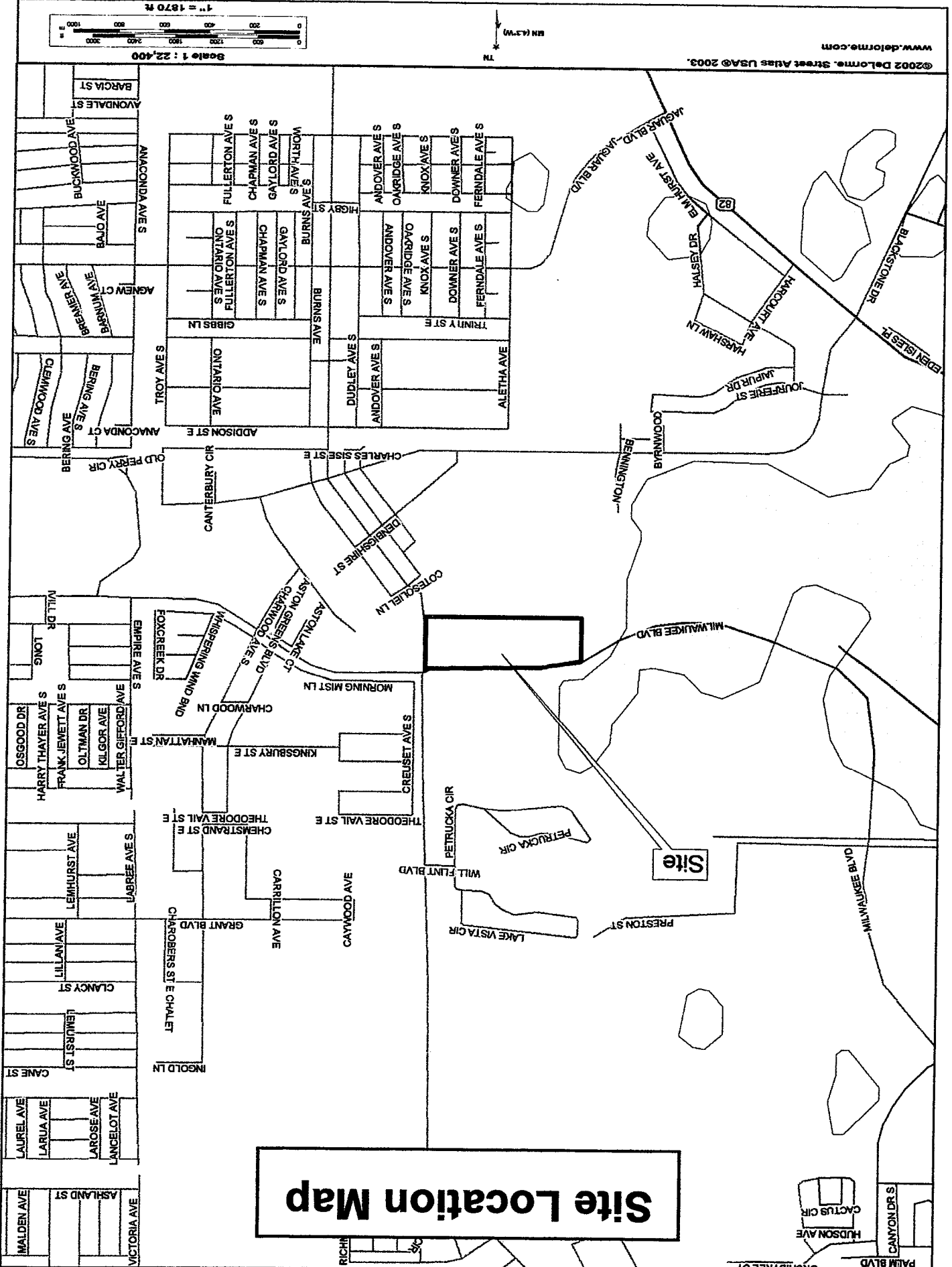
Appendix:

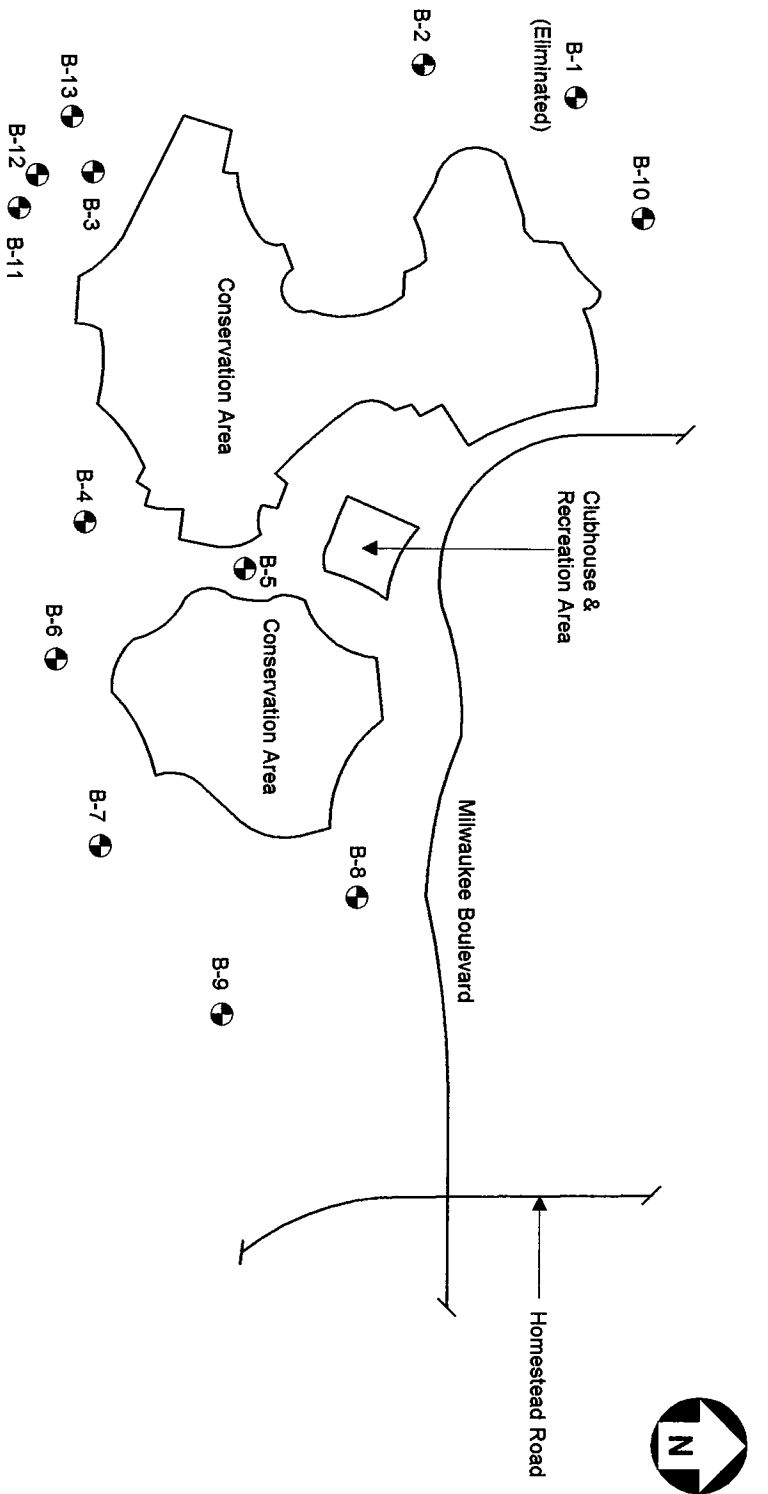
- Site Location Map
- Field Exploration Plan
- Generalized Subsurface Profile
- Boring Logs
- Key To Boring Log Classification

Matt H. Nolton
Matt H. Nolton, P.E.
Vice-President

APPENDIX

Site Location Map





LEGEND

- ⊕ B-2 Number and Approximate Location of Soil Test Boring



Reference: Undated, unfiled site plan prepared by Heidt and Associates, Inc.

Field Exploration Plan
Proposed Lake Excavations
 Southwest Corner of Homestead Road
 and Milwaukee Boulevard
 Lehigh, Lee County, Florida
Forge Project No. 984F-001.01

Material Description										Laboratory Test Results								
Depth (feet)	Strength	Primary >50%	Secondary >12%	Tertiary >5%	Color	Remarks	Elev. (feet)	Groundwater	Unified	AASHTO	Symbol	N Blows per foot	Water Content, %	Fines Content, %	Organic Content, %	Liquid Limit, %	Plasticity Index, %	Time Rate of Drilling (minutes:seconds)
6.0	Medium Dense	SAND			brown				SP		12	»»»»»»»»						
	Loose										7	»»»»						
	Loose										9	»»»»»»						
	Loose										7	»»»»						
12.0		SAND			dark brown				SP		8	»»»»»»	16	23				
	Loose										7	»»»»						
20.0		SAND	Clay		brown	Boring Terminated at 20.0 ft.			SC		7	»»»»						

Forge Engineering, Inc.
 Naples/Fort Myers, Florida
 Sheet 1 of 1
 Project Name: Lennar Lehigh Property
 Boring Number: B-2
 Job Number: 984F-001.01
 Date Drilled: 11/18/2004

