

BOWSER-MORNER

122 South St. Clair Street, P.O. Box 838, Toledo, Ohio 43696
(419) 255-8200

FIELD SERVICE REPORT

Client: Cornerstone Construction
10105 Switzer Road, P.O. Box 431
Defiance, Ohio Attention: Mr. John Rosebrock

Project: Proposed Metal Building, Napoleon, Ohio

Laboratory: 41660

Report No.: T-415842

Date of Service: November 26, 1986

Technician: M. Jaber

At the request of Mr. John Rosebrock, the writer visited the above-referenced site this date to examine test pit excavations for the proposed structure. The proposed structure is a one-story, prefabricated metal building. The purpose of this site visit was to examine the soil conditions and to recommend an allowable design bearing capacity. Also to be noted were conditions that would affect the design or construction of the proposed structure.

Upon arrival at the site, the writer met with Mr. Martin Helmke of Cornerstone Construction who briefly described the project. Mr. Helmke informed the writer that the design criteria for the foundations includes a bearing capacity of at least 3000 pounds per square foot, and the building is to be constructed to bear on shallow spread footings at a depth of 3 feet 8 inches below finished grade elevation (3 to 4 feet below existing grade). As we understand it, the grade of the site will be raised to meet the proposed elevations.

While at the site, three test pit excavations were dug near the corners of the proposed building. The location of each test pit is indicated on the sketch included with this report. The writer examined the sides and the bottom of each of the pit excavations to determine the soil type and to determine the approximate strength of the soil material present. The original soil material consisted predominantly of brown and gray clay with some silt, some sand and a trace of gravel. Test pit No. 1 was dug near the northwest corner of the proposed building to a depth of about 6 feet. Cone penetrometer readings were made at the bottom of the excavation and indicated cone index readings of greater than 280 with penetrations of between 1 and 3 inches. Generally, cone penetrometer refusal (cone index greater than 280) was encountered at 1 and 3 inches. Hand penetrometer readings were made at various locations at the bottom of the excavation indicated shear strengths which varied between 1.5 and 4.5 ksf. The shear strength at the sides of the excavation were between 1.5 and 3.5 ksf.

Test pit No. 2 was dug near the southwest corner of the building to a depth of 5 feet 8 inches. Cone index readings greater than 280 with penetrations of between 6 and 8 inches were measured. The shear strength of the in-place soil

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material found at the bottom, as measured with a pocket penetrometer, was between 3 and 4.5 ksf. The shear strength at the sides varied between 1.5 and 4.5 ksf.

Test pit No. 3 was dug near the southeast corner to a depth of 6 feet. Cone index readings at the bottom were measured to be greater than 280 with penetrations of between 3 and 4 inches. Hand penetrometer readings at the bottom indicated shear strengths of between 3 and 4.5 ksf. The shear strength at the sides varied from 2 to 4 ksf.

No water was encountered at any of the pit excavations at the time of the examination.

Based on our testing and observations, it is our opinion that the test pit excavations encountered satisfactory original soil material which is suitable for the support of the proposed building foundations. In our opinion, the foundations for the proposed building can be placed on the brown and gray clay till at a depth of between 3 and 4 feet below existing grade utilizing an allowable bearing capacity of 3500 pounds per square foot.

This report has been prepared for the exclusive use of Cornerstone Construction for specific application to the foundation design for this particular structure in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made. In the event that any changes in the nature, design or location of the structure are planned, the conclusions and recommendations contained in this report should not be considered valid unless the changes are reviewed and the conclusions of this report modified or verified in writing.

The analyses and recommendations submitted in this report are based in part upon the data obtained from three test pit excavations. The nature and extent of variations in the soil profile may not become evident until construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations of this report. This is particularly important due to the limited soil exploration done at this site. It is recommended that the soil and foundation engineer be provided the opportunity for a general review of final design and specifications in order that earthwork and foundation recommendations may be properly interpreted and implemented in the design and specifications. (If the soil and foundation engineer is not accorded the privilege of making this recommended review, he can assume no responsibility for misinterpretation of his recommendations.)

If you should have any questions or if we can be of further service on this project, please contact us.

Respectfully submitted,

BOWSER-MORNER ASSOCIATES, INC.



Mike M. Jaber, Geotechnical Engineer

MMJ:jl(19)
3-Client
Attach: sketch



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JOB 41660

SHEET NO. _____ OF _____

CALCULATED BY M-J DATE 11-26-86

CHECKED BY _____ DATE _____

SCALE 1" = 40'

