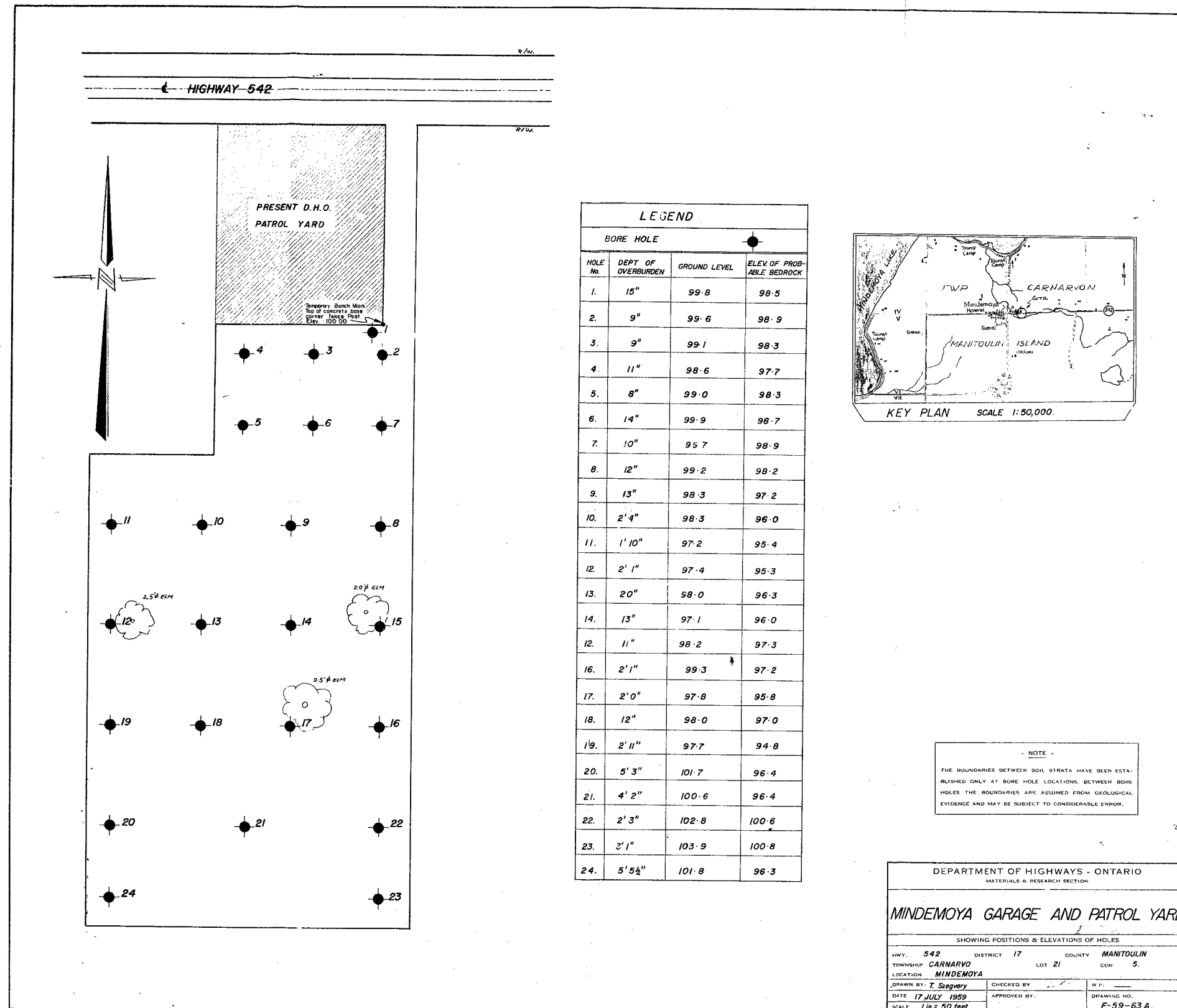


59-F-63

D.H.O GARAGE
&
PATROL YARD
AT MINDEMoya
MANITOULIN
ISLAND



28-17.

Mr. F. E. Cavell,
Supertinentend of Buildings.
Materials & Research Section.

July 20, 1959.

FOUNDATION INVESTIGATION -

W.J. F-59-63.

Attention: Mr. J. Hamilton.

Re: Proposed D.H.O. Garage and Patrol Yard
at Mindemoya, Manitoulin Island, Dist. 17,
Township of Carnarvon, Concession 5, Lot 21.

This memorandum accompanies our report on a subsoil investigation recently completed at the above site.

For your convenience, the recommendations contained in the report are enumerated as follows:-

- (1) Since bedrock is so shallow throughout the site, it is recommended that footings for all buildings be placed directly on the surface of bedrock.
- (2) No problems are anticipated due to seepage of water during excavation for footings.
- (3) All areas which are to be paved will require 18" of Granular Base Course Class 'B' or Sand Cushion topped with 6" of Granular Base Course Class 'A'.
- (4) All topsoil should be removed prior to placing granular material and the latter should be thoroughly compacted.
- (5) For all paved areas a 4" thickness of H.L.4 is recommended.
- (6) The well at the existing D.H.O. Garage is understood to be inadequate and it will probably be necessary to drill a new well on the site. Wells in the vicinity seem to be mostly about 100 feet deep.

If any queries arise in connection with the contents of this report, please contact our office.

LGS/MdeF

Encl.

cc: Messrs. F. E. Cavell

H. A. Tregaskes

H. D. McMillan

C. Tackaberry

L. G. Soderman,

PRINCIPAL SOILS & FOUNDATIONS ENGINEER.

W. S. Cole

E. R. Saint

Foundation Office

- Gen. Files.

FOUNDATION INVESTIGATION

for

PROPOSED D.H.O. GARAGE AND PATROL YARD

at MINDEMOYA, MANITOULIN ISLAND

DISTRICT 17

TOWNSHIP OF CARNARVON, CONCESSION 5, LOT 21

Presented in this report are the results of an investigation carried out on June 22nd, 1959 at the site of the proposed D.H.O. Garage and Patrol Yard on the south side of Highway No. 542 at the eastern end of the town of Mindemoya.

DESCRIPTION OF SITE

The site is mainly fairly flat at the north end dipping about 3 feet down towards the centre and then rising about 5 feet at the south end. Vegetation consists mainly of long grasses with fairly tall thick cultivated hay over the southern half and shorter sparser grasses over the northern half. In addition there are three large elm trees as shown on the plan included with this report.

DESCRIPTION OF FIELD WORK

Initial hand auger holes at the north end of site showed bedrock (or boulders) to be very shallow. Two open excavations were made and these exposed what is believed to be limestone or dolomite bedrock.

At the time of the investigation, no drawing showing the proposed locations of the buildings was available. Therefore the site was divided into a 70 to 100 ft. grid as shown on the drawing included in this report and the depth to probable bedrock was obtained from hand auger holes at 24 points across the whole site. These depths, together with existing ground level and probable bedrock elevations at each point are tabulated on the drawing. All levels were by hand level only and must therefore be regarded

as fairly approximate particularly at the south end of the site. All levels are related to the top of the concrete base of the fence post at the south-east corner of the present D.H.O. Yard (assumed elevation: 100.0).

SOIL CONDITIONS

The soil overlying bedrock varies in depth from a minimum of 8" at the north end of the site to about 5' 6" at the south end where the existing ground is somewhat higher.

Generally speaking, the soil consisted of 8" to 12" of brown fine silty sandy topsoil followed by dry lighter brown fine silty sand usually with some gravel and small boulders immediately above bedrock. In the deeper overburden at the south end of the site the light brown sandy silt changes at about 27" to a stiff darker brown clay to silty clay and then at about 39" to a brown clay till which becomes moist for about the last 6" above bedrock. No saturated soil was encountered and therefore no water table problems are anticipated.

RECOMMENDATIONS

- 1.) Since bedrock is so shallow throughout the site it is recommended that footings for all buildings be placed directly on the surface of bedrock.
- 2.) No problems are anticipated due to seepage of water during excavation for footings.
- 3.) All areas which are to be paved will require 18" of Granular Base Course Class "B" or sand cushion topped with 6" of Granular Base Course Class "A".
- 4.) All topsoil should be removed prior to placing granular material and the latter should be thoroughly compacted.
- 5.) For all paved areas a 4" thickness of H.L. 4 is recommended.

6.) The well at the existing D.H.O. Garage is understood to be inadequate and it will probably be necessary to drill a new well on the site. Wells in the vicinity seem to be mostly about 100 feet deep.

B. J. Mackenzie.

B. J. Mackenzie,

Foundation Engineer.

APPENDIX I.