

MEMORANDUM

To: Mr. C. S. Moase,
Manager,
Special Services Section.

FROM: Mr. A. G. Stermac,
Principal Foundation Engr.,
Foundation Section,
Materials & Research Division.

DATE: December 23, 1963

OUR FILE REF.

IN REPLY TO

SUBJECT:

FOUNDATION INVESTIGATION REPORT

For

Proposed D.H.O. Patrol Yard at
Point Alexander, Hwy. #17, Lot 25,
Range 'B', District of North Bay,
District No. 13

W.J. 63-F-134 -- W. P. (Nil)

It is proposed to erect a D.H.O. Patrol Garage on Hwy. #17, approx. 1½ miles west of the Village of Point Alexander. A request for a foundation investigation was received from Mr. F. E. Cavell, dated September 19, 1963.

In order to determine the properties of the soil and decide on the type of foundations, an investigation was carried out by this Section. The field investigation was confined to two sampled boreholes, supplemented by one penetration test. B.H. #1 was taken 16'-6" and B.H. #2 - 21'-6" below existing ground levels.

The elevations, as well as the locations of the boreholes, are shown on Dwg. No. 63-F-134A, attached to this report.

The stratigraphy of the soil throughout the site, was found to be quite uniform. The upper 4'-0" to 9'-0" consists of well compacted gravel and sand fill, followed by the original ground, which is dense silty fine sand.

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December 23, 1963

The safe bearing pressure for spread footings, at a depth of 6 feet below ground level, is estimated to be 4000 lbs./sq.ft.

At the time of the investigation, the water level was approximately 12'-0" below existing ground level. It may be assumed that the water level will change with the seasons of the year.

The sand pile at the present location, may be built without danger of base failure.

The recommendations given by the Regional Materials Engineer, Mr. E. R. Saint, for grading and paving, are as follows:

Fill was brought to the site earlier this by Peel Construction Co. Ltd. who were reconstructing Highway #17 from Pt. Alexander northerly, under Contract 62-264. This fill came from a pit which was located on the opposite side of the highway from the patrol yard and the material would have been acceptable for granular borrow. The fill varied in depth from 3 to 6 feet and the core penetration, taken during the foundation investigation, revealed it to be very well compacted. The soils underlying the imported fill are also sandy. Therefore, no soils problems of any consequence are anticipated.

Over the driveways and parking areas of the proposed site it is recommended that 6 inches of G.B.C. Class 'A' or 5/8 crushed gravel type 'A' be provided.

The bituminous surfacing should consist of two 1½ inch courses of HL-4.

The estimated distance from the patrol yard site to the nearest well is 350'-0" to the south. The subsoil conditions indicate the possibility of contamination by salt.

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The field work, performed during December 5, 1963, together with the preparation of this report, was undertaken by Mr. W. W. Kulmattickas, Project Foundation Engineer. The investigation was carried out under the general supervision of Mr. K. G. Selby, Senior Foundation Engineer.

We believe the information contained in this report will suffice for your design work. However, should further information be required, please do not hesitate to contact our Office.

WWK/MdeF
Attach.

cc: Messrs. C. S. Moase (4)
E. J. Orr
H. D. McMillan
G. Martens
E. R. Saint
A. Watt

Foundations Office ✓
Gen. Files

K. Y. Lo.
K. Y. Lo,
SUPERVISING FOUNDATION ENGR.
For:
A. G. Stermac,
PRINCIPAL FOUNDATION ENGR.

APPENDIX I.

#63-F-134

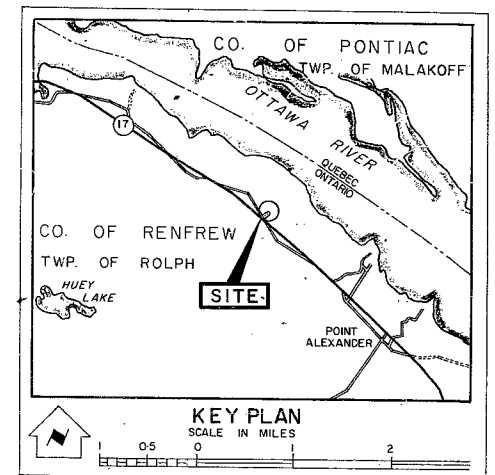
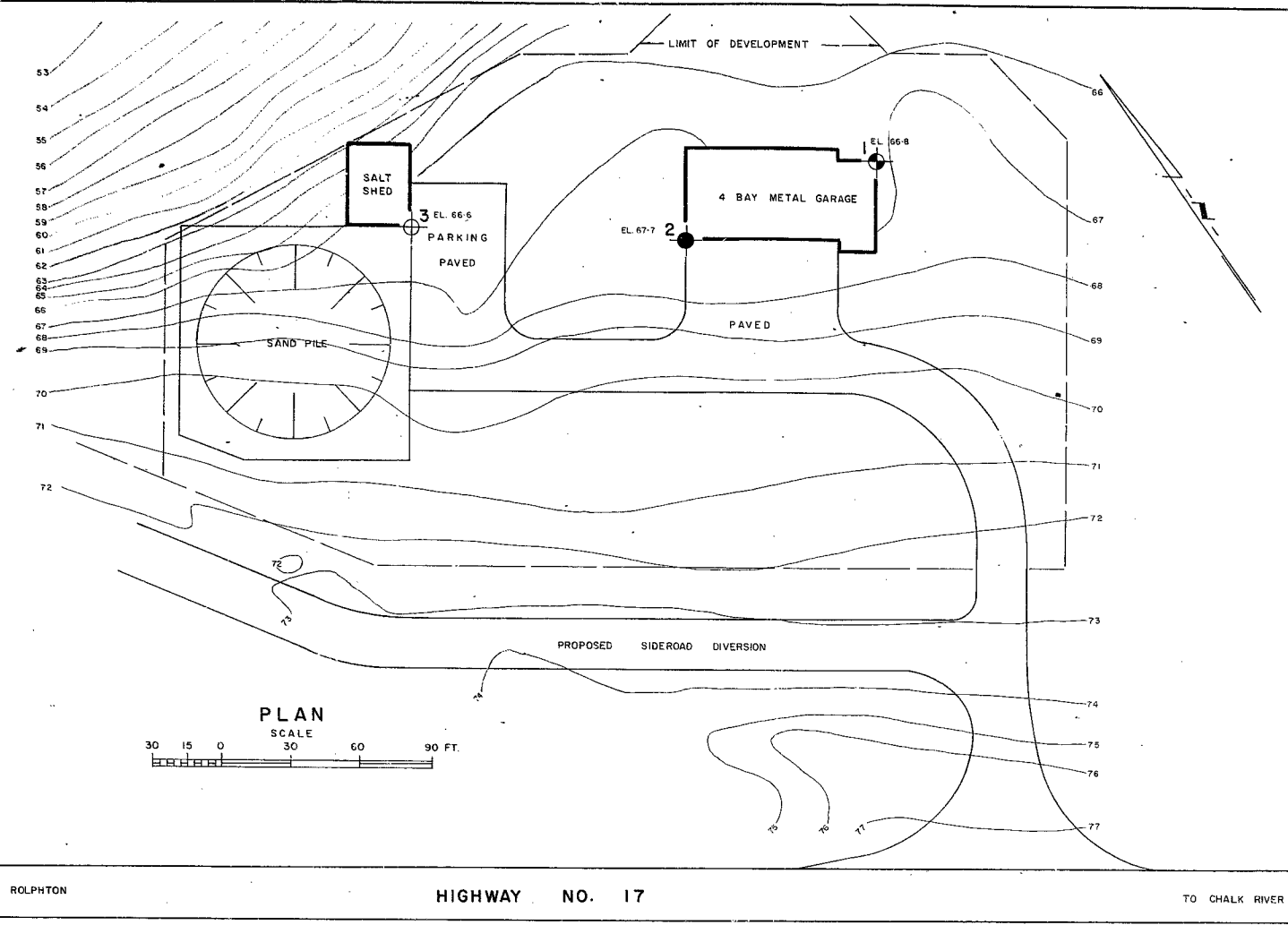
HWY #17

POINT

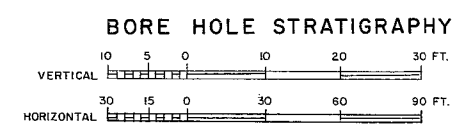
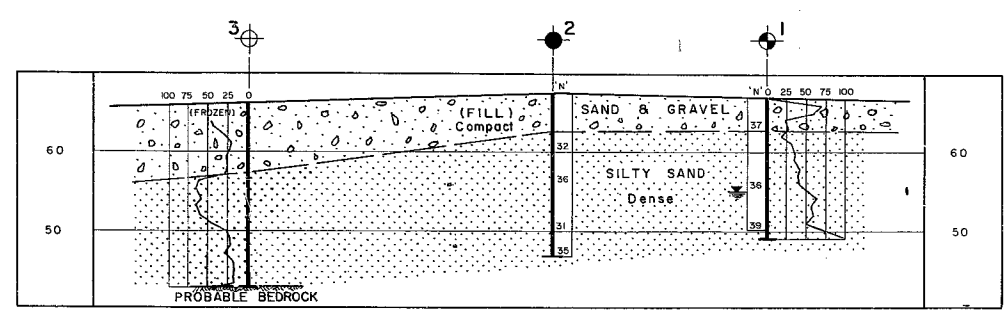
ALEXANDER

PATROL

YARD



- LEGEND
- BORE HOLE
 - ⊕ CONE PENETRATION HOLE
 - ⊕ BORE & CONE PENETRATION HOLE
 - ▽ WATER LEVELS - DEC. 5, 1963



NOTE
THE BOUNDARIES BETWEEN SOIL STRATA HAVE BEEN ESTABLISHED ONLY AT BORE HOLE LOCATIONS. BETWEEN BORE HOLES THE BOUNDARIES ARE ASSUMED FROM GEOLOGICAL EVIDENCE AND MAY BE SUBJECT TO CONSIDERABLE ERROR.

DEPARTMENT OF HIGHWAYS - ONTARIO
MATERIALS & RESEARCH SECTION

POINT ALEXANDER PATROL YARD

SHOWING POSITIONS & ELEVATIONS OF HOLES

HWY. 17	DISTRICT 13	COUNTY RENFREW
TOWNSHIP ROLPH	LOT 25	CON. RANGE B
LOCATION 1.5 MILES N.W. POINT ALEXANDER		
DRAWN BY: F. CLARK	CHECKED BY: [Signature]	W.P.
DATE JAN. 15, 1964	APPROVED BY: [Signature]	DRAWING NO.
SCALE AS SHOWN		63-F-134 A