

Mr. F. E. Cavell,
Superintendent,
Special Services Section.

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

September 28, 1962.

Re: D.H.O. FOUNDATION INVESTIGATION REPORT -
D.H.O. Patrol Yard at Powassan,
District #13, North Bay.
W.J. 62-F-106 -- W.P. (Nil.)

Attached, we are sending you the report
for the above-mentioned garage site.

We believe that the information contained
in the report will be adequate for your further work.
However, should there be any additional information that
you would require, please feel free to contact this Office.

AGS/MdeF
Attach.

A. G. Stermac
A. G. Stermac,
PRINCIPAL FOUNDATION ENGINEER

cc: Messrs. F. E. Cavell (4)
H. A. Tregaskes
H. D. McMillan
D. Foster

Foundations Office ✓
Gen. Files.

FOUNDATION INVESTIGATION

For

D.H.C. Patrol Yard at Powassan
District #13, North Bay
W.J. 62-7-106 -- W.P. (Nil).

A request for a foundation investigation to be carried out at the site of the proposed Patrol Yard at Powassan, was received from Mr. F. E. Cavell, Superintendent, Special Services Section, dated July 11th, 1962.

A field investigation was subsequently carried out by the Foundation Section to determine the subsoil conditions existing at the locations of the proposed 5 bay garage, salt shed, and stockpile area. In addition to this, a soils investigation was carried out by North Bay Regional Soils Section to determine the most suitable method of constructing the roadways and gravelled areas. This report contains a description of subsoil conditions at the site, together with recommendations pertaining to the design and construction of the proposed buildings, roadways and parking areas.

A total of 6 borings was carried out by the Soils Section. These borings were located within the limits of the proposed roadways and parking areas. The depths of these holes varied from 30 to 60 inches. Four borings were carried out by the Foundation Section, with depths ranging from 16.5' to 26.5'. The locations and elevations of all borings are shown on the accompanying Drawing #62-F-106A.

cont'd. /2 ...

Subsoil at the site was found to consist of about 6.0' of compact sandy silt containing occasional layers of clayey silt and silty clay, followed by a compact deposit of silty fine sand which extended for the full remaining depths of the borings. In B.H. #2, the water level was observed to be at 24". No water was observed in any of the other borings.

Spread footings for the proposed buildings may be placed at a depth sufficient for frost protection - i.e., about 6.0' below ground level. A design load of 1.0 ton/sq.ft. may be used in this case. No dewatering problems are anticipated during excavation. The proposed sand stockpile may be built without danger of base failure.

For roadways and parking areas, a minimum thickness of 24" of suitable granular fill is recommended. The top 4" of this latter should consist of G.B.C. Class 'A' material. Topsoil stripping should be carried out in accordance with D.H.O. standards. Surfacing materials should consist of a 1½" binder course of HL-4 with a 1½" top course of HL-4.

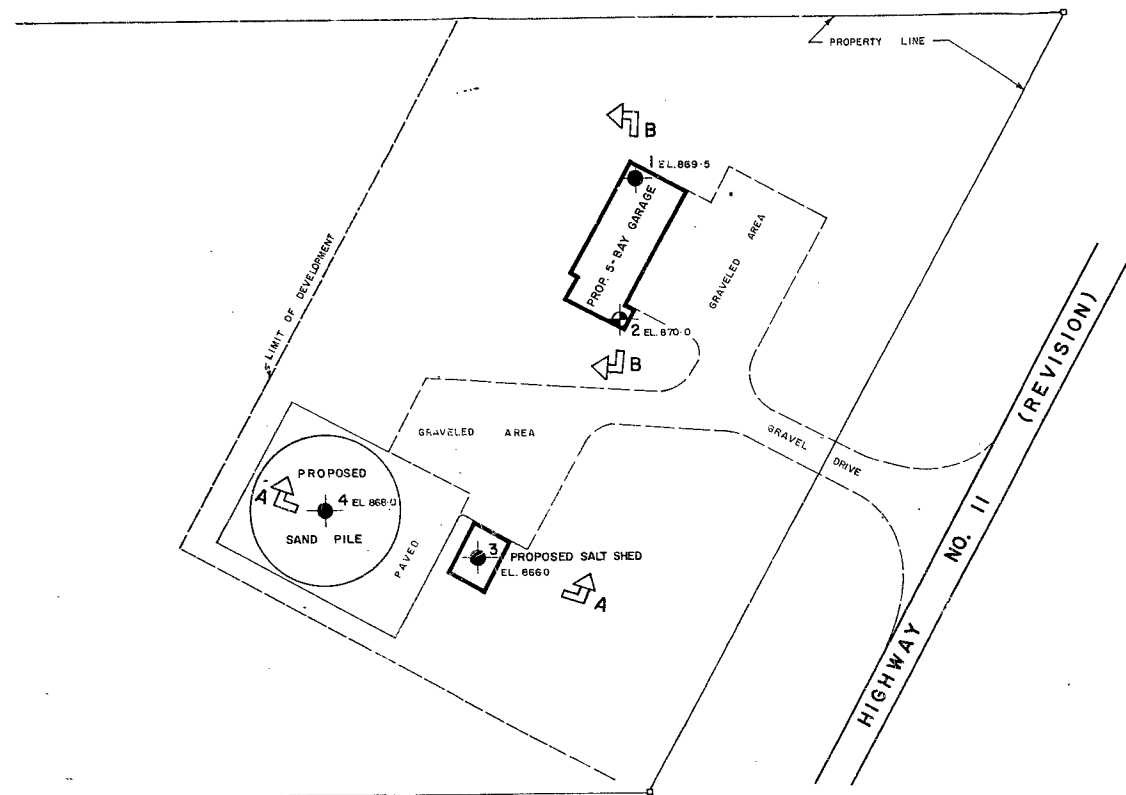
The field work for this investigation was carried out by Mr. F. Rendulic of the Soils Section and Mr. I. Holubec of the Foundation Section. This report was written by Mr. K. G. Selby of the Foundation Section.

APPENDIX I.

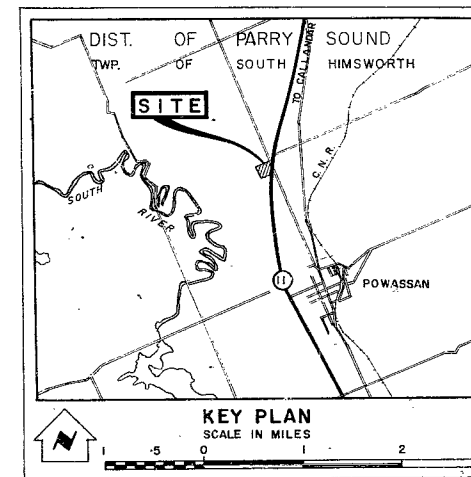
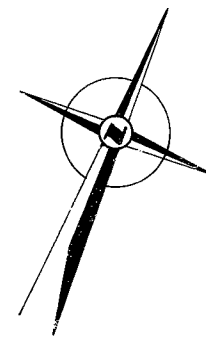
62-F-106

POWASSAN

PATROL YD.



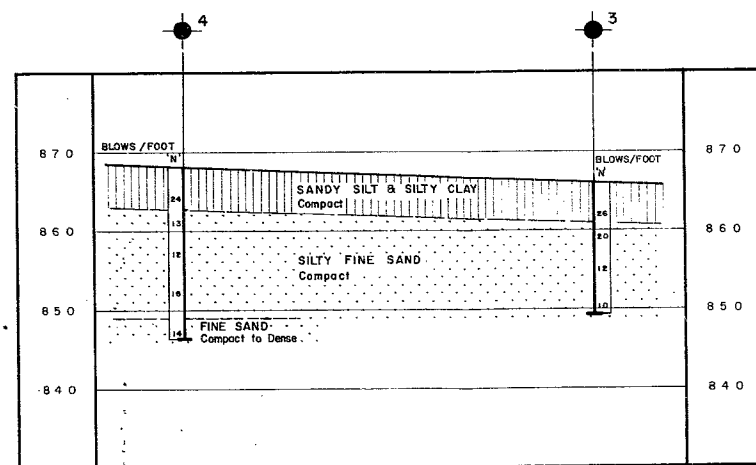
PLAN
SCALE IN FEET
50 25 0 50 100



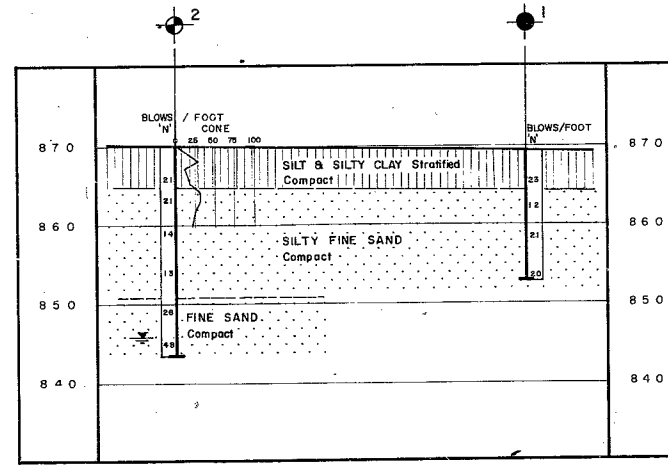
3123W
E: 626150
N: 5745630
2: 17

LEGEND

- Bore Hole
- Cone Penetration Hole
- /○ Bore & Cone Penetration Hole
- ≡ Water Levels established at time of field investigation, AUG. 1962



A - A



B - B

SECTIONS
SCALE IN FEET
10 5 0 10 20
VERTICAL
20 10 0 20 40
HORIZONTAL

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

POWASSAN PATROL YARD

ORIGINATED I. HOLUBEC	DISTRICT NO. 13	DATE 16 OCTOBER 1962
DRAWN D. MUMFORD	W.P. NO.	JOB NO. 62-F-106
CHECKED <i>HR HP</i>	CONT. NO.	DRAWING NO.
APPROVED <i>R. G. Smith</i>		62-F-106 A